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Rebuilding Banking Law: Banks as Public Utilities

Law Working Paper N° 732/2023
September 2023

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The authors thank Yochai Benkler, Christine Desan, Howell Jackson, Kate Judge, Joshua Macey, Saule Omarova, Todd Phillips, Howard Shelanski, Nathan Tankus, Art Wilmarth, and Josh Younger, as well as participants in seminars, workshops, and conferences at Harvard Law School, Columbia Law School, Vanderbilt Law School, Brooklyn Law School, Michigan Law School, Yale Law School [scheduled], UC Berkeley School of Law [scheduled], Duke Law School [scheduled], and the European Commission Directorate-General for Financial Stability, Financial Services and Capital Markets Union.

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Abstract

Under the New Deal framework for money and payments—which had its roots in the National Bank Act of 1864—banks in the United States were governed in many respects as public utilities. Charters were available only where they were consistent with public convenience and need, the usual standard for utilities. Banks enjoyed an exclusive privilege to augment the money supply, maintaining deposit account balances that households and businesses could use as a means of payment and store of value. Banks were largely limited to conducting activities consistent with their monetary purpose. Geographic expansion was constrained to promote adequate service to local communities. And a government agency, the Federal Reserve, regulated the quantity of bank money in circulation and set the interest that accrued to its holders. The result was an unprecedented period of overall financial stability that lasted more or less until 2008. Unfortunately, policymakers have steadily undermined and degraded key elements of this system and now its logic has been largely forgotten. Deposit alternatives—financial products that as a formal, legal matter are distinct from bank deposits but that function like them in practice—match or exceed deposits in value, and the country's once-diffuse banking system has given way to a top-heavy financial architecture in which a handful of complex conglomerates engaged in a broad range of monetary and nonmonetary financial activities with little meaningful government oversight. Although policymakers dramatically expanded regulation after the 2008 financial crisis, we still face rolling panics, a central bank committed to backstopping much of private finance, massive rent extraction by Wall Street, and democratic decline. This paper proposes a blueprint for reform, what we call a New National Banking system. Our goal is part restoration, part innovation. We aim to both renew the framework that undergirded American prosperity in the twentieth century and refine it by improving access to bank services and carrying through on the law's public utility vision where previous policymakers came up short. The proposal is structural not technocratic—banking law not "finreg." Consequently, it is conceptually and legally simple: it involves fairly surgical changes and can be implemented through a series of incremental adjustments, which we delineate herein.

Keywords: Money, Banking, Public Utilities, Monetary System, Monetary Policy

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Rebuilding Banking Law

Banks as Public Utilities

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Unfortunately, policymakers have steadily undermined and degraded key elements of this system and now its logic has been largely forgotten. Deposit alternatives—financial products that as a formal, legal matter are distinct from bank deposits but that function like them in practice—match or exceed deposits in value, and the country's once-diffuse banking system has given way to a top-heavy financial architecture in which a handful of complex conglomerates engaged in a broad range of monetary and nonmonetary financial activities with little meaningful government oversight. Although policymakers dramatically expanded regulation after the 2008 financial crisis, we still face rolling panics, a central bank committed to backstopping much of private finance, massive rent extraction by Wall Street, and democratic decline.

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INTRODUCTION

America's system of money and banking is broken. Another interest rate tightening cycle has precipitated yet another round of financial instability. On March 10, 2023, with unemployment near multi-decade lows and U.S. gross domestic product growing at a healthy clip, the $210 billion Silicon Valley Bank (SVB) failed. Two days later, with panic spreading, the Federal Deposit Insurance Corporation (FDIC) took over the $100 billion Signature Bank while also overriding a $250,000 cap on deposit insurance to rescue SVB's and Signature's uninsured depositors.[1] To enable the rescue, the Secretary of the Treasury determined that following the ordinary rules of bank failure for SVB and Signature would have "serious adverse effects on economic conditions or financial stability."[2] That same day, the Federal Reserve invoked section 13(3) of its enabling act to establish an emergency lending facility to support other banks facing similar pressure.[3] To enable this assistance, the Treasury Secretary committed $25 billion from the country's Exchange Stabilization Fund (ESF).[4] The joint maneuver marked the fourth extraordinary government intervention to prevent a financial collapse in fifteen years.[5]

Weeks later, the fallout continued. On May 1, the FDIC closed the $230 billion First Republic Bank and sold it to one of the banking subsidiaries of JPMorgan Chase, the $3.7 trillion conglomerate that functions as America's apex financial services provider.[6] The FDIC once again made uninsured depositors whole, this time maneuvering around, rather than overriding, the ordinary rules of bank failure. Regulators did so even though the primary beneficiaries this time were not true depositors, but eleven of the largest banks in the country, which had structured $30 billion of loans to First Republic in the form of "deposits." The FDIC now expects thirteen billions of dollars of losses to the deposit insurance fund, which will ultimately be recouped through assessments on *all* banks, making the resolution of First Republic a bailout of the country's largest banks by their smaller competitors.

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[1] *See* Joint Statement by the Department of the Treasury, Federal Reserve, and FDIC, Mar. 12, 2023.

[2] Federal Deposit Insurance Corporation Improvement Act, Pub. L. No. 102-242, § 141 (1991), codified at 12 U.S.C. § 1823(c)(4)(G).

[3] *See* Federal Reserve, Bank Term Funding Program: Frequently Asked Questions, Mar. 16, 2023.

[4] *See* Federal Reserve, Report to Congress Pursuant to Section 13(3) of the Federal Reserve Act: Bank Term Funding Program, Mar. 16, 2023, at 2.

[5] The three prior episodes were: the 2007–09 global financial crisis, the 2019 repo market meltdown, and the 2020 pandemic panic.

[6] Federal Deposit Insurance Corporation, JPMorgan Chase Bank, National Association, Columbus, Ohio Assumes All the Deposits of First Republic Bank, San Francisco, California, May 1, 2023.

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The United States has a long history of financial instability. While some countries have never experienced damaging bank runs,[7] America has suffered many. And the consequences have been severe. Many recessions (and both depressions) since the Founding were the product of disorderly monetary and credit contractions.[8] The best known of these, the Great Depression, was driven largely by a banking collapse that led to the closure of nearly half the depository institutions in the country.[9] An earlier depression running from 1837 to 1842, sometimes known as the First Great Depression, was also triggered by a panic and led multiple states to default on their obligations.[10] The more recent Great Recession was the product of similar dynamics.[11]

America's core banking laws were enacted in the aftermath of such crises. The pivotal moment arrived during the Civil War when the fiscal demands of the North's military campaign crippled the country's fragmented network of state-chartered banks. Congress responded with the National Bank Act of 1864 (NBA), which established a system of federally chartered corporations overseen by a federal official, the Comptroller of the Currency (OCC). Championed by Treasury Secretary Salmon P. Chase and Senator John Sherman (R-Ohio), and signed into law by President Abraham Lincoln, the NBA was designed to resurrect the Bank of the United States—slain three decades earlier by Andrew Jackson—in new form. Rather than rely on a single instrumentality, the NBA enabled many separate ones, each with their own capital, shareholders, and directors.[12] Policymakers hoped that these "national banks," plural,

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[7] For example, Canada. Canada has an oligopolistic banking system in which banks are closely tied to the government. Although such systems are more stable, there are significant political and economic downsides. *See infra* Part II; *see also* MORGAN RICKS, GANESH SITARAMAN, SHELLEY WELTON & LEV MENAND, NETWORKS, PLATFORMS, AND UTILITIES: LAW AND POLICY 821–35 (2022) (exploring the U.S. experiment with a similar model in the Early Republic).

[8] *See infra* Part II.A.2; MORGAN RICKS, THE MONEY PROBLEM: RETHINKING FINANCIAL REGULATION 102–42 (2016).

[9] *See* MILTON FRIEDMAN, A PROGRAM FOR MONETARY STABILITY 9–22 (1960); CHARLES P. KINDLEBERGER, THE WORLD IN DEPRESSION: 1929-1939 (1973); Barry Eichengreen, *Viewpoint: Understanding the Great Depression*, 37 CANADIAN J. OF ECON. 1 (2004); Ben S. Bernanke, *Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression*, 73 AM. ECON. REV. 257 (1983). Also relevant was the operation of the international gold standard—another dimension of the monetary framework of that period. *See* BARRY J. EICHENGREEN, GOLDEN FETTERS: THE GOLD STANDARD AND THE GREAT DEPRESSION, 1919–1939 (1995).

[10] ALASDAIR ROBERTS, AMERICA'S FIRST GREAT DEPRESSION: ECONOMIC CRISIS AND POLITICAL DISORDER AFTER THE PANIC OF 1837 (2012).

[11] *See* Ben S. Bernanke, *The Real Effects of Disrupted Credit: Evidence from the Global Financial Crisis*, 49 BROOKINGS PAPERS ON ECON. ACTIVITY 251 (2018) (tying the economic contraction to the financial system disruption); Tyler Atkinson et al., *How Bad Was It? The Costs and Consequences of the 2007-09 Financial Crisis*, 20 FED. RES. BANK OF DALLAS STAFF PAPERS 1, 2 (2013) (estimating the output lost at between $6 and $14 trillion in 2012 dollars).

[12] As the law's leading drafter, Rep. Samuel Hooper (R–MA), explained "[National banks will secure] all the benefits of the old United States Bank without many of those objectionable

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could replace the country's heterogenous mix of state banks and become the exclusive source of paper notes.[13]

The new system had four major features. The most significant was delegation: banks owned by investors, not the government, expanded (and contracted) the money supply. Although the federal government continued to issue legal tender cash (largely in the form of gold and silver coins), it did not intend to do so on a discretionary basis. Instead, national banks enjoyed a franchise to augment a fairly inelastic base with a much larger supply of notes and deposit account balances. Policymakers believed that renting new money into circulation through bank lending was a better way to adjust the amount of money in a growing economy. Bankers, unlike public officials, would not face political pressure to issue too many notes and deposits (or so the thinking went). And putting underwriting into the hands of investor-owned banks would prevent government corruption (or so everyone hoped).[14] The NBA was an outsourcing regime.

The other three features of the national banking system were designed to sustain delegation politically and economically. Investor-owned, government-chartered banks were controversial: why should Congress hand over to private investors the power to expand the money supply? What would stop bank investors from using their ability to create money to dominate the economy and favor their own business activities? Worse, what would stop them from using it to control the government itself, subverting democracy? Outsourcing was also potentially inefficient. The problem was instability. To a much greater degree than the government, investor-owned businesses face the prospect of failure and default, especially during economic disruptions. To ameliorate both sets of concerns, the NBA (1) separated banks from other businesses, strictly limiting their activities to issuing notes and deposits (by originating loans and purchasing bonds) and dealing in government cash and bullion; (2) diffused banks geographically, aiming to prevent any one group of bankers from

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features which aroused opposition. . . . [T]he Government enabled that bank to monopolize the business of the country. Here no such system of favoritism exists. . . . It will be as if the Bank of the United States had been divided into many parts, and each part endowed with the life, motion, and similitude of the whole." Cong. Globe, 37th Cong., 2d Sess. 616 (1862).

[13] *See* Lev Menand & Morgan Ricks, *Federal Corporate Law and the Business of Banking*, 88 U. CHI. L. REV. 1361, 1387 (2021). To accelerate the obsolescence of state banks, in 1865, Congress enacted a prohibitively high, ten percent tax on their note issue. Act of Mar. 3, 1865, ch. 78, 13 Stat. 469, 484. This tax worked to eliminate state bank notes but ultimately state banks shifted to deposit issue and checks drawn on those accounts, as these were not subject to the tax. *See* RICKS, SITARAMAN, WELTON, AND MENAND, *supra* note 9, at 839.

[14] Lev Menand, *The Logic and Limits of the Federal Reserve Act*, 40 YALE J. ON REG. 197, 212–14 (2023).

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accumulating too much political or economic power; and (3) imposed a heightened form of public sector oversight, known as supervision.[15]

The NBA remains the core of U.S. banking law. In 1913, at the urging of Woodrow Wilson, Congress supplemented the statute with the Federal Reserve Act, which established a federal agency, now called the Board of Governors of the Federal Reserve System (the Fed), to administer the banking system (including the state banks that survived Congress's efforts to force them into federal charters).[16] During the Depression, Congress enacted the Banking Act of 1933, which created the FDIC, insured bank deposits, and restored the firewall between banks and securities dealers after it had eroded in the 1910s and '20s.[17] Through these further enhancements the vision underlying the NBA approached full realization.

Banks were governed in many respects as public utilities. Charters were available only where they were consistent with the convenience and needs of the public. Franchisees enjoyed an exclusive privilege to augment the money supply but were largely limited to conducting activities consistent with their monetary mission. Geographic expansion by banks was constrained such that individual banks served their local communities.[18] Most bank money was rendered a government product by deposit insurance, and a government agency, the Fed, regulated the quantity of bank money in circulation and set the interest that accrued to its holders. The result was an unprecedented period of overall financial stability that lasted more or less until 2008.[19]

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[15] *See* Lev Menand, *Why Supervise Banks: The Foundations of the American Monetary Settlement*, 74 VAND. L. REV. 951 (2021). To ensure monetary stability, the National Bank Act also required that national banks back their note issue with U.S. government debt. This practice eventually became unsustainable as the need for notes outpaced the supply of government debt—as predicted by Salmon Chase at the time of enactment. "But these considerations may be for another generation," he wrote. U.S. SEC'Y OF THE TREASURY, REPORT OF THE SECRETARY OF THE TREASURY ON THE STATE OF THE FINANCES FOR THE YEAR ENDING JUNE 30, 1862, at 20 (1862).

[16] *See* Menand, *supra* note 14, at 222–23.

[17] Banking Act of 1933, Pub. L. No. 73-66, 48 Stat. 162.

[18] In the 1970s, Congress added critical antidiscrimination and consumer protection provisions in an effort to extend to more people the benefits of this critical infrastructure. *See, e.g.*, Community Reinvestment Act, Pub. L. No. 95–128 91 Stat. 1147 (1977) (codified at 12 U.S.C. § 2901 et seq). *See also* Michael S. Barr, *Credit Where it Counts: The Community Reinvestment Act and its Critics*, 80 N.Y.U. L. REV. 513 (2005). These measures were unsuccessful along many dimensions and the problems of access and rent extraction remain. *See infra* Part II.D.

[19] The primary exception was an episode from the mid-to-late 1980s known as the Savings and Loan Crisis when many depository institutions failed, including Continental Illinois, one of the largest commercial banks in the country. These failures were in part a product of severe economic conditions between 1974 and 1984 and in part a product of deregulation and desupervision of banks over that same time period. *See, e.g.,* Depository Institutions Deregulation and Monetary Control Act of 1980, Pub. L. No. 96-221, §§ 401–402, 94 Stat. 132, 151–56; Garn-St. Germain Depository Institutions Act of 1982, Pub. L. No. 97-320, §§ 321–330 and 403, 96 Stat. 1469, 1499–1502 and 1510–11; George A. Akerlof & Paul M. Romer, *Looting: The*

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During the system's heyday from 1935 to 1980, the United States also enjoyed a golden age of economic growth.

Unfortunately, the achievements of the Civil War Republican Party, the Wilson Administration, and the New Deal Congress have been progressively undermined and degraded since 1980, and Lincoln's underlying vision has been largely forgotten. The core of the problem is shadow banking: the creation of new forms of deposit money issued by nonbank financial firms.[20] The growth of shadow banking, fueled by the implicit and explicit backing of the Federal Reserve,[21] made it impossible for policymakers to sustain the federal banking laws as originally conceived. Steadily, the legal framework collapsed. Regulators loosened restrictions on bank activities and affiliations, raising the pressure on Congress to do the same. By 2007, deposit alternatives exceeded deposits in value,[22] and the country's once-diffuse banking system gave way to top-heavy financial architecture in which a handful of complex conglomerates engaged in a broad range of monetary and nonmonetary financial activities with little meaningful government oversight.[23] Although policymakers dramatically expanded regulation in the 2010s, we still face rolling panics, a central bank committed to backstopping much of private finance, massive rent extraction by Wall Street, and democratic decline.[24]

Economic Underworld of Bankruptcy for Profit, 1993 BROOKINGS PAPERS ON ECON. ACTIVITY 1. The failures, however, never gave rise to widespread contagion, disorderly monetary contraction, or acute economic recession as the New Deal legal framework, which worked to prevent these outcomes, was still largely in place. Other episodes, such as the failure of Franklin National Bank in 1974, resulted from the deposit substitutes that plague our system today. Since the use of these substitutes was on a smaller scale, the fallout was more easily contained by policymakers. *See* Pierre-Christian Fink, *Caught between Frontstage and Backstage: The Failure of the Federal Reserve to Halt Rule Evasion in the Financial Crisis of 1974*, 88 AM. SOC. REV. 24 (2022).

[20] *See, e.g.,* BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, MONEY AND PAYMENTS: THE U.S. DOLLAR IN THE AGE OF DIGITAL TRANSFORMATION 27 (2022) (stating that the 2008 financial crisis was "in large part" caused by "nonbank money").

[21] *See infra* text accompanying notes 232 et seq.

[22] RICKS, *supra* note 10.

[23] *See* Lev Menand, *Too Big to Supervise: The Rise of Financial Conglomerates and the Decline of Discretionary Oversight in Banking*, 103 CORNELL L. REV. 1527 (2018); Saule T. Omarova, *From Gramm-Leach-Bliley to Dodd-Frank: The Unfulfilled Promise of Section 23A of the Federal Reserve Act*, 89 N.C. L. REV. 1683 (2011); Yeva Nersisyan, *The Repeal of the Glass-Steagall Act and Consequences for Crisis Response*, *in* REFORMING THE FED'S POLICY RESPONSE IN THE ERA OF SHADOW BANKING 85-99 (2015).

[24] *See* LEV MENAND, THE FED UNBOUND: THE TROUBLE WITH GOVERNMENT BY CENTRAL BANK (2022); ARTHUR E. WILMARTH, TAMING THE MEGABANKS: WHY WE NEED A NEW GLASS-STEAGALL ACT (2020); MONEY AND PAYMENTS, *supra* note 20, at 27 ("nonbank money contributed to financial strains again at the onset of the COVID-19 pandemic").

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It's time therefore to reform our banking laws and refashion them for the twenty-first century.[25] This paper proposes a New National Banking (NNB) system. The goal is part restoration, part innovation. We aim to both renew the framework that undergirded American prosperity in the twentieth century and refine it by expanding access to bank services and carrying through on the law's public utility vision where previous policymakers came up short.[26] In doing so, we have a further objective: to better explain the law we already have. There is a logic immanent in the longstanding statutory framework for money and banking.[27] The pieces do fit together, if imperfectly

[25] For a somewhat different defense of the New Deal system of bank regulation, see Prasad Krishnamurthy, *George Stigler on His Head: The Consequences of Restrictions on Competition in (Bank) Regulation*, 35 YALE J. ON REG. 823 (2018). For a more critical take on that system, see Daniel R. Fischel, Andrew M. Rosenfeld & Robert S. Stillman, *The Regulation of Banks and Bank Holding Companies*, 73 VA. L. REV. 301 (1987).

[26] In developing a contemporary framework for governing banks as public utilities, we follow progressive era policymakers, jurists, and scholars such as Louis Brandeis who viewed banks as "public service corporations" that perform a public function and who worked to build a law that aligned. *See* LOUIS D. BRANDEIS, OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT 67 (1914) ("the directors of our great banking institutions, as the ultimate judges of bank credit, exercise today a function no less important to the country's welfare than that of the judges of our courts, the interstate commerce commissioners, and departmental heads"); HARVEY WHITE MAGEE, A TREATISE ON THE LAW OF NATIONAL AND STATE BANKS: INCLUDING THE CLEARING HOUSE AND TRUST COMPANIES (1913) ("[T]he very nature of the business of a bank and its relationship to its customers and the public generally place it within the scope, or class, of a public utility institution."). We also build on more recent scholarship including K. Sabeel Rahman, *The New Utilities: Private Power, Social Infrastructure, and the Revival of the Public Utility Concept*, 39 CARDOZO L. REV. 1621 (2018), NATHAN TANKUS, THE NEW MONETARY POLICY: REIMAGINING DEMAND MANAGEMENT AND PRICE STABILITY IN THE 21ST CENTURY (Michael Brennan ed., 2022), Mehrsa Baradaran, *Banking and the Social Contract*, 89 NOTRE DAME L. REV. 1283 (2014), Robert C. Hockett & Saule T. Omarova, *The Finance Franchise*, 102 CORNELL L. REV. 1143 (2017), Saule T. Omarova, *The "Franchise" View of the Corporation: Purpose, Personality, Public Policy, in* RESEARCH HANDBOOK ON CORPORATE PURPOSE AND PERSONHOOD 201 (Elizabeth Pollman & Robert B. Thompson, eds., 2021), WILMARTH, *supra* note 26, Krishnamurthy, *supra* note 25, and Alan M. White, *Banks as Utilities*, 90 TUL. L. REV. 1241 (2016), as well as Morgan Ricks, *Money as Infrastructure*, 2018 COLUM. BUS. L. REV. 757 (2018), and RICKS, SITARAMAN, WELTON, AND MENAND, *supra* note 9, at 813–928. *See also* Neel Kashkari, President and CEO, Federal Reserve Bank of Minneapolis, Lessons from the Crisis: Ending Too Big to Fail, Remarks at the Brookings Institution (Feb. 16, 2016) (suggesting that policymakers consider "turning large banks into public utilities"); Joe Rauch, *Big Banks are Government-Backed: Fed's Hoenig*, REUTERS, Apr. 12, 2011 (quoting Federal Reserve Bank of Kansas City President Thomas Hoenig to the effect that large banks are "public utilities"); Stephanie Kelton & Paul McCulley, *The Fed Chair Should Be a Principled Populist*, N.Y. TIMES, Oct. 30, 2017 ("Banks are many things, but at their core, they have a public utility function . . . In that sense, banks are not different than the gas company or the electric company, connecting you to the grid.").

[27] *But see* Peter Conti-Brown & Brian D. Feinstein, *The Contingent Origins of Financial Legislation*, 99 WASH. U. L. REV. 145 (2021) (arguing that financial legislation has been the product of a "random walk," that this randomness "undercuts the notion of 'design' at all," and that, more

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at points. By focusing on these misshapen joints, and tying each aspect of the NNB system to an aspect of the existing framework, this paper offers a roadmap for studying money and banking law more generally.

We should be clear about what the NNB system is not. It is not "public banking." We expect that most banks in the NNB system will be investor owned. Nor is the NNB system a framework for converting the activity of lending money into a public utility. Banks in the NNB system would continue to compete with myriad other financial firms in the credit markets, and lending rates and terms would remain unregulated (subject of course to relevant consumer protection and antidiscrimination laws). The NNB system is a monetary framework geared toward the public utility regulation of deposit liabilities (and their equivalents), not a credit market framework, and it would in no way curtail entry into loan or bond origination, underwriting, or investment. Finally, the NNB system is not "narrow banking"—the old idea, which resurfaces periodically, that banks should hold only the safest assets, such as central bank cash and possibly government securities.[28] On the contrary, we envision that banks would participate actively in credit allocation, although subject to such portfolio constraints that legislators and regulators might choose to impose to promote safety and soundness and to advance various public policies, much as policymakers did throughout the twentieth century and continue to do today, albeit to a lesser extent.

The Article proceeds in three parts. Part I describes the NNB system. Part II explains its rationales, demonstrating the ways in which it addresses the most glaring defects and pathologies of our current arrangement. Part III describes how to get from here to there.

I. WHAT IS THE NEW NATIONAL BANKING SYSTEM?

We begin with a description of the NNB system. As shown in the notes, virtually every feature of the system has a direct analogue or precedent in U.S. banking law. We present the system as an end state rather than as a set of modifications to the current system; transition issues are deferred to Part III. All currently operating insured depository institutions would be grandfathered into the NNB system as "member banks."

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generally, legislation "is not designed to be effective"). We find this account of U.S. banking law reductive and ahistorical. For alternative, less cynical conceptions of legislation and democracy, see WILLIAM N. ESKRIDGE, PHILIP P. FRICKEY & ELIZABETH GARRETT, CASES AND MATERIALS ON LEGISLATION: STATUTES AND THE CREATION OF PUBLIC POLICY (2001); JEREMY WALDRON, THE DIGNITY OF LEGISLATION (1999).

[28] *See, e.g.,* IRVING FISHER, 100% MONEY (1935); MILTON FRIEDMAN, A PROGRAM FOR MONETARY STABILITY (1960); ROBERT E. LITAN, WHAT SHOULD BANKS DO? (1987); RONNIE J. PHILLIPS, THE CHICAGO PLAN AND NEW DEAL BANKING REFORM (1995).

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While it might at first seem that we are putting the cart before the horse—describing the solution in advance of the problem—this sequence is necessary. The defects of the current arrangement described in Part II can be fully understood only against the baseline of an alternative arrangement.[29] So, the blueprint must come first.

A. Legal Structure

We divide our overview of the NNB system into four categories: (1) the basic powers and purposes of member banks; (2) their role in economic governance; (3) ownership and control of member banks; and (4) their duties to the public.

1. Member Banks

The NNB system is based on a set of federally chartered corporations called member banks, all of which have identical corporate charters that are codified by statute.[30] They are endowed with special privileges, but they must stay in their lane.

Bank money. Member banks maintain "bank money" liabilities consisting of account money (transactions accounts and savings deposits) and cash equivalents (short-term, zero-coupon debt, such as certificates of deposit).[31] Account money is a dollar-denominated, demandable liability that serves as a means of payment and store of value. By virtue of having mostly monetary liabilities but mostly nonmonetary assets, member banks are in the money-augmentation business.[32]

Corporate powers. Member banks' corporate charters endow them with only limited powers, entitling them to issue bank money, invest in loans and bonds (subject to portfolio constraints—see below), and exercise all such incidental powers as are

[29] In companion papers that are underway, we aim to flesh out the logic of the New Deal system of money and banking, document and elucidate its collapse, and delve more deeply into some of the consequences of that collapse. *See* Lev Menand, *The Collapse of Banking Law*; Lev Menand & Morgan Ricks, *The Monetary-Financial Complex*.

[30] *Cf.* National Bank Act of 1864, ch. 106, 13 Stat. 99, codified as amended at 12 U.S.C. §§ 1 et seq. (codifying national banks' corporate charters); Menand and Ricks, *supra* note 15; Robert C. Hockett & Saule T. Omarova, *Special, Vestigial, or Visionary: What Bank Regulation Tell Us about the Corporation—and Vice Versa*, 39 SEATTLE U. L. REV. 453 (2016).

[31] *Cf.* RICKS, *supra* note 10.

[32] *Cf.* N. GREGORY MANKIW, PRINCIPLES OF MACROECONOMICS 347 (5th ed. 2009) ("*[B]anks create money*." (emphasis in original)); United States v. Philadelphia Nat'l Bank, 374 U.S. 321, 326 (1963) ("[B]anks do not merely deal in[,] but are actually a source of, money."). Affirming banks' money-creation function does not require one to subscribe to the incomplete and mechanical "money multiplier" story presented in many macroeconomics and banking textbooks. *See* Basil J. Moore, *How credit drives the money supply: the significance of institutional developments*, 20 J. ECON. ISSUES 443 (1986).

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necessary or useful to carry on these enumerated powers.[33] Courts are instructed to construe member banks' corporate powers narrowly.[34]

Unauthorized banking. Member banks are the only private-sector entities that are permitted to augment the dollar money supply.[35] This is the main privilege that a member bank charter conveys. While entities that are not member banks may hold money for their customers or others on a custodial or pass-through basis, they are prohibited from augmenting the supply of bank money or close substitutes therefor. (We address international dimensions of this prohibition below.[36]) Member banks compete with all manner of other financial institutions in the lending and bond-investing markets; the legal privilege they enjoy extends only to bank-money issuance.

Governmental guarantee. Member banks' bank-money liabilities—and only their bank-money liabilities—are nondefaultable, that is, fully backed by the federal government. This can be understood as deposit insurance without any coverage caps.[37] The government holds a senior, secured claim on each member bank's assets as collateral for the guarantee.[38] In conjunction with the unauthorized banking provision just described, the guarantee means there are no private (defaultable) dollar-denominated moneys or money substitutes outstanding.

2. Economic Governance

Member banks are not a mere set of standalone enterprises; they exist as part of an integrated *system*.

Quantity of bank money. The monetary authority[39] places a flexible cap on the aggregate quantity of bank money that member banks are permitted to issue and adjusts the cap in the conduct of monetary policy.[40] The cap may be implemented

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[33] *Cf.* 12 U.S.C. § 24 (Seventh) (national banks' corporate powers).

[34] *Cf.* 6 FLETCHER CYCLOPEDIA OF THE LAW OF CORPORATIONS § 2483 (2020) (stating the settled principle that "[a]ny ambiguity respecting the extent of [a corporation's] powers will be strictly construed against the corporation."); Menand and Ricks, *supra* note 15.

[35] *Cf.* 12 U.S.C. § 378(a)(2) (criminalizing the unauthorized incurrence of "deposit" liabilities). We describe in Part II how the NNB system modernizes this provision. The existing provision succeeds the prohibitive tax on bank notes issued by entities other than national banks that was enacted alongside the National Bank Act. *See* Act of March 3, 1865, ch. 78, § 6, 13 Stat. 469, 484 (as amended by Act of February 8, 1875, ch. 36, § 19, 18 Stat. 307, 311).

[36] *See infra* text accompanying note 87.

[37] *Cf.* 12 U.S.C. § 1821(a) (deposit insurance with coverage cap).

[38] *Cf.* 12 U.S.C. § 1821(d)(11)(A) (priority of deposits in bank receivership); 12 U.S.C. § 1821(g)(1) (FDIC subrogation to insured depositors' claims).

[39] We use "monetary authority" to refer collectively to the federal money and banking agency or agencies. We reserve questions of how to reform administrative structure for future work.

[40] *Cf.* Menand, *supra* note 16.

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through a standard reserve requirement.[41] (This is how interest-rate policy was conducted in the United States from 1984 to 2008.)[42] The cap is pliable, not rigid; for example, member banks may borrow from the central bank to replenish temporary reserve deficiencies, at a modest penalty rate.[43] Permit capacity is tradeable among member banks; for example, a member bank may augment its reserve balance by borrowing in the interbank market, enabling balance sheet expansion (subject, however, to the concentration limit described below).[44]

Interest rate paid on bank money. The monetary authority administers the interest rate that member banks pay on account money and adjusts this rate in the conduct of monetary policy.[45] The interest rate that member banks pay on cash equivalents is determined by market forces.

Franchise fees. Member banks are required to pay ongoing franchise fees to the federal government.[46] Fees are paid periodically (say, quarterly) and are based on the

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[41] *Cf.* 12 U.S.C. § 461 (reserve requirements). Reserve requirements set a legal cap on the quantity of reservable deposits. *See* FREDERIC S. MISHKIN, THE ECONOMICS OF MONEY, BANKING, AND FINANCIAL MARKETS (2022).

[42] Specifically, reserve requirements constrained banks' balance sheet growth, and the Fed continuously adjusted the supply of reserves through purchases and sales of securities ("open market operations"), thereby influencing interbank lending ("federal funds") rates and broader economic conditions. Injecting reserves increased banks' balance sheet capacity, lowered interest rates, and stimulated economic activity. We discuss below how interest rate policy changed in 2008. *See infra* text accompanying notes 143 et seq.

[43] *Cf.* Joshua N. Feinman, Reserve Requirements: History, Current Practice, and Potential Reform, 1993 FED. RES. BULLETIN 569, 579–80 (describing the Federal Reserve's methods for affording flexibility in banks' daily reserve management under a system of reserve requirements). Thus, reserve requirements can restrain banks' balance sheet growth without interfering with par clearance of payments between banks.

[44] An alternative approach to similar ends would be to impose credit origination ceilings on banks, as detailed in TANKUS, *supra* note 28. While we see advantages to Tankus's approach from a portfolio-shaping, distributional, and macroeconomic standpoint, bank-money caps are of course more readily administrable and a more incremental adjustment.

[45] *Cf.* Banking Act of 1933, Pub. L. No. 73-66, § 11, 48 Stat. 162, 181–82 (regulating the interest rate paid on bank deposits). This provision, which became the basis for the Federal Reserve's "Regulation Q," was repealed by the Depository Institution Deregulation and Monetary Control Act of 1980, Pub. L. No. 96-221, 94 Stat. 132.

[46] *Cf.* National Bank Act of 1864, ch. 106, § 41, 13 Stat. 99, 111 (duty imposed upon the circulation, deposits, and capital stock of national banks). Chase supported this provision. *See* U.S. SEC'Y OF THE TREASURY, REPORT OF THE SECRETARY OF THE TREASURY ON THE STATE OF THE FINANCES FOR THE YEAR ENDING JUNE 30, 1861, AT 17 (Dec. 9, 1861) (asking "whether sound policy does not require that the advantages [of bank note funding] be transferred, in part at least, from the banks, representing only the interests of the stockholders, to the government, representing the aggregate interests of the whole people"); *id.* at 19 (noting that the planned national banking system would give the people "a participation in the profit of circulation" and that "[t]he people claim, at least, part of the benefit of debt without interest, made into money, hitherto

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quantity of the member bank's issued and outstanding bank money. The fee is risk-based, meaning it is tailored to the member bank's risk characteristics—in particular, its asset quality and capital adequacy.[47] The riskier the portfolio and the thinner the capital, the higher the fee. The fees payable by a given member bank are designed to approximate the incremental funding costs it would incur if it replaced its bank-money liabilities with long-term debt financing (with maturities matching its asset portfolio maturities) in the capital markets.[48] These fees can be understood as royalty payments

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enjoyed exclusively by banks"); Letter from Sec'y Salmon P. Chase to John Bigelow (Oct. 7, 1862), *in* 3 THE PAPERS OF SALMON P. CHASE (noting that the provision would "give to the government a fair seignorage" on bank note circulation). Members of Congress agreed. *See* CONG. GLOBE, 37th Cong., Sess. 3d. 1146–47 (1863) (statement of Rep. Alley) (noting that "the people are entitled" to the profit from money creation and that "the Government is really the party who should have all the profit of the circulation" and is "entitled to the whole benefit"); CONG. GLOBE, 37th Cong., 2d Sess. 1412 (1864) (statement of Rep. Morrill) (opining that national banks should be assessed duties "to the fullest extent of their ability to bear" them); CONG. GLOBE, 38th Cong., 1st Sess. 1897–99 (1864) (statement of Sen. Sherman) (supporting the duties and predicting they would yield "a very large sum of money" to the government).

[47] *Cf.* 12 U.S.C. § 1817(b) (risk-based deposit insurance fees keyed to probability of default, loss given default, and the revenue needs of the deposit insurance fund).

[48] More specifically, the government charges each member bank an amount equal to the product of its outstanding bank-money liabilities and the sum of (1) the fair premium (expressed as a percentage of notional value) of a put option written on the member bank's total assets, struck at the face value of its outstanding bank-money liabilities and (2) the difference between (a) the weighted average of the "asset-specific risk-free rate" (defined below) corresponding to each investment asset in the member bank's portfolio and (b) the weighted-average interest rate paid by the member bank on its bank-money liabilities (which are guaranteed and, in the case of account money, rate-regulated). The value of the option is a function of the issuer's portfolio volatility (asset quality) and its level of capital (the difference between the fair value of the firm's assets and the face value of its money-claim liabilities). *See* Robert C. Merton, *An Analytic Derivation of the Cost of Deposit Insurance and Loan Guarantees: An Application of Modern Option Pricing Theory*, 1 J. BANKING & FIN. 3 (1977); Fischer Black, Merton H. Miller & Richard A. Posner, *An Approach to the Regulation of Bank Holding Companies*, 51 J. BUS. 379 (1978). The "asset-specific risk free rate" is, for fixed-rate assets, the as-of-acquisition risk-free rate corresponding to the asset's as-of-acquisition duration, and for floating-rate assets, the current value of the relevant benchmark rate. Properly charged, the franchise fees, when added to the rate the bank pays to holders of its bank money, generate a long-term-debt-equivalent cost of financing. Conceptually, the government's earnings from the franchise fees equate to what it would earn if all member banks' deposits migrated to the Fed (as under a "FedAccounts"–type system—*see infra* note TKTK), and the Fed replaced member banks' lost deposit funding with fairly priced discount window loans. From the standpoint of interest-rate risk, each member bank runs a matched book, obviating the need for member banks to engage in asset and liability management (ALM) to any meaningful extent. Rather than member banks' liability structures driving their asset portfolio decisions, portfolio characteristics determine the cost of their liabilities.

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for a governmental franchise.[49] From the government's standpoint, the fees flow to fiscal revenue as seigniorage, or revenue from money creation.[50] By virtue of these fees, member banks are constrained to a fair return on capital.[51]

Portfolio constraints. Member banks are confined to diversified portfolios of dollar-denominated loans and bonds representing claims on U.S. domestic borrowers. As implied by their limited corporate powers (see above), member banks may not invest outright in stocks, commodities, or real estate apart from their premises, although such assets may be taken as loan collateral (and may be held for a period after foreclosure).[52] Investments in the securities of any one issuer, and in loans to any one borrower, are capped as a percentage of the bank's capital.[53] The precise contours of these portfolio constraints can't be specified *a priori*; they depend on the quantity and composition of available loans and bonds in relation to the desired money supply. The monetary authority is authorized to adjust portfolio constraints as a form of credit control and to ensure that member banks allocate credit toward productive ends.[54] Member banks' portfolios are also shaped by their obligation to meet the credit needs of their entire communities (see below).

Derivatives. While member banks are permitted to enter into interest-rate swaps to hedge rate risk,[55] they are not allowed to engage in derivatives dealing (intermediation or market making) or take directional bets in the derivatives

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[49] *Cf.* Hockett and Omarova, *supra* note 28.

[50] *See* Bryan P. Cutsinger & William J. Luther, *Seigniorage Payments and the Federal Reserve's New Operating Regime*, 220 ECON. LETTERS 110880 (2022).

[51] *Cf.* RICKS, SITARAMAN, WELTON, AND MENAND, *supra* note 9 (describing how public utility ratemaking is designed to limit regulated firms to a fair return on invested capital). The monetary authority would also have the ability to cap employee compensation, dividends, and buybacks.

[52] *Cf.* 12 U.S.C. § 24(Seventh) (prohibiting national banks from owning stocks); *id.* (prohibiting national banks from dealing in and underwriting securities, subject to exceptions); 12 U.S.C. § 29 (limiting national banks' real estate holdings to properties "necessary for [the bank's] accommodation in the transaction of its business," subject to exceptions, including holdings for up to five years of real estate acquired in foreclosure).

[53] *Cf.* 12 U.S.C. § 24(Seventh) (limiting national banks' ownership of securities of any one issuer to 10% of regulatory capital); 12 U.S.C. § 84(a) (limiting national banks' loans to any one borrower to 15% of regulatory capital, or 25% when certain conditions are met).

[54] *Cf.* TANKUS, *supra* note 28, at 16-18. A similar result could be reached through adjustments to franchise fees. The system we describe is functionally similar to a system in which eligible collateral for central bank loans is liberalized to be coextensive with banks' permissible investments. *See* Rohan Grey, *Banking in a Digital Fiat Currency Regime*, *in* REGULATING BLOCKCHAIN: TECHNO-SOCIAL AND LEGAL CHALLENGES 169 (Philipp Hacker et al. eds., 2019).

[55] The need to hedge interest-rate risk would, however, be substantially lessened by the franchise fees described above.

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markets.[56] Derivatives dealing and speculation do not advance member banks' monetary function. Apart from loan commitments, member banks would not be in the business of offering guarantees or other forms of insurance.

Capital requirements. Member banks are subject to common equity capital requirements, which are calibrated together with portfolio constraints to both cabin the risk assumed by the government as guarantor and mitigate member banks' moral hazard incentives.[57] Each member bank's common equity represents a residual claim on the firm, absorbing "first loss" in the event of portfolio underperformance.

Supervision. Member banks are subject to ongoing safety and soundness supervision by a single supervisory authority.[58] Supervisors are empowered to evaluate member banks' balance sheets to ensure that their risk-taking is consistent with the public interest. Supervisors are required to conduct annual stress tests for member banks with at least $50 billion in assets, the results of which determine whether they are permitted to pay out capital through dividends or share buybacks.[59] Supervisors have the power to order banks that are operating in an unsafe or unsound manner to cease and desist from such practices.[60] Supervisors also have the power to hold individual bank executives accountable for unsafe or unsound practices, removing them from office or prohibiting them from working at member banks upon a finding of gross negligence (or in the case of a failed member bank, simple negligence).[61]

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[56] *Cf.* Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 716, 124 Stat. 1376, 1648–51 (2010) (the "swaps push-out"). This provision was later substantially repealed. *See* Consolidated and Further Continuing Appropriations Act, 2015, H.R. 83, 113th Cong. § 630 (2014). For background on the evolution of banks' derivatives activities prior to Dodd-Frank, see Saule T. Omarova, *The Quiet Metamorphosis: How Derivatives Changed the Business of Banking*, 63 U. MIAMI L. REV. 1041 (2009).

[57] *Cf.* 12 U.S.C.§ 1831o(c) (capital standards); 12 C.F.R. 3.1–3.701 (capital adequacy standards for national banks). Modern capital regulation is forbiddingly complex. *See* Matt Levine, "Relatively Simple Basel Leverage Rules Still Pretty Complicated," *Dealbreaker* (blog), June 26, 2013. Because member banks in the NNB system are barred from the derivatives business (see above) and structurally separated from securities dealing and other commercial activities (more on this below), capital requirements in the NNB system would be much simpler than they are today.

[58] *Cf.* Menand, *supra* note 17.

[59] *Cf.* 12 U.S.C. § 5365(i) (annual stress tests).

[60] *Cf.* 12 U.S.C. § 1818(b) (cease-and-desist proceedings).

[61] *Id.* at § 1818(e) (removal and prohibition authority). *Cf.* Da Lin & Lev Menand, *The Banker Removal Power*, 108 VA. L. REV. 1 (2022); Fact Sheet: President Biden Urges Congressional Action to Strengthen Accountability for Senior Bank Executives, The White House, Mar. 17, 2023.

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3. Ownership and Control

Because of their unique role in the economy, member banks' ownership and control are subject to special limitations.

Corporate governance. Each member bank is managed by or under the direction of a board of directors, whose members are elected by the corporation's shareholders. The monetary authority appoints an observer to the board who sits on the audit, compensation, and risk committees.[62] All board members owe fiduciary duties of care and loyalty to the corporation and its shareholders, and they are entitled, in considering the best interests of the corporation, to consider the effects of their actions on all groups affected, including shareholders, employees, suppliers, customers, creditors (including the federal government as guarantor—see above), and the communities in which the bank operates.[63]

Share ownership. No person, entity, or group is permitted to own or control, directly or indirectly, more than 5% of a member bank's voting shares. Shares owned by non-U.S. citizens, or by entities controlled by non-U.S. citizens, are not entitled to vote.[64] Member bank mergers require the approval of the monetary authority.[65]

Conglomeration and affiliation. The NNB system separates banking from commerce—a venerable principle of American banking law.[66] This principle is realized

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[62] *Cf.* An Act to Incorporate the Subscribers to the Bank of the United States, ch. 44, 3 Stat. 266 (1816) (providing that five of the bank's twenty-five directors were to be appointed by the President of the United States with the advice and consent of the Senate). *See also* Saule T. Omarova, *Bank Governance and Systemic Stability: The "Golden Share" Approach*, 68 ALABAMA L. REV. 1029 (2017) (proposing that governmental representatives be appointed to the boards of directors of systemically important banking organizations); Andrew Verstein, *The Corporate Governance of National Security*, 95 WASH. U. L. REV. 775 (2018) (detailing the federal government's representation on the boards of directors of many defense contractors).

[63] *Cf.* 15 Pa. Cons. Stat. 1715 (Pennsylvania's corporate constituency statute). *See also* Jonathan R. Macey & Maureen O'Hara, *The Corporate Governance of Banks*, 9 ECON. POLICY REV. 91 (2003) (arguing that the scope of bank directors' and officers' fiduciary duties should be broadened to include creditors); Joshua C. Macey & Aneil Kovvali, *The Corporate Governance of Public Utilities*, 40 YALE J. ON REG. (forthcoming 2023) (arguing that ratepayers, as residual claimants, should be represented on the boards of directors of public utilities).

[64] *Cf.* ALEXANDER HAMILTON, REPORT ON A NATIONAL BANK (1790; repr. 1810) ("It seems scarcely reconcileable with a due caution, to permit, that any but citizens should be eligible, as directors of a national bank, or that non-resident foreigners should be able to influence the appointment of directors, by the votes of their proxies."); Ganesh Sitaraman, *The Regulation of Foreign Platforms*, 74 STAN. L. REV. 1073 (2022) (describing "a long history of legal restrictions on the foreign ownership of, control of, and influence over platforms" in the United States).

[65] *Cf.* Bank Merger Act of 1960, Pub. L. No. 86-463, 74 Stat. 129, codified as amended at 12 U.S.C. § 1828(c) (requiring regulatory approval of bank mergers).

[66] *See, e.g.*, Bernard Shull, *The Separation of Banking and Commerce in the United States: An Examination of the Principal Issues*, 8 FIN. MARKETS, INSTITUTIONS & INSTRUMENTS 1, 1 (1999).

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by, first, endowing member banks with only limited corporate powers (see above),[67] and second, prohibiting member banks from conglomerating or otherwise affiliating with commercial enterprises, including investment banks and insurance companies.[68] Member banks are monoline enterprises and, as noted above, each member bank's share ownership is dispersed.[69]

Insolvency. In the event of insolvency, member banks enter receivership, where their equity and long-term debt obligations are written down or extinguished while their bank-money liabilities are seamlessly honored.[70] After that, they are returned to investor ownership, presumptively under new management. In extreme cases—specifically, when the value of a member bank's assets falls very near to or below the value of its bank-money liabilities—the monetary authority or another organ of government may need to directly recapitalize the member bank.[71]

Concentration limit. To prevent undue concentration and ease the process of bank resolution, no member bank is permitted to maintain more than 3% of the total bank-money liabilities of the NNB system taken as a whole.[72]

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[67] *Cf.* Arnold Tours Inc. v. Camp, 472 F.2d 427 (1st Cir. 1972) (holding that national banks may not own and operate travel agencies); 12 U.S.C. § 24(Seventh) (specifying that national banks may not engage in securities dealing or underwriting, subject to narrow exceptions); 15 U.S.C. § 6712(a) (specifying that national banks may not engage in insurance underwriting, subject to narrow exceptions).

[68] *Cf.* Banking Act of 1933, Pub. L. No. 73-66, §§ 20–21, 48 Stat. 162, 188–89 (commonly known as the "Glass-Steagall" prohibition). This prohibition was repealed by the Gramm-Leach-Bliley Act, Pub. L. No. 106-102, § 101, 113 Stat. 1338, 1341 (1999).

[69] *Cf.* Menand, *supra* note 25; WILMARTH, *supra* note 26; Saule T. Omarova, *The Merchants of Wall Street: Banking, Commerce, and Commodities*, 98 MINN. L. REV. 265 (2013) (arguing that "the quiet transformation of U.S. [financial holding companies] into global merchants of physical commodities effectively nullifies the foundational principle of separation of banking from commerce"); Lina M. Khan, *The Separation of Platforms and Commerce*, 119 COLUM. L. REV. 973 (2019) (examining the history of and rationales for imposing structural separations between platform enterprises and other lines of business).

[70] *Cf.* 12 U.S.C. § 1821(d) (bank receivership).

[71] The cleanest way to do would be by supplying the member bank with a credit—recorded on its balance sheet as an asset—prospectively relieving it of the obligation to pay franchise fees in relation to some quantity of its bank-money liabilities.

[72] *See* Jonathan R. Macey & James P. Holdcroft, *Failure Is an Option: An Ersatz-Antitrust Approach to Financial Regulation*, 120 YALE L. J. 1368 (2011) (proposing a bright line limit on bank liabilities to ease the process of bank resolution). Although current law imposes a 10% deposit concentration limit, it applies only to growth through mergers and acquisitions, not organic growth. 12 U.S.C. § 1842(d)(2)(A). Dodd-Frank also added a 10% liabilities limit that similarly permits excess organic growth. 12 U.S.C. § 1852.

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4. Duties to the Public

Member banks in the NNB system are not mere for-profit businesses; they have affirmative obligations to the public.

Universal service. While all member banks are free to do business nationwide, each has a designated franchise area in which it is required to (1) establish physical branches in all communities, (2) open and maintain accounts for all comers (consistent with applicable law enforcement and national security laws[73]), and (3) distribute credit equitably.[74] (More on the third point below.) The monetary authority is directed to ensure that every community in the country falls within the franchise area of at least one member bank.[75]

Bank chartering. Member bank charters are granted selectively, under a "public convenience and necessity" standard, rather than to all qualified applicants.[76]

Consumer protection and antidiscrimination. With respect to consumer matters, member banks are subject to regulation and oversight by the Consumer Financial Protection Bureau (CFPB).[77] They must offer standardized bank account terms and may not require minimum balances or charge periodic account fees. Bank account customers may not be charged overdraft fees for debit card transactions unless they

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[73] *See* Raúl Carrillo, *Seeing Through Money: Democracy, Data Governance, and the Digital Dollar,* GEORGIA L. REV. (forthcoming 2023) (examining these laws and the harms that may result from large-scale financial data collection by the government).

[74] *Cf.* RICKS, SITARAMAN, WELTON, AND MENAND, *supra* note 9, at 26 (describing universal service mandates in public utility law).

[75] *Cf. id.* at 26-27 (describing the franchise area concept in public utility law).

[76] *Cf.* 12 C.F.R. § 5.20 (organizing a national bank). "Public convenience and necessity" (PCN) is the traditional standard in public utility law. *Cf. Id.*, at 86–87; William K. Jones, *Origins of the Certificate of Public Convenience and Necessity: Developments in the States, 1870–1920*, 79 COLUM. L. REV. 426 (1979). The PCN standard once applied to national bank chartering. *See* Bank Act of 1935, Pub. L. No. 74-305, § 101, 49 Stat. 684, 687–88; *see also* Bureau of the Comptroller of the Currency, Functions and Procedures, 11 Fed. Reg. 177A-13, 177A-14 (Sept. 11, 1946). Subsequent case law confirmed the OCC's broad discretion to reject charter applications based on PCN. *See* Camp v. Pitts, 411 U.S. 138 (1973). As late as 1976 the OCC asserted that "[t]he vital relationship of banking to the monetary system precludes complete free market operation with unlimited entry." Bank Charters, Branches, Conversions, Etc.: Policy Statements on Corporate Activities, 41 Fed. Reg. 47,964, 47,964 (Nov. 1, 1976). But in 1980 the OCC announced a major "shift in emphasis," relaxing its longstanding policy of considering PCN in its chartering decisions and concluding instead that "the marketplace normally is the best regulator of economic activity." Clarification and Revision of Charter Policy, 45 Fed. Reg. 68,603, 68,604 (Oct. 15, 1980). In 1991, Congress unceremoniously deleted the provision, originally adopted in the 1935 Act, requiring the OCC when chartering a new bank to consider PCN in its chartering decisions. *See* Federal Deposit Insurance Corporation Improvement Act of 1991, Pub. L. No. 102-242, § 115(b), 105 Stat. 1126, 2249.

[77] *Cf.* 12 U.S.C. §§ 5511 et seq. (powers of the Consumer Financial Protection Bureau).

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affirmatively opt into overdraftable accounts, and all overdraft fees are subject to direct rate regulation by the CFPB.[78] As for lending activities, member banks are subject to the full panoply of consumer financial protection and antidiscrimination requirements under federal law, including the Equal Credit Opportunity Act,[79] the Truth in Lending Act,[80] and relevant provisions of the Dodd-Frank Act.[81]

Lending to underserved communities. To prevent redlining, member banks are required to meet the credit needs of their entire communities, including low- and moderate-income neighborhoods, consistent with the safe and sound operations.[82] To be clear, the requirement to serve all communities does not obligate member banks to make loans to all applicants; member banks set loan terms and underwriting standards and make individual underwriting decisions (as under existing law). Rate regulation in the NNB system applies only to account-money rates, not lending rates. Because member banks have designated franchise areas, they cannot avoid their credit extension obligations by picking and choosing the areas in which they lend.[83]

Payments. Member banks are required to clear and settle payments for their customers in real time, including payments between customers using different member banks.[84] Central bank payment services (such as Fedwire, FedACH, and

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[78] *Cf.* Lauren E. Willis, *When Nudges Fail: Slippery Defaults*, 80 U. CHI. L. REV. 1155 (2013) (evaluating shortcomings in overdraft opt-in rules).

[79] 15 U.S.C. § 1691 et seq.

[80] 15 U.S.C. § 1601 et seq.

[81] *E.g.,* Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010), Title XIV (Mortgage Reform and Anti-Predatory Lending Act).

[82] *Cf.* Community Reinvestment Act of 1977, Pub. L. No. 95-128, 91 Stat. 1111 (1977), codified as amended at 12 U.S.C. §§ 2901 et seq. (requiring supervisory agencies to "assess [insured banks'] record of meeting the credit needs of its entire community, including low- and moderate-income neighborhoods, consistent with the safe and sound operation of such institution"). At present, banks are subject only to indirect sanctions for failing to meet the credit needs of the communities in which they operate. Under the NNB, banks would be subject to direct regulatory intervention.

[83] *Cf.* Consent Decree, United States. v. Chevy Chase Bank, No. 94-cv-2829 (D.D.C. Aug. 22, 1994) (bank considered racial composition of residential areas in determining where to market products and avoided doing business in African-American neighborhoods).

[84] *Cf.* Lael Brainard, Bd. of Governors, Federal Reserve System, *Delivering Faster Payments for All,* Remarks at the Federal Reserve Bank of Kansas City, Aug. 5, 2019; website of the FedNow℠ Service (launching 2023). Japan has had real-time payments since 1973 and many other countries, including South Africa, Singapore, India, and the United Kingdom, have transitioned to real-time retail payments in recent years. Faster Payments Task Force, *The U.S. Path to Faster Payments Final Report Part 1: The Faster Payments Task Force Approach*, App'x 3, at 30 (2017). *See also* Aaron Klein, *How the Fed Can Help Families Living Paycheck to Paycheck*, Brookings Institution, Nov. 22, 2017.

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FedNow) are supplied to member banks at no charge.[85] Debit and credit card swipe fees are subject to direct rate regulation by either the monetary authority or the CFPB.[86]

* * *

The foregoing components of the NNB system are paired with two key international features, which complement the unauthorized banking prohibition. First, the monetary authority is directed to seek to supplement the Basel capital and liquidity accords[87] with a new monetary sovereignty accord, under which countries mutually agree to prohibit domestic institutions from issuing account money or cash equivalents denominated in nondomestic currencies without the permission of the home jurisdiction. Second, the monetary authority is directed to deny dollar clearing services to foreign institutions that are known issuers of dollar-denominated account money or cash equivalents.[88] None of the foregoing would prevent foreign or domestic institutions from holding dollar balances or dollar-denominated cash equivalents for customers or others on a custodial or pass-through (i.e., fully reserved) basis.

B. Banks as Public Utilities

Member banks in the NNB system are investor-owned public utilities that provide essential infrastructure: the money supply. The federal government charters them to invest the money supply into circulation. Like other regulated utilities, they must offer their services on nondiscriminatory terms within their franchise areas

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[85] The Federal Reserve generally did not charge banks for Fedwire and other payment system services until Congress required it to do so in 1980. *See* Depository Institutions Deregulation and Monetary Control Act of 1980, Pub. L. No. 96-221, § 107, 94 Stat. 132, 140–41, 12 U.S.C. § 248a. For background, see Anatoli Kuprianov, *The Monetary Control Act and the Role of the Federal Reserve in the Interbank Clearing Market,* 71 FRBR ECON. Q. 23 (1985).

[86] *Cf.* Dodd-Frank Act § 1075, 15 U.S.C. § 1693o-2(a)(2) (the "Durbin Amendment") (requiring that debit card interchange transaction fees be "reasonable and proportional" to the cost incurred by the issuer with respect to the transaction); 12 C.F.R. § 235.3 (defining reasonable and proportional debit card interchange fees as no more than 21 cents plus the product of 5 basis points and the value of the transaction). For its first sixty years the Federal Reserve fought doggedly, and ultimately successfully, to end "nonpar banking," whereby some banks would charge fees to pay checks drawn upon them. For a brief history *see* Federal Reserve Bank of Minneapolis, *Developing an Efficient Payments System*, THE REGION (Aug. 1988); s*ee also* Hal Scott, *The Risk Fixers*, 91 HARV. L. REV. 737 (1978); THE FEDERAL RESERVE SYSTEM: PURPOSES AND FUNCTIONS 124–25 (10th ed. 2016). Congressman Carter Glass called the fees "tollgates upon the highways of commerce." Address by Hon. Carter Glass Before the American Bankers' Association at Richmond, Virginia, 53 CONG. REC. 14,085, 14,089 (1916). Interchange fees are just nonpar banking in a new guise.

[87] Basel Committee on Banking Supervision, *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems*, December 2010 (revised June 2011).

[88] *Cf.* RICKS, *supra* note 10.

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(though, of course, loan terms would be tailored to individual borrower characteristics) and may earn no more than a fair return on their invested capital.

By making loans and buying bonds in exchange for newly issued bank money, member banks augment the money supply and put downward pressure on market interest rates. By selling loans and bonds or allowing them to mature, they shrink the money supply and put upward pressure on market interest rates. Member banks operate within a "cap and trade" system, which places an adjustable cap on the supply of bank money. This is how reserve requirements worked in the past; as Jeremy Stein has written, under binding reserve requirements, reserve balances function as "tradeable permits" for "money creation."[89] The monetary authority may increase or decrease permit capacity (e.g., by injecting or draining reserves through open market operations, or else by adjusting the reserve requirement) in the conduct of monetary policy, thereby influencing interest rates, the price level, and overall economic activity.

Necessarily, member bank chartering is selective, just as entry is typically restricted in other public utility contexts. Supplying member bank charters to all applicants, even all qualified applicants, would make it difficult or impossible for existing member banks to manage their balance sheets, the aggregate size of which is determined not by market forces but by the monetary authority in the conduct of monetary policy. Excessively liberal chartering would also complicate supervision. Chartering decisions are therefore more in the nature of procurement or outsourcing than nondiscretionary permitting.[90]

The fair-return-on-invested-capital constraint is implemented through the franchise fees described above, by virtue of which the returns from each member bank's asset portfolio are split between the member bank and the federal government. The member bank's earnings net of the fee flow to shareholders' equity. The government's fee stream from the member banking system constitutes seigniorage.

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[89] *Cf.* Jeremy C. Stein, *Monetary Policy as Financial Stability Regulation*, 127 Q. J. ECON. 57 (2012). Longstanding state and federal doctrine reflects an outsourcing perspective to bank chartering and regulation. *See, e.g.*, Shaake v. Dolley, 118 P. 80, 83 (Kan. 1911):

> [B]anking has ceased to be, if it ever was, a matter of private concern only, like the business of the merchant, and for all purposes of legislative regulation and control it may be said to be "affected with a public interest." The public patronage which the banker invites and receives is of such a character that he becomes in a just sense a trustee of the fiscal affairs of the people and of the state.

See also Noble State Bank v. Haskell, 219 U.S. 104 (1911) (explaining that as "checks replace currency in daily business" . . . "[the government may] tak[e] the whole business of banking under its control . . . [and that it] may go from regulation to prohibition except upon such conditions as it may prescribe").

[90] *Cf.* Harold Demsetz, *Why Regulate Utilities?*, 11 J. L. & ECON. 55 (1968) (comparing public utility regulation to franchise bidding or outsourcing). The number of entities among which the banking system's aggregate portfolio is split also has implications for the cost of the government's guarantee. *See* Ricks, *supra* note 28.

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Whereas today the government earns seigniorage only on the *central* bank's assets, in the NNB system it also receives seigniorage from money creation by its agents, the member banks.

This arrangement flows logically from the system's structure. If the government had chartered no investor-owned banks at all—if it had retained a monopoly on money creation, say through a central bank—then it would have accrued all the revenue from money creation. The government's decision to enlist private agents in no way obligates it to forfeit the entirety of the associated revenue stream. On the contrary, it should forfeit no more revenue than is necessary to induce its agents to do a good job. In the NNB system, as in all franchising arrangements, revenues are split between the franchisor, which bestows a valuable privilege, and its franchisees. In the absence of franchise fees, member banks would earn windfall profits: because account money and cash equivalents satisfy money demand, they are a source of very cheap funding to their issuers.[91] The fair fee thus causes banks to disgorge what would otherwise amount to privately captured seigniorage.[92]

It bears emphasizing that the NNB system recognizes only its specially chartered, money-issuing banks, not other financial institutions, as public utilities.[93] Member banks in the NNB system are presumably just one part of a diverse financial sector. Myriad other types of financial enterprises—securities firms (broker-dealers), finance companies, insurance companies, mutual funds, hedge funds, etc.—still exist, and the NNB system has no necessary implications for their regulation apart from barring them from (1) issuing dollar-denominated account money or cash equivalents

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[91] *See* Robin Greenwood, Samuel G. Hanson & Jeremy C. Stein, *A Comparative-Advantage Approach to Government Debt Maturity*, 70 J. FIN. 1683 (2015).

[92] *See id.* (describing the "seigniorage" accruing to financial institutions that issue money-like instruments); CHRISTINE DESAN, MAKING MONEY: COIN, CURRENCY, AND THE COMING OF CAPITALISM 414–21 (2014) (discussing private capture of "seigniorage"); Frank D. Graham, *Partial Reserve Money and the 100 Per Cent Proposal*, 26 AM. ECON. REV. 428, 430 (1936) (noting that banks earn "seigniorage profits"); Ulrich Bindseil, *Evaluating Monetary Policy Operational Frameworks*, ECONOMIC POLICY SYMPOSIUM PROCEEDINGS 190 (2016) (referring to "seigniorage income of banks"); REPORT FROM THE SELECT COMMITTEE ON THE HIGH PRICE OF BULLION 71–2 (1810) (noting during England's suspension of convertibility, which lasted from 1797 to 1821, that bank money creation, "enabled under the protection of the law . . . at a very trifling expense," was "prejudicial to the public interest" and that, barring some other remedy, "some mode ought to be devised of enabling the [English] State to participate much more largely in the profits accruing from" that issuance).

[93] This public utility approach to banks and not to other financial firms is consistent with longstanding U.S. historical practice. *See generally* H. W. MAGEE, A TREATISE ON THE LAW OF NATIONAL AND STATE BANKS INCLUDING THE CLEARING HOUSE AND TRUST COMPANIES AND BANK ACCEPTANCES (3d ed. 1921) ("the very nature of the business of a bank and its relationship to its customers and the public generally place it within the scope, or class, of a public utility institution; and, therefore, subject it directly to strict regulation and control of law").

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and (2) conglomerating or otherwise affiliating with member banks. (These two restrictions would, however, profoundly affect many such enterprises; see Part III.B). Member banks compete with nonbank financial institutions and other market participants in lending and bond-buying. By way of context, chartered U.S. depository institutions today hold only 33% of loans and 10% of debt securities in the United States, equating to 18% of the $93 trillion U.S. debt markets.[94] Under the NNB system, these figures could either grow or shrink, as member banks' aggregate balance sheet is a function of monetary policy. In any case, the NNB system contemplates regulation only of account-money rates, not lending rates.[95]

* * *

The NNB system follows through on the vision underlying the National Bank Act while also modernizing it to suit twenty-first century conditions. As with the NBA, the NNB system is an outsourcing scheme for money creation: member banks exercise delegated authority, issuing the money supply on the government's behalf.[96] And as with the NBA, the NNB system separates members banks from ordinary commercial activity, diffuses them geographically, and constrains them through ongoing, intensive public oversight. As indicated in the notes above, virtually every component of the NNB system—including the public-utility-style provisions just mentioned, such as selective chartering, cap-and-trade, and risk-based fees—has a direct analogue in U.S. banking law as it appears the books today or, if not, in the recent past, prior to the sweeping program of liberalization undertaken in the last few decades.

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[94] *See* BD. OF GOVERNORS OF THE FED. RSRV. SYS., FEDERAL RESERVE STATISTICAL RELEASE: FINANCIAL ACCOUNTS OF THE UNITED STATES (2022). The relevant data series are available in the Federal Reserve Economic Database under series codes BOGZ1FL764023005A, USCDIDSA, CBTCMAHDFS, ASTLL, ASTDSL, and TCMDO.

[95] The NNB system would not be inconsistent with also establishing a public option for bank account money, through direct public provisioning, as we proposed along with John Crawford many years ago. *See* John Crawford, Lev Menand & Morgan Ricks, *FedAccounts: Digital Dollars*, 89 GEO. WASH. L. REV. 113 (2021) (initially released in June 2018). In fact, the two proposals completement each other with a NNB improving the effectiveness of a public option and a public option raising the standards for NNB member banks. For another, complementary public banking perspective, see Saule T. Omarova, *The People's Ledger: How to Democratize Money and Finance the Economy*, 74 VAND. L. REV. 1231 (2021).

[96] *Cf.* FRIEDMAN, *supra* note 11, at 74 ("[The government] has a monopoly on the issuance of money, though it has chosen to give up part of its monopoly powers by permitting commercial banks to operate with fractional required reserves."); *id* at 8 (describing commercial banks as "issuers of money"); IRVING FISHER, 100% MONEY 44 (3d ed. 1945) ("[B]anks are virtually private mints.").

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II. WHY ESTABLISH THE NEW NATIONAL BANKING SYSTEM?

We are now several decades into a radical political and economic experiment. What happens when the leading global hegemon embarks on a sustained program of monetary liberalization, allowing unrestricted entry into the business of issuing dollar-based money substitutes, relaxing or dismantling laws that separate money creation from other financial activities, and permitting or even encouraging dollar-denominated private moneys to proliferate? What is the impact on our financial system, our economy, and our democracy?[97]

We think the answers are plain: recurring financial panics; ever-expanding too-big-to-fail institutions; a monetary-financial complex with the Federal Reserve at its center; loss of monetary control; rent extraction and upward redistribution; skyrocketing asset prices; financialization of the economy; and democratic erosion. The NNB system represents a different path. This Part enumerates the major rationales for transitioning from our current arrangement, dividing them into four categories: jurisdiction and stability; regulation and monetary policy; distribution and efficiency; and inclusion and political economy.

A. Jurisdiction and Stability

1. De-Privatizing Money

We currently live in a sort of monetary anarchy. Notwithstanding Congress's Constitutional power to create money and control its value[98] and its recognized power to restrain or prohibit the creation of money not issued under its own authority,[99] and despite recognition from even the most ardent laissez-faire advocates such as Milton Friedman that establishing a stable monetary framework is "an essential governmental function on a par with the provision of a stable legal framework,"[100] the U.S. government imposes no structural legal impediment to the financial sector's creation of unlimited quantities of short-term or demandable debt funding.

That the short-term and demandable debt of the financial sector is a form of money is almost a truism.[101] But because this fundamental point is so often elided in

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[97] This paragraph echoes the opening paragraph of TIM WU, THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GILDED AGE (2018). Our project bears a similarity to his.

[98] U.S. CONST. Art I, sec. 8, cl. 5.

[99] Veazie Bank v. Fenno, 75 U.S. 533 (1869).

[100] FRIEDMAN, *supra* note 11, at 8 (1960). *See also* James M. Buchanan, *The Constitutionalization of Money,* 30 CATO J. 251 (2010) ("The market will not work effectively with monetary anarchy.").

[101] It wasn't always. *See* Charles F. Dunbar, *Deposits as Currency,* 1 Q. J. ECON. 401 (1887) ("The ease with which we ignore deposits as a part of the currency seems the more remarkable, when we consider that few men in business fail to recognize the true meaning of this form of bank

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contemporary scholarship, we feel the need to underscore it. We are far from the first to do so. John Maynard Keynes suggested "treat[ing] as *money*" debt instruments with a maturity not "in excess of three months."[102] Another great English economist, John Hicks, wrote that "[b]ills of short maturity" have "moneyness."[103] Henry Simons, who founded the Chicago School of economics, opined that certain "short-term debts . . . are . . . closely akin to money and demand deposits."[104] Chicago economists Milton Friedman and Anna Schwartz said that short-term debt can have "moneyness."[105] Yale economist Gary Gorton has referred to various types of financial sector short-term debt as "forms of money" and "private money."[106] Harvard economist and former member of the Federal Reserve's Board of Governors Jeremy Stein has said that the financial sector's short-term debt obligations are "private money" and offer "monetary services" and that they have "money-ness."[107] Chicago economists Robert Lucas and Nancy Stokey observe that repo (a major type of financial sector short-term debt, described below) is "close to cash" and performs for large institutions "the same function that commercial banks perform for smaller depositors."[108] Paul Krugman says that "repo and other kinds of short-maturity obligations are, from an economic point of view, more or less equivalent to deposits."[109] Chicago economist John Cochrane says "short-term debt *is* money."[110] Longtime Fed economist Marvin Goodfriend said that short-term debt instruments offer "monetary services."[111] Legal scholars have referred to the

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liability; that it is a circulating medium in as true a sense and in the same sense as the bank-note, and that, like the bank-note, it is created by the bank and for the same purposes.").

[102] JOHN MAYNARD KEYNES, THE GENERAL THEORY OF EMPLOYMENT, INTEREST, AND MONEY 167n1 (1936) (emphasis in original).

[103] JOHN HICKS, VALUE AND CAPITAL 163 (2nd ed. 1946).

[104] Henry C. Simons, *A Positive Program for Laissez Faire: Some Proposals for a Liberal Economic Policy (1934) in* ECONOMIC POLICY FOR A FREE SOCIETY 320 n.7 (1948).

[105] MILTON FRIEDMAN & ANNA SCHWARTZ, MONETARY STATISTICS OF THE UNITED STATES 104 (1970).

[106] GARY B. GORTON, MISUNDERSTANDING FINANCIAL CRISES: WHY WE DON'T SEE THEM COMING 5 (2012); Gary B. Gorton & Guillermo Ordoñez, *Collateral Crises*, 104 AM. ECON. REV. 343, 343 (2014).

[107] Stein, *supra* note 91; *see also* Greenwood, Hanson, and Stein, *supra* note 93, at 1684 (noting that "financial intermediaries engage in private money creation . . . when they issue safe short-term debt that is collateralized by long-term risky assets").

[108] Robert E. Lucas Jr. & Nancy L. Stokey, *Liquidity Crises: Understanding Sources and Limiting Consequences; A Theoretical Framework*, THE REGION, June 2011, at 6, 12.

[109] Paul Krugman, "The Amnesiac Economy," *The Conscience of a Liberal* (blog), *New York Times*, October 26, 2011.

[110] John H. Cochrane, *Toward a Run-Free Financial System, in* ACROSS THE GREAT DIVIDE: NEW PERSPECTIVES ON THE FINANCIAL CRISIS 224 (Martin Neil Baily & John B. Taylor eds., 2014) (emphasis in original).

[111] Marvin Goodfriend, *Money Markets*, 2011 ANN. REV. FIN. ECON. 120.

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financial sector's short-term debt as "nondeposit deposits."[112] In a 2016 speech, the Fed's vice chair for supervision, Daniel Tarullo, said the financial sector's short-term debt instruments exhibit "features sometimes characterized as 'money-like'" and that their "private creation . . . is, at least to some degree, the creation of money outside of the operations of central banks or of depository institutions subject to reserve requirements and other regulations."[113] In keeping with this widespread and longtime understanding, major categories of short-term financial-sector debt are included in central banks' measures of the "broad" money supply,[114] and U.S. generally accepted accounting principles recognize liquid short-term debts as "cash equivalents," specifying that "[g]enerally, only investments with original maturities of three months or less qualify."[115]

In the heyday of the New Deal banking system, from 1933 to around 1980, the private money markets were small; explicitly or implicitly insured deposits dominated the U.S. money supply, and their issuance was controlled. But private moneys steadily grew—in some cases, nurtured by the Federal Reserve and other financial regulators[116]—and by the eve of the Global Financial Crisis their dollar value far exceeded the quantity of public money (cash and insured deposits) outstanding.[117] The money supply, in other words, had been largely privatized.

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[112] Jonathan R. Macey & Geoffrey P. Miller, *Nondeposit Deposits and the Future of Bank Regulation*, 91 MICH. L. REV. 237 (1992).

[113] Daniel K. Tarullo, Opening Remarks, Center for American Progress and Americans for Financial Reform, Conference on Exploring Shadow Banking: Can the Nation Avoid the Next Crisis? (July 12, 2016).

[114] According to the European Central Bank, ""Broad money . . . [includes] marketable instruments issued by the [monetary-financial institution (MFI)] sector. Certain money market instruments, in particular money market fund (MMF) shares/units and repurchase agreements are included in this aggregate. A high degree of liquidity and price certainty make these instruments close substitutes for deposits." The ECB also refers to MFIs located in the euro area as the "money-issuing sector." *See* ECB website. The Federal Reserve stopped reporting its measure of broad money in 2006.

[115] Financial Accounting Standards Board, "Statement of Cash Flows," Statement of Financial Accounting Standards 95, §§ 8–9. *See also id.* ("Examples of items commonly considered to be cash equivalents are Treasury bills, commercial paper, money market funds, and federal funds sold (for an enterprise with banking operations). Cash purchases and sales of those investments generally are part of the enterprise's cash management activities rather than part of its operating, investing, and financing activities, and details of those transactions need not be reported in a statement of cash flows."). The corresponding definition under international accounting standards is similar. *See* International Accounting Standards Board, "Statement of Cash Flows," International Accounting Standard 7, § 7.

[116] *See infra* at text accompanying notes 233, 234.

[117] *See* RICKS, *supra* note 8, at 33-35; KATHARINA PISTOR, THE CODE OF CAPITAL: HOW THE LAW CREATES WEALTH AND INEQUALITY 77-107 (2019); PERRY MEHRLING, THE NEW LOMBARD STREET: HOW THE FED BECAME THE DEALER OF LAST RESORT (2010); BOARD OF GOVERNORS OF THE FEDERAL

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Little has changed since then. The U.S. government has abdicated control over the money supply, and the consequences, sketched below, are disastrous: recurring financial panics, bailouts for large institutions, exorbitant subsidies for finance, a bloated and growing financial sector, ever-inflating asset prices, and corrosion of democracy. By confining money creation to member banks, controlling the amount of money they issue, and guaranteeing bank money's soundness, the NNB system re-establishes public control over this basic public infrastructure.

2. Forestalling Macroeconomic Disasters

Private money is often bad money.[118] Appealing to some during good times because of its higher yield, the greater risk-taking typically associated with that yield leads private money holders to turn to other issuers during periods of economic uncertainty. Panics—generalized runs on short-term or demandable debt[119]—imperil the economy. This point, too, needs underscoring. Famed banking theorist Walter Bagehot wrote in 1873 that, in the event of a panic, "the public may be exposed to disaster."[120] Irving Fisher, a towering figure in twentieth-century macroeconomics, identified "the instability of demand deposits" as "the chief cause of both booms and depressions."[121] Simons wrote in 1936 that "the economy becomes exposed to catastrophic disturbances as soon as short-term borrowing develops on a large scale."[122] Another University of Chicago economist, who recently won the Nobel Prize, said that "financial crises are everywhere and always about short-term debt."[123]

Indeed, every major panic in U.S. history has been accompanied by a severe recession, and most of the worst recessions—including the Great Depression and the Great Recession—have been accompanied by panics. Analyzing banking panics in the United States prior to the Great Depression, economic historian Andrew Jalil found

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RESERVE SYSTEM, MONEY AND PAYMENTS: THE U.S. DOLLAR IN THE AGE OF DIGITAL TRANSFORMATION (2022) ("[T]he global financial crisis in 2008 was in large part a crisis of nonbank money.").

[118] *See* Dan Awrey, *Bad Money*, 106 CORNELL L. REV. 1 (2020); Gary B. Gorton & Jeffrey Zhang, *Taming Wildcat Stablecoins*, 90 U. CHI. L. REV. (forthcoming 2023) (arguing that privately produced moneys are not always accepted at par and are subject to runs).

[119] *Cf.* Ben S. Bernanke, "Reflections on a Year of Crisis," remarks at the Federal Reserve Bank of Kansas City's Annual Economic Symposium, Jackson Hole, WY, August 21, 2009 (defining a "panic" as "a generalized run by providers of short-term funding to a set of financial institutions").

[120] WALTER BAGEHOT, LOMBARD STREET: A DESCRIPTION OF THE MONEY MARKET [1873] (1999).

[121] IRVING FISHER, 100% MONEY, at xviii (1935).

[122] Henry C. Simons, *Rules versus Authorities in Monetary Policy* (1936), *in* ECONOMIC POLICY FOR A FREE SOCIETY 166, 172 (1948).

[123] Douglas W. Diamond, remarks at the Panel Discussion on Financial Regulation, Becker Friedman Institute, University of Chicago, November 6, 2010 (comment appears at the eight minute mark).

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that major banking panics had large, rapid, and highly persistent negative effects on output. He estimates that output declines by roughly ten percent in the year following a major banking panic and concludes that panics have been "a primary source of business-cycle fluctuations throughout U.S. history."[124] Milton Friedman and Anna Schwartz agreed: "Banking panics have occurred only during severe contractions and have greatly intensified such contractions, if indeed they have not been the primary factor converting what would otherwise have been mild contractions into severe ones."[125] They famously showed that the banking panics of the early 1930s bore substantial responsibility for the Great Depression in the United States.[126] Ben Bernanke has shown that the shadow money panic that started in 2007 was a principal driver of the ensuing output contraction and millions of job losses.[127] Other research corroborates his conclusion.[128]

Disastrous runs on private moneys are not unique to the United States; they have also driven deep recessions in other countries. Recent research suggests that banking panics in France in 1930 and 1931 led to a massive credit crunch and were major

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[124] Andrew J. Jalil, *A New History of Banking Panics in the United States, 1825–1929: Construction and Implications,* 7 AM. ECON. J.: MACROECONOMICS 295 (2015).

[125] MILTON FRIEDMAN & ANNA J. SCHWARTZ, A MONETARY HISTORY OF THE UNITED STATES, 1867–1960, at 441–42 (1963).

[126] Bernanke in 2002 described Friedman and Schwartz's achievement as "nothing less than to provide what has become the leading and most persuasive explanation of the worst economic disaster in American history." Ben S. Bernanke, "On Milton Friedman's Ninetieth Birthday," address at the Conference to Honor Milton Friedman, University of Chicago, Nov. 8, 2002. *See also* Gary Richardson & William Troost, *Monetary Intervention Mitigated Banking Panics during the Great Depression: Quasi-Experimental Evidence from a Federal Reserve District Border, 1929–1933*, 117 J. POL. ECON. 1070 (2009) (showing that central bank intervention supported real economic activity during the Great Depression). Subsequent research on the Depression has stressed the causal role of the international gold standard. *See, e.g.,* BARRY EICHENGREEN, GOLDEN FETTERS: THE GOLD STANDARD AND THE GREAT DEPRESSION, 1919–1939, at 18 (1992). The two explanations are complementary.

[127] *See* Bernanke, *supra* note 13.

[128] *See, e.g.,* Mark Gertler & Simon Gilchrist, *What Happened: Financial Factors in the Great Recession*, 32 J. ECON. PERSP. 3 (2018) (concluding that "the recession would have been far milder in the absence of the financial turmoil"); Gabriel Chodorow-Reich, *The Employment Effects of Credit Market Disruptions: Firm-Level Evidence from the 2008–9 Financial Crisis*, 129 Q. J. ECON. 1 (2014) (finding that "withdrawal of credit accounts for between one-third and one-half of the employment decline at small and medium firms in [his sample of 2,000 nonfinancial firms] in the year following the Lehman bankruptcy."). Other research emphasizes the role of household debt loads in driving the protracted slump. ATIF MIAN & AMIR SUFI, HOUSE OF DEBT: HOW THEY (AND YOU) CAUSED THE GREAT RECESSION, AND HOW WE CAN PREVENT IT FROM HAPPENING AGAIN (2015). Although there may appear to be some tension between these views, we see them as compatible and even complementary: the panic appears to have been the main driver of the contraction, while high debt levels (especially household debt) held back the recovery.

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drivers of its Great Depression.[129] Proto-shadow banking panics caused deep, sharp recessions in Sweden and Finland in the early 1990s.[130] Japan experienced a major shadow banking panic in late 1997,[131] likely precipitating the acute recession that occurred immediately thereafter.[132] By ruling out defaultable moneys, the NNB system largely eliminates the leading source of macroeconomic catastrophes.[133]

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[129] *See* Patrice Baubeau, Eric Monnet, Angelo Riva & Stefano Ungaro, *Flight-to-Safety and the Credit Crunch: A New History of the Banking Crisis in France During the Great Depression*, Banque de France working paper 698 (Nov. 2018).

[130] *See* Stefan Ingves & Göran Lind, *Stockholm Solutions*, 45 FINANCE AND DEVELOPMENT 21 (2008) ("In the Swedish crisis, finance companies played a role similar to that of SIVs."). *See also* Peter Englund & Vesa Vihriala, *Financial Crisis in Finland and Sweden: Similar But Not Quite the Same, in* THE GREAT FINANCIAL CRISIS IN FINLAND AND SWEDEN: THE NORDIC EXPERIENCE OF FINANCIAL LIBERALIZATION 90 (Lars Jonung, Jaakko Kiander & Pentti Vartia, eds., 2009) ("This was a sort of 'run'; rather than actively running to the bank to withdraw deposits the holders of maturing marknadsbevis, otherwise routinely reinvesting, now refused to renew funding in the face of an imminent bankruptcy risk. The crisis spread to the whole market for marknadsbevis, which dried up in a couple of days. . . . The crisis also spread to other segments of the money market with sharply increasing spreads between t-bills and certificates of deposit."). Klas Fregert & Jaakko Pehkonen, *The Crisis of the 1990s and Unemployment in Finland and Sweden, in* THE GREAT FINANCIAL CRISIS IN FINLAND AND SWEDEN, at 133 (non-employment rate rose by 10 percentage points in Sweden and 15 percentage points in Finland).

[131] *See* Yasuyuki Fuchita & Kei Kodachi, *Managing Systemwide Financial Crises: Some Lessons from Japan since 1990, in* ROCKY TIMES: NEW PERSPECTIVES ON FINANCIAL STABILITY (Yasuyuki Fuchita, Richard Herring & Robert Litan, eds., 2012) 11–58 (describing "the first default ever in Japan's money market" in late 1997, leading to a broad run that "radically reduced the provision of credit to market participants and shrank liquidity throughout the financial system"); Hiroshi Nakaso, *The Financial Crisis in Japan during the 1990s: How the Bank of Japan Responded and the Lessons Learnt*, Bank for International Settlements Papers 6, Oct. 2001 (noting that the default "paralysed the entire interbank market" and in short order "it was as though the financial system was starting to melt down"); Masazumi Hattori, Koji Koyama & Tatsuya Yonetani, *Analysis of Credit Spread in Japan's Corporate Bond Market*, Bank for International Settlements Papers 5, Oct. 2001 (describing the contemporaneous widening of short-term funding spreads and corporate bond spreads). *See also* Christina D. Romer & David H. Romer, *New Evidence on the Aftermath of Financial Crises in Advanced Countries*, 107 AM. ECON. REV. 3072 (2017) (constructing a new series on financial distress in 24 OECD countries for the period 1967–2007 and finding that Japan's 1997–99 experience was by far the worst episode of financial distress—and the only "extreme" crisis—in their entire sample before 2007).

[132] *See* Adam Posen, *It Takes More Than a Bubble to Become Japan, in* ASSET PRICES AND MONETARY POLICY (Anthony Richards & Tim Robinson, eds., 2003); Tamim Bayoumi, *The Morning After: Explaining the Slowdown in Japanese Growth in the 1990s,* 53 J. INT'L ECON. 241, 242 (2001) ("[I]n 1997 the economy entered into its first recession since the early 1970s.").

[133] *Cf.* FRIEDMAN, *supra* note 11, at 38 (1960) ("[F]ederal deposit insurance has performed a signal service in rendering the banking system panic-proof."); FRIEDMAN & SCHWARTZ, *supra* note 105, at 441 ("Had federal deposit insurance been in existence in 1930, it would very likely have prevented . . . the tragic sequence of events" that followed).

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3. Restoring Monetary Sovereignty

Conjoined to the privatization of the money supply has been the U.S. government's loss of control of the creation of U.S. dollar-denominated money substitutes in the international sphere. Today, overseas financial entities issue dollar-denominated cash equivalents, called Eurodollars, largely outside the reach of U.S. money and banking authorities. Eurodollars are often issued to U.S.-based institutions (such as money market mutual funds) and the bulk of the proceeds is typically invested back into the U.S. credit markets (such as Treasury and agency securities). This is money creation: as Milton Friedman pointed out, "the existence of the Euro-dollar market increases the total amount of dollar balances available to be held by nonbanks throughout the world for any given amount of money (currency plus deposits at Federal Reserve Banks) created by the Federal Reserve System"[134]

The Eurodollar market is enormous. By one estimate it reached a peak size of $4.9 trillion in 2007, making Eurodollars the single largest category of dollar money-claims on the eve of the financial crisis—bigger even than insured deposits ($4.3 trillion) and short-term repo ($4.1 trillion).[135] It is also highly unstable and poses a threat to the domestic U.S. economy.[136] Like the rest of the private money markets, it experienced severe stress during the Global Financial Crisis. In response, the Federal Reserve provided a staggering $583 billion (peak level) in U.S. dollar loans to *foreign* institutions to support their short-term dollar funding. It provided this support indirectly, through liquidity swaps with foreign central banks. These liquidity swaps were the single largest Fed facility in the crisis, as measured by peak levels,[137] and they were reactivated during the COVID crisis, reaching a peak level of about $450 billion.[138]

Traditionally, money creation has been viewed as a matter of national sovereignty.[139] The NNB system would bring this traditional conception back to reality:

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[134] Milton Friedman, *The Euro-Dollar Market: Some First Principles*, FEDERAL RESERVE BANK OF ST. LOUIS REV., July 1971.

[135] *See* RICKS, *supra* note 10, at 238.

[136] Victoria Ivashina, David S. Scharfstein & Jeremy C. Stein, *Dollar Funding and the Lending Behavior of Global Banks*, 130 Q. J. ECON. 1278 (2015).

[137] The swaps have been reactivated repeatedly since then, specifically during Europe's sovereign debt crisis in 2011, the COVID crisis in 2020, and just after the SVB/Signature rescue in 2023. For an analysis of their use and effects in the 2011 episode—which implicated U.S. money funds, which were heavily exposed to Eurodollars—see Sergey Chernenko & Adi Sunderam, *Frictions in Shadow Banking: Evidence from the Lending Behavior of Money Market Mutual Funds*, 27 REV. FIN. STUD. 1717 (2014).

[138] *See* Lev Menand, *The Federal Reserve and the 2020 Economic and Financial Crisis*, 26 STAN. J. L. BUS. & FIN. 295, 323 (2021).

[139] *See* FRANCIS A. MANN, THE LEGAL ASPECT OF MONEY (5th ed. 1992), chap. 16; ROSA M. LASTRA, INTERNATIONAL FINANCIAL AND MONETARY LAW (2nd ed. 2015), chap. 1; Robert A. Mundell, *Monetary Unions and the Problem of Sovereignty*, 579 ANNALS OF THE AM. ACAD. OF POL. & SOC. SCI.

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the U.S. government would reassert control over the creation of dollar-denominated moneys and money substitutes. To be clear, the NNB system implicates only money *creation,* not use: it would not interfere with foreign central banks' purchases of U.S. Treasuries (the basis for the dollar's international "reserve currency" status) or with the use of the dollar in foreign trade.

B. Regulation and Monetary Policy

1. Curbing Too Big to Fail

The NNB system makes large financial firms much safer for failure, in two ways. First, it reduces their size.[140] It disallows conglomeration of member banks with Wall Street securities firms and other enterprises. It limits the ability of member banks to merge. And it withdraws public backstops that lead to financial sector bloat (see below), shrinking the size of nonbank financial firms. Second, it eliminates shadow banking, that is, the issuance of dollar-based money substitutes by entities other than chartered banks. Accordingly, nonbank financial firm failures become much less dangerous. Lehman Brothers's 2008 bankruptcy sent the U.S. economy into a tailspin not because it was a particularly important lender, nor because it was so interconnected with the rest of the financial system (though it was), but because it defaulted on its short-term borrowings, igniting a widespread panic in shadow money. By making the financial system much safer for failure, the NNB system would ameliorate Too Big to Fail.

The effects of this shift should not be understated. Increasing the likelihood that both large banks and large nonbanks can be resolved substantially improves the oversight exercised by market actors. Arguably, part of the point of outsourcing money augmentation to investor-owned firms is to harness the expertise and influence of these market participants. Our current arrangement blunts this potential source of good governance by curtailing the sorts of scenarios in which these investors will face substantial losses. Similarly, incentives in the nonbank financial sector should also improve, as these firms' stakeholders can no longer expect ad hoc government support.[141]

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123 (2002); Gary B. Gorton & Jeffrey Y. Zhang, *Protecting the Sovereign's Money Monopoly*, working paper, July 14, 2022.

[140] *Cf.* Michael J. Hsu, Financial Stability and Large Bank Resolvability, Remarks Before the Wharton Financial Regulation Conference, Apr. 1, 2022 (raising questions about the ability of the FDIC to resolve today's large regional banks in ways consistent with the public interest).

[141] *See* Macey and Holdcroft, *supra* note 74.

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2. *Reducing Costs and Streamlining Regulations*

The NNB system would open up opportunities to rationalize and simplify the existing U.S. financial regulatory regime. Much of the complexity of existing capital and liquidity regulation is a product of the complex activities permitted under current interpretations of bank powers. Because member banks under the NNB system are limited to investing in diversified portfolios of credit assets, the task of regulators and supervisors would be dramatically simplified. Many off balance sheet items, which create difficult compliance and oversight burdens, would simply no longer exist inside the banking system proper. Member banks deposits are nondefaultable, largely eliminating run risk. Stress testing would be streamlined, as much or all of member banks' interest rate risk would shift via franchise fees from the banking system to the central bank, leaving bankers and supervisors to focus on managing credit risks. Affiliations are largely eliminated, obviating the need for the accompanying rulebook. Consumer protection oversight can be simplified as member banks are prohibited from charging for certain services or, in the case of services directly appurtenant to account money (such as overdraft fees, 75 percent of which are paid by only eight percent of bank customers[142]), their rates are expressly regulated. Many expensive third party service providers, such as those brokering deposits or cashing checks, would no longer be needed. Money augmentation would come out of the shadows into the deposit form, alleviating burdens to track and regulate various unstable money substitutes.

3. *Improving Macroeconomic Management*

The NNB system would improve both the efficacy and the distributional fairness of monetary policy. Since 2008, the Fed has influenced monetary expansion not by keeping bank reserves scarce and adjusting their supply, but by paying interest to banks on their central bank accounts.[143] These payments are called interest on reserves (IOR).

In theory IOR "passes through" to market interest rates, allowing the Fed to control inflation and influence macroeconomic conditions. Pass-through, however, has been lackluster: for the great majority of the IOR era, the federal funds rate has remained below the IOR rate, and other money market rates have fallen even lower. Weak pass-through raises two problems. First, it impedes the Fed's ability to affect the economy as desired. Second, it pads bank profits without regard to their effectiveness in carrying out their business functions. Entities receiving IOR but not passing it

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[142] CONSUMER FINANCIAL PROTECTION BUREAU, DATA POINT: CHECKING ACCOUNT OVERDRAFT (2014).

[143] In 2006, Congress authorized the Federal Reserve to begin paying interest on reserves beginning October 1, 2011. *See* Financial Services Regulatory Relief Act of 2006, Pub. L. No. 109-351, §§ 201 & 203, 120 Stat. 1966, 1968–69. The Emergency Economic Stabilization Act of 2008 accelerated the effective date to October 1, 2008. *See* Pub. L. No. 110-343, § 128, 122 Stat. 3765, 3796.

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through earn economic rents.[144] The Fed has sought to address the first problem (efficacy) by paying interest to a broader set of financial institutions.[145] But there are reasons to think this only makes the second problem (distribution) worse.[146] The NNB system would ameliorate and potentially eliminate the pass-through problem, because the monetary authority would directly administer the interest rate paid on bank money.

The NNB system would improve monetary policy in another way as well. It would allow the Fed to avoid "financial dominance"—the notion, real or imagined, that the Fed is limited in its ability to raise interest rates by the inability of the financial system to withstand the increases. Since under current conditions the Fed must always concern itself with the disorderly contraction of the money supply—an ever-present possibility—it cannot change monetary policy in a way that would destabilize the solvency or liquidity of existing money issuers. By eliminating shadow money, the NNB system would allow the Fed to adjust interest rates without fear of inducing runs or panics.

C. Distribution and Efficiency

The NNB system would end regressive subsidies to the financial sector and restore a more level playing field for both nonfinancial businesses and nonbank financial firms.

1. Stopping Upward Redistribution

Today's liberalized and backstopped system of money and banking leads to upward redistribution—rent extraction by the financial industry, accruing

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[144] *See* Ann Saphir, *Yellen Draws Fire for Fed Policy to Pay Banks*, REUTERS, Feb. 10, 2016; *Is the Federal Reserve Giving Banks a $12 Billion Subsidy?* THE ECONOMIST, Mar. 18, 2017; Erin E. Syron Ferris, Soo Jeong Kim & Bernd Schlusche, *Confidence Interval Projections of the Federal Reserve Balance Sheet and Income*, FEDS Notes, Board of Governors of the Federal Reserve System, Jan. 13, 2017, fig. 5.

[145] *See* Board of Governors of the Federal Reserve System, Policy Tools: Overnight Reverse Repurchase Agreement Facility, available at www.federalreserve.gov; Josh Frost et al., *Overnight RRP Operations as a Monetary Policy Tool: Some Design Considerations*, Federal Reserve System, Finance and Econ. Discussion Series 2015-010, Feb. 19, 2015, chart 3.

[146] *See* Darrell Duffie & Arvind Krishnamurthy, *Pass-Through Efficiency in the Fed's New Monetary Policy Setting, in* ECONOMIC POLICY SYMPOSIUM PROCEEDINGS (Federal Reserve Bank of Kansas City, 2016) (developing a model in which an increase in average pass-through to all money markets is achieved with a reduction in pass-through to the average rate paid on bank deposits). *But see* Simon Potter, *Money Markets at a Crossroads: Policy Implementation at a Time of Structural Change*, Remarks at the Master of Applied Economics' Distinguished Speaker Series, University of California, Los Angeles, Apr. 5, 2017 (arguing that rate dispersion may be tied to idiosyncratic, one-off factors).

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predominately to financial institutions' already disproportionately well-off shareholders and professionals—in at least two ways. First, because cash equivalent instruments satisfy money demand, they are a source of extraordinarily cheap funding to their issuers.[147] In essence, private money issuers extract seigniorage revenue from the public by piggybacking on the state.[148] Economists have estimated that money creation accounts for two-thirds of the median bank's equity market value.[149] Second, these institutions' already cheap funding costs are further suppressed by implicit public backstops—a "liquidity put" written by the public sector for the benefit of private financial institutions—resulting in what are sometimes called "TBTF subsidies."[150] Both types of subsidies accrue ultimately to financial institutions' shareholders and highly paid professionals, as well as to certain institutional customers—for example, hedge funds, which rent broker-dealer balance sheet capacity through the dealers' prime brokerage divisions.[151] These effects are visible in compensation data. "Workers in finance earn[ed] the same education-adjusted wages as other workers until 1990, but by 2006 the premium [was] 50% on average. Top executive compensation in finance follows the same pattern and timing, where the premium reache[d] 250%."[152] A substantial proportion of the pay premium is attributable to economic rents.[153] The NNB system would reduce financial industry rent extraction, reversing existing wealth transfers from the public to the financial sector.

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[147] *See* Greenwood, Hanson, and Stein, *supra* note 93.

[148] *See supra* note 92.

[149] Mark Egan, Stefan Lewellen & Adi Sunderam, *The Cross-Section of Bank Value*, 35 REV. FIN. STUD. 2101 (2022).

[150] *See* International Monetary Fund, *How Big Is the Implicit Subsidy for Banks Considered Too Important to Fail?, in* GLOBAL FINANCIAL STABILITY REPORT: MOVING FROM LIQUIDITY- TO GROWTH-DRIVEN MARKETS (2014).

[151] Specifically, hedge funds hypothecate their securities to the dealers, which in turn rehypothecate them in the short-term repo markets. For a discussion of rehypothecation practices, see Manmohan Singh & James Aitken, *The (Sizable) Role of Rehypothecation in the Shadow Banking System*, IMF Working Paper 10/172, July 2010; Mark Mitchell & Todd Pulvino, *Arbitrage Crashes and the Speed of Capital*, 104 J. FIN. ECON. 469 (2012). *Cf.* Viral V. Acharya & Bruce Tuckman, *Unintended Consequences of LOLR Facilities: The Case of Illiquid Leverage*, 62 IMF ECON. REV. 645 (2014) (noting that broker-dealer customers, such as hedge funds, may have "indirect" access to the lender of last resort).

[152] Thomas Philippon & Ariell Reshef, *Wages and Human Capital in the U.S. Finance Industry: 1909–2006*, 127 Q. J. ECON. 1551 (2012).

[153] *See id.; see also* Josh Bivens & Lawrence Mishel, *The Pay of Corporate Executives and Financial Professionals as Evidence of Rents in Top 1 Percent Incomes*, 27 J. ECON. PERSP. 57 (2013).

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2. *Countering the Economy's Overfinancialization*

The growth of private money fuels financialization: the increasing size and importance of financial institutions and financial markets relative to the overall economy. Theory suggests that implicit public backstops should make the financial sector larger and more profitable. Empirical evidence corroborates this prediction. U.S. "securities industry output" accelerated sharply in the early 1990s,[154] when Congress liberalized the Fed's emergency lending powers to cover the repo and other runnable liabilities of Wall Street securities firms.[155] Implicit backstops are a leading culprit in this financial bloat. "[I]t is an open question," write two leading researchers on financial crises, "to what extent implicit government insurance and the prospect of rescue operations have . . . contributed to the spectacular growth of finance and leverage within the system, creating more of the very hazards they were intended to solve."[156] Profitability has also soared in recent decades, as private moneys have grown: "Financial sector profits grew from less than 10 percent of total corporate profits in 1950 to nearly 30 percent of total corporate profits in 2013."[157] Researchers have also found that a bloated financial sector can become a drag on the growth of the rest of the economy.[158] By withdrawing implicit backstops, capping money creation by member banks, and charging a fair price for the government's explicit guarantee of bank-money liabilities, the NNB system would counteract decades of overfinancialization in the American economy.

3. *Arresting Asset Price Inflation*

Sociologists have begun speaking of a shift toward an "asset economy" in which asset ownership (of stocks, real estate, etc.), rather than income, is the primary determinant of class and economic opportunity.[159]

The growth of private money has fueled asset price inflation in at least two ways. First, uncontrolled private money issuance represents a perverse form of excessively "easy money" that has driven long-term risk-free interest rates ever-lower

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[154] Robin Greenwood & David S. Scharfstein, *The Growth of Finance*, 27 J. ECON. PERSP. 9 (2013).

[155] *See infra* note 237 and accompanying text.

[156] Moritz Schularick & Alan M. Taylor, *Credit Booms Gone Bust: Monetary Policy, Leverage Cycles, and Financial Crises, 1870–2008*, 102 AM. ECON. REV. 1042 (2012).

[157] Mike Konczal & Nell Abernathy, *Defining Financialization*, Roosevelt Institute (2015).

[158] *See* Stephen G Cecchetti & Enisse Kharroubi, *Reassessing the Impact of Finance on Growth*, BIS Working Paper No. 381 (July 2012).

[159] *See* LISA ADKINS, MELINDA COOPER & MARTIJN KONINGS, THE ASSET ECONOMY (2020). *See also* Andrea Zaghini, *The CSPP at Work: Yield Heterogeneity and the Portfolio Rebalancing Channel*, 56 J. CORP. FIN. 282 (2019) (evaluating the effects of the European Central Bank's Corporate Sector Purchase Programme on corporate bond yields and prices).

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in recent decades, pushing asset prices upward in the process.[160] How money enters the economy affects relative prices.[161] Because institutional money markets are mostly collateralized by trading securities (including mortgage-back securities), the resulting price increases manifested for decades in asset markets, such as stocks and real estate, rather than markets for goods and services.[162] Funneling new money creation into asset markets instead of into supporting real economic activity mutes its stimulative impact, while further enriching the already wealthy.

Second, the government's implicit backstop of private moneys further pumps up asset prices. Studying the 1997 financial turmoil in Southeast Asia, Paul Krugman has argued that in the run-up to the crisis, "implicit government guarantee[s]" of the liabilities of financial companies that "borrowed short-term money" in effect "created inflation—not of goods but of asset prices."[163] Krugman develops a model in which "the problem of moral hazard in financial intermediaries . . . can lead to over-investment at the aggregate level" as well as "over-pricing of assets."[164] In his model, real estate and other assets take on "Pangloss values"—values that far exceed what they would be "in an undistorted economy."[165] "Throughout the region," he writes, "implicit government guarantees were helping underwrite investments that were both riskier and less promising than would have been undertaken without those guarantees, adding fuel to what would probably anyway have been an overheated speculative boom."[166] Krugman applies the same analysis to Japan's gigantic debt-fueled bubble in stocks and real estate in the 1980s. "Japan, where all the usual lines—between government and business, between banks and their clients, between what was and what was not subject to government guarantee—were especially blurry, was peculiarly ill suited to a loosened financial regime," he writes. "Japan's banks . . . helped inflate the bubble

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[160] Ben S. Bernanke, *Why are interest rates so low?*, BROOKINGS (2015); Ben S. Bernanke, *Why are interest rates so low, part 2: Secular stagnation*, BROOKINGS (2015); Ben S. Bernanke, *Why are interest rates so low, part 3: The Global Savings Glut*, BROOKINGS (2015). That low rates translate to high asset prices underlies the "Greenspan Put"—the idea that the Federal Reserve will cut rates to prop up stock prices if they fall too much. *See* Marcus Miller, Paul Weller & Lei Zhang, *Moral Hazard and the US Stock Market: Analysing the "Greenspan Put*," 112 ECON. J. C171 (2002).

[161] RICHARD CANTILLON, AN ESSAY ON ECONOMIC THEORY (1730).

[162] *Cf.* Alan Greenspan, Testimony before the Financial Crisis Inquiry Commission, April 7, 2010 (noting that a fall in long-term interest rates had driven asset prices, including house prices, "dramatically higher").

[163] Paul Krugman, "What Happened to Asia?" unpublished manuscript, January 1998, 3, 4, 2, 5–7.

[164] *Id.*

[165] *Id.*

[166] PAUL KRUGMAN, THE RETURN OF DEPRESSION ECONOMICS AND THE CRISIS OF 2008 (2009), at 82, 84.

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economy to grotesque proportions."[167] Loosened financial constraints combined with unpriced government guarantees, Krugman argues, also help explain the U.S. experience in the 1980s, in the run-up to the savings and loan debacle.

Scholars have pointed to similar explanations for other asset booms. Gary Gorton and Andrew Metrick examined the Federal Reserve's lender-of-last-resort policies in the 1920s, a period associated with rising household debt, a stock market frenzy, and skyrocketing real estate valuations. In the early part of the decade, hundreds of banks borrowed continuously from the Fed for extended periods and at interest rates below the market rate. According to Gorton and Metrick, "By the latter part of the 1920s, the Fed became concerned with trying to distinguish between 'speculative security loans' and loans for 'legitimate business.' In other words, was discount window credit being used to pump up stock market values? Was it leading to high growth in real estate prices, labeled a 'bubble' by some?"[168]

It takes no great leap of imagination to suppose that the U.S. government's demonstrated commitment to backstopping dollar-based private money markets may bear a large measure of responsibility for recent speculative excesses and upward price spirals in real estate, stocks (including "meme" stocks), cryptocurrencies, "non-fungible tokens," special-purpose acquisition companies, and so on. By stopping uncontrolled private money creation and withdrawing the associated implicit backstops, the NNB system would reduce the incidence and severity of speculative distortions in asset prices.

D. Inclusion and Political Economy

1. Serving All Americans

Many Americans are profoundly underserved by our existing money and banking infrastructure. Some do not even have access to basic banking services—a stunning fact for an advanced economy. Unlike Canada, France, Germany, Japan, and the United Kingdom, for example, where bank account penetration exceeds ninety-nine percent,[169] 4.5 percent of U.S. households are currently "unbanked," meaning that no individual in the household has a bank account.[170] Another 14.1 percent of U.S. households are "underbanked," meaning that, despite having a bank account, they rely

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[167] *Id.* at 62, 65–66.

[168] Gary B. Gorton & Andrew Metrick, *The Federal Reserve and Panic Prevention: The Roles of Financial Regulation and Lender of Last Resort*, 27 J. ECON. PERSP. 52 (2013).

[169] *See* World Bank, *Global Findex Database 2014: Measuring Financial Inclusion around the World* at 84.

[170] *See* 2021 FDIC NATIONAL SURVEY OF UNBANKED AND UNDERBANKED HOUSEHOLDS 1 ("This proportion represents approximately 5.9 million U.S. households.").

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to some degree on expensive nonbank services—such as nonbank money orders, check cashing, and payday loans.[171]

Un- and underbanked individuals use a mishmash of products and services to make and receive payments. They cash checks at retail stores (such as grocery, drug, or convenience stores) and standalone check-cashing businesses, typically paying 1.5 percent to 3.5 percent of face value.[172] They stand in line at bill pay centers to pay routine expenses in cash, and they use nonbank money orders, which are subject to fees. They transfer money domestically through expensive wire transfer outlets like Western Union and Moneygram. And increasingly they turn to prepaid debit cards. These cards have various types of fees[173] and can experience service interruptions, leaving users unable to access to their accounts for days at a time.[174]

The unbanked also save at a much lower rate,[175] in part because they do not have checking and savings accounts.[176] Low savings increases the likelihood that these households will need to use expensive nonbank credit products, such as payday loans, to cover cash shortfalls and emergency expenses.[177] Between interest and fees on short-term credit products and haircuts on earned income, the unbanked bear tens of billions of dollars in annual costs for financial services that wealthier households either get for free or do no need at all.[178]

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[171] *See id.* at 7 ("representing approximately 18.7 million households").

[172] *See* Michael S. Barr & Rebecca M. Blank, *Savings, Assets, and Banking among Low-Income Households: Introduction and Overview, in* INSUFFICIENT FUNDS 3 (Rebecca M. Blank and Michael S. Barr eds., 2009). Underbanked households, which are predominately low- or moderate-income, may resort to nonbank check cashing for reasons of convenience and immediacy of payment. *See* Rachel Schneider & Balafama Longjohn, *Beyond Check-cashing: An Examination of Consumer Demand and Business Innovation for Immediate Access to Check Funds,* Center for Financial Services Innovation, June 2014.

[173] For example, see the fee chart for the RushCard Prepaid Visa, available at www.rushcard.com/fee-chart. *See also* Prepaid Accounts Under the Electronic Fund Transfer Act (Regulation E) and the Truth in Lending Act (Regulation Z), 81 Fed. Reg. 83,934, 83,937, 83,954 (2016).

[174] *See* Liz Moyer & Jessica Silver-Greenberg, *RushCard Breakdown Affects Thousands of Prepaid Debit Card Users*, N.Y. TIMES, Oct. 20, 2015; Stacy Cowley, *Senators Press for Answers After Prepaid Debit Cards Fail*, N.Y. TIMES, June 28, 2016.

[175] *See* 2017 FDIC NATIONAL SURVEY OF UNBANKED AND UNDERBANKED HOUSEHOLDS 8 (17% of unbanked households saved compared with 56% of underbanked households and 62% of fully banked households).

[176] *See* MEHRSA BARADARAN, HOW THE OTHER HALF BANKS: EXCLUSION, EXPLOITATION, AND THE THREAT TO DEMOCRACY 213 (2015) (noting that countries with near-universal bank account penetration have substantially higher savings rates).

[177] *See* JOHN ARMOUR ET AL., PRINCIPLES OF FINANCIAL REGULATION 263 (2016) (estimating that 75% of payday loans are advanced to borrowers taking out upwards of eleven loans per year).

[178] *See* BARADARAN, *supra* note 178, at 212 (estimating $89 billion per year).

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Banks are not meeting these households' needs. Branch locations are less prevalent in low-income and minority communities and hours of operation in these areas are inconvenient for many users and prospective users.[179] Minimum balance requirements, account fees, and delays in check clearing deter low- and moderate-income households from opening or retaining accounts.[180]

Banks also find it unprofitable to service low-balance accounts.[181] Accordingly, when banks do maintain such accounts, they often use questionable tactics to generate revenue, such as overdraft "protection" fees averaging $35 per overdraft.[182] These fees exploit behavioral biases (among other things, many people who incur these fees do not expect to overdraw their account) and fall disproportionately on low-balance households.[183] In 2013, one in ten Americans reported paying such fees. Estimates of annual overdraft fees vary, ranging from $14 billion to as much as $32 billion.[184] Despite federal consumer protection regulation directed at overdraft abuses,[185] banks have succeed at convincing vulnerable consumers to "opt in" to these fees by using aggressive and sometimes misleading marketing practices.[186] And a history of overdrafts may preclude access to a bank account in the first place: banks use the private ChexSystem to screen out users who have had problems with checking accounts in the past.[187]

The NNB system would reset the relationship between banks and their customers. By fully executing on a public utility approach, the system would transform the mainstream, account-based money-and-payments system into public

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[179] *Cf.* MEHRSA BARADARAN, THE COLOR OF MONEY: BLACK BANKS AND THE RACIAL WEALTH GAP (2019).

[180] *See* 2021 FDIC NATIONAL SURVEY, *supra* note 170, at 3.

[181] *See* Aaron Klein, *America's Poor Subsidize Wealthier Consumers in a Vicious Income Inequality Cycle*, Brookings Institution, Feb. 6, 2018 (noting that it costs banks between $250 and $400 to establish a new checking account and another several hundred dollars to maintain it each year on average).

[182] *See* Pew Charitable Trusts, *Overdrawn: Persistent Confusion and Concern about Bank Overdraft Practices*, at 1 (2014).

[183] *See* Willis, *supra* note 80.

[184] *See* Klein, *supra* note 181 (estimating $14 billion in overdraft fees per year); LISA SERVON, THE UNBANKING OF AMERICA: HOW THE NEW MIDDLE CLASS SURVIVES 31 (2017) (estimating $32 billion in overdraft fees in 2014); Theresa Schmall & Eva Wolkowitz, *2016 Financially Underserved Market Size Study*, Center for Financial Services Innovation, Nov. 2016, at 12 (estimating $24 billion).

[185] 12 C.F.R. § 205.17.

[186] *See* Willis, *supra* note 80, at 1181–99.

[187] *See* James Marvin Pérez, *Blacklisted: The Unwarranted Divestment of Access to Bank Accounts*, 80 N.Y.U. L. REV. 1586 (2005).

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infrastructure.[188] It would disallow account fees and minimum balance requirements, and it would require member banks to make accounts and payment services available to all comers within their franchise areas without discrimination based on wealth.

Accordingly, the NNB system could attract millions of people who currently choose not to or are unable to maintain bank accounts, reducing the number of un- and underbanked households. These households would benefit significantly. Their payment-related costs would shrink, leaving them with more resources to meet other needs. And consumers' need for alternative credit suppliers would decrease—both because their savings would likely increase and because they would be more likely to qualify for credit cards and other forms of bank credit, which are (at least somewhat) cheaper and safer.

The benefits of inclusion would also extend to the people and businesses on the *other* side of payments, who will be better off transacting with fully banked individuals. For example, employers benefit from using direct deposit instead of cutting physical checks. Many businesses benefit from customers' use of convenient and reliable automatic bill pay. Government agencies benefit from easier administration of benefit transfers and tax refunds.[189] These network externalities are significant. Also, the NNB system would ease the oversight burden on state and federal consumer agencies and bank regulators, because overdraft abuses and other bank-account-related consumer protection issues would decline, as would usage of substandard credit products. Finally, by virtue of being an inclusive public utility, the NNB system would foster social cohesion and reduce marginalization. The National Bank Act's designers viewed

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[188] *See* Kenneth J. Arrow, *The Organization of Economic Activity: Issues Pertinent to the Choice of Market versus Non-market Allocations, in* ANALYSIS AND EVALUATION OF PUBLIC EXPENDITURES: THE PPP SYSTEM 48 (J. Econ. Comm. of Cong. 1969) ("The creation of money is in many respects an example of a public good."); DAVID LAIDLER, TAKING MONEY SERIOUSLY 47 (1990) ("[T]here is something of the nature of a public good about money."); CHARLES P. KINDLEBERGER & ROBERT Z. ALIBER, MANIAS, PANICS, AND CRASHES: A HISTORY OF FINANCIAL CRISES 19 (6th ed. 2011) ("Money is a public good."); John Cochrane, Remarks at the Federal Reserve Bank of Minneapolis, May 16, 2016 ("There's a few things that government has a natural monopoly in: national defense, courts, property rights, and I would say money."); Agustin Carstens, *The Future of Money and the Payment System: What Role for Central Banks?* 7, Bank for Int'l Settlements, Dec. 5, 2019 (describing the trust in the currency underpinned by the central bank as a public good "like the legal system"). For a contrary, laissez-faire perspective, see LAWRENCE H. WHITE, THE THEORY OF MONETARY INSTITUTIONS 88–119 (1999).

[189] For example, the U.S. Treasury makes over one billion payments per year valued at over $2 trillion. Each payment once cost Treasury $1, but because of increasing electronification payments now cost a fraction of that. *See* Electronic Invoicing: Why It Matters, Bureau of the Fiscal Service (2014).

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it as a means of binding the country together,[190] and the NNB system would similarly advance that goal.

2. Promoting Geographic Fairness

Community banks—those with assets under $10 billion—make up an ever shrinking portion of the banking system. Deregulation of rules governing geographic expansion by banks in the 1980s and '90s prompted rapid consolidation and the emergence of massive nationwide conglomerates like Wells Fargo, Bank of America, Citigroup, and JPMorgan Chase. Today, most of the largest financial institutions are based out of New York. The NNB system would help to reverse these trends, improving the competitive position of banks outside of a few major cities and increasing access to credit for local and regional businesses.

For well over a century, dispersion and decentralization were bywords of American industrial organization.[191] Bigness in business was seen as a danger to consumers and producers alike, as well as a threat to democratic self-government. Of particular concern, was concentration in banking and access to bank credit.[192] Since banks have the lowest funding costs of any lender—they have the ability, within constraints, to create new purchasing power—bank lending practices play an important role in shaping economic activity.[193] Businesses that can borrow from banks are more likely to get off the ground and succeed, and people that can use banks to finance real estate purchases are more likely to become homeowners.

Both theory and practice indicate that the size of banks and the location of their headquarters influence the sorts of borrowers that banks lend to. Small, local banks are more likely to lend to small, local businesses. This point was once so widely acknowledged that the Supreme Court, in holding that the Clayton Act applies to bank mergers, warned that "concentration in banking accelerates concentration generally."[194] Small businesses, the Court explained, borrow locally, and if they have

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[190] SALMON P. CHASE, REPORT OF THE SECRETARY OF THE TREASURY ON THE STATE OF THE FINANCES FOR THE YEAR ENDING JUNE 30, 1862, at 20 (1862) (suggesting that a national banking system might have forestalled "the wild treason of secession"); CONG. GLOBE, 37th Cong., 3d Sess. 843 (1863) (statement of Sen. Sherman) ("I believe [a national banking system] would have done very much indeed to maintain the Federal Government and to prevent the great crime of secession.").

[191] *See* MARK ROE, STRONG MANAGERS WEAK OWNERS: THE POLITICAL ROOTS OF AMERICAN CORPORATE FINANCE (1994); TIM WU, THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GUILDED AGE (2018); Saule Omarova & Graham Steele, *Banking and Antitrust*, YALE L. J. (forthcoming 2023).

[192] *See, e.g.*, LOUIS BRANDEIS, OTHER PEOPLE'S MONEY—AND HOW THE BANKERS USE IT (1914).

[193] *See* Christine Desan, *How To Spend a Trillion Dollars: Our Monetary Hardwiring, Why It Matters, and What We Should Do About It*, HARV. PUB. L. WORKING PAPER NO. 22-04, at 11 (2022); *see also* RICHARD CANTILLON, AN ESSAY ON ECONOMIC THEORY (1755).

[194] U.S. v. Philadelphia Nat'l Bank, 374 U.S. 321, 370 (1963).

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fewer options to obtain bank credit, they are likely to be "at a disadvantage vis-à-vis larger businesses with which [they] compete[]."[195]

One reason why concentration in banking affects industrial organization is the high fixed costs of making a loan. It is more efficient for a large bank to underwrite a few large loans than many smaller loans. Large banks are also governed differently. Key decision makers across the bank do not know each other personally. They must rely on policies and procedures to align practices. As a result, large banks tend to use formal, formulaic methods to underwrite and price loans. Such approaches are often poorly suited to extending credit to small businesses, which may struggle with the additional paperwork or require more bespoke risk assessments.[196] Moreover, local banks are more likely to employ loan officers that originate loans through community involvement, i.e., to engage in relationship lending.[197]

Of course, it's possible that the increased efficiencies that accompany concentrated banking allow large banks to improve lending terms for small businesses, notwithstanding their reasons to prefer lending to larger businesses or underwriting credit in ways that make it less likely small businesses qualify. Past practice helps clarify which effect dominates. Multiple empirical analyses demonstrate that small businesses have more difficulty obtaining credit when banking system concentration increases. As one study concluded, "access to bank credit for small businesses is much less likely in markets dominated by the largest banks."[198] And similar results have been found in other countries.[199]

These results are backed up by more granular data and findings. As of year-end 2014, when community banks accounted for just 22% of banking system lending, these institutions provided 77% of agricultural loans, 46% of commercial real estate loans, 51% of small business loans, and 25% of first-lien residential real estate loans.[200] Numbers for loans to low- and moderate-income borrowers are even more striking. In

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[195] *Id.*

[196] Steven G. Craig & Pauline Hardee, *The Impact of Bank Consolidation on Small Business Credit Availability*, 31 J. OF BANKING & FIN. 1237 (2007).

[197] Remarks by FDIC Acting Chairman Martin J. Gruenberg at the 10th Community Banking Research Conference, Sept. 28, 2022

[198] Craig & Hardee, *supra* note 196.

[199] *See, e.g.*, Iftekhar Hasan, Krzysztof Jackowicz, Oskar Kowalewski & Łukasz Kozłowski, Bank Ownership Structure, *SME Lending, and Local Credit Markets*, Bank of Finalnd Research Discussion Papers, No. 22, 2014 (finding that local banks lend more to small businesses than large domestic banks and foreign-owned banks, that local banks provide loans to small businesses at lower costs than foreign-owned banks or large domestic banks, and that SMEs perform better in counties with a large number of cooperative banks than in counties dominated by foreign-owned banks or large domestic banks).

[200] Marshall Lux & Robert Greene, *The State and Fate of Community Banking*, Harvard M-RCBG Associate Working Paper Series, No. 37, Feb. 2015, at 9-13.

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2020, community banks made 97% of such loans including 99% of all manufactured housing loans to minority borrowers.[201] Relatedly, and strikingly, community banks are the only banking presence within one third of U.S. counties and operate between four and five branches in rural areas for every one branch operated by large banks.[202]

Studies which have looked at the effect of legal changes in the 1990s have found that when Congress deregulated bank branching laws, large out-of-state banks took market share from local banks, which were often acquired. The result was a reduction in lending to small businesses and ultimately a reduction in the number of small businesses. The shift also led to decreased employment and hours worked in small businesses, as many of the small businesses that survived shrunk in the process.[203] The closure of bank branches in low and moderate income neighborhoods—which has often followed bank mergers—has been tied directly to changes in economic conditions. For example, mortgage originations decrease and interest rate spreads increase. These effects are tied specifically to the presence of community banks as opposed to branches of large nationwide firms.[204]

These effects are particularly pronounced when it matters most: during economic downturns. A study of banking lending during the Great Recession showed that regions with more local banks experienced smaller reductions in employment.[205] Similarly, in 2020, small banks provided an outsized share of PPP loans.[206] Small banks also outcompeted large banks in the speed with which they originated PPP loans for

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[201] Letter from Rebecca Romero Rainey, President & CEO, Independent Community Bankers of America, to Rohit Chopra, Director, Consumer Financial Protection Bureau, dated Apr. 18, 2022, at 4.

[202] *Id.* at 2-3.

[203] John Lynch, *Does Banking Competition Really Increase Credit for All? The Effect of Bank Branching Deregulation on Small Business Credit*, FDIC CFR Working Paper Series, No. 7, Jun. 2022 (estimating a 5.4% decline in small business lending associated with the change in banking structure).

[204] Ozgur Emre Ergungor, *Bank Branch Presence and Access to Credit in Low- to Moderate-Income Neighborhoods*, 42 J. MONEY, CREDIT & BANKING 1321 (2010).

[205] Luke Petach, Stephan Weiler & Tessa Conroy. *It's a Wonderful Loan: Local Financial Composition, Community Banks, and Economic Resilience*," 126 J. OF BANKING & FIN. 106077 (2021).

[206] Lei Li & Philip E. Strahan, *Who Supplies PPP Loans (and Does It Matter)? Banks, Relationships, and the COVID Crisis*, 56 J. FIN & QUANT. ANAL. 2411 (2021). "Small and medium-sized banks (those with assets under $50 billion) provide about two-thirds of the loans under the PPP program ($310 billion out of $494 billion by all banks, or 63%). This share exceeds their share of lending to small businesses before the COVID crisis, which was just 44% at the end of 2019." *See also* Tetyana Balyuk, Nagpurnanand Prabhala & Manju Puri, *Small Bank Financing and Funding Hesitancy in a Crisis: Evidence from the Paycheck Protection Program*, FDIC WORKING PAPER SERIES, No. 1 (2021).

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their small business customers.[207] Finally, survey data suggests that local banking better serves the needs of local customers. For example, the Federal Reserve's Small Business Credit Survey revealed that in 2022 74% of small businesses were satisfied with their lenders when their lenders were small banks compared with 62% for large banks, 48% for nonbank finance companies, and 34% for nonbank online lenders.[208] For all these reasons, the presence of banks headquartered locally has long been considered critical to fostering fair credit availability across the national geography and is something that the NNB system would restore.[209]

3. Sustaining Democracy

Restructuring the American monetary system around a network of banks chartered, regulated, and supervised as public utilities will help to strengthen and sustain American democracy. Our current monetary architecture—by redistributing wealth upwards, funneling credit to business conglomerates and choking off small, local firms, excluding low-income and minority communities from the payments system (or connecting them only at high cost), and fueling financialization—undermines the economic preconditions for equal citizenship. Recurring government bailouts of financial firms, meanwhile, damage trust in government. And the looming prospect of economic collapse means that monetary system dysfunction threatens to create the sort of social conditions conducive to the rise of more authoritarian modes of governance.[210]

By contrast, the NNB system would diffuse economic power and help support democratic politics. Universal access to basic infrastructural resources like money and payments improves the ability of all citizens to start a business or buy a home.[211] Banks with limited powers that are foreclosed from conglomerating with nonbank financial firms would have fewer resources with which to influence government. The executives of some banks today are too powerful; they are "overmighty citizens."[212] As a result,

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[207] Christopher James, Jing Lu & Yangfan Sun, *Time is Money: Real Effects of Relationship Lending in a Crisis*, 133 J. OF BANKING & FIN. 106283, 1 (2021).

[208] Federal Reserve, Small Business Credit Survey: Report on Employer Firms (2022), at 22.

[209] *See also* Ganesh Sitaraman, Morgan Ricks & Christopher Serkin, *Regulation and the Geography of Inequality*, 70 DUKE L. J. 1763 (2021).

[210] *Cf.* TIM WU, THE CURSE OF BIGNESS: ANTITRUST IN A NEW GUILDED AGE (2018); Manuel Funke, Moritz Schularick & Christoph Trebesch, *Going to Extremes: Politics after Financial Crises, 1870–2014*, 88 EUR. ECON. REV. 227 (2016); Enrique Hernández & Hanspeter Kriesi, *The Electoral Consequences of the Financial and Economic Crisis in Europe*, 55 EUR. J. POL. RESEARCH (2015).

[211] *Cf.* BARADARAN, *supra* note 178; MICHAEL BARR, NO SLACK: THE FINANCIAL LIVES OF LOW INCOME AMERICANS (2012).

[212] *Cf.* PAUL TUCKER, UNELECTED POWER: THE QUEST FOR LEGITIMACY IN CENTRAL BANKING AND THE REGULATORY STATE 525 (2018). The NNB system would also reduce the influence of powerful

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banks are hard to regulate and supervise effectively. We need look no further than the recent collapse of Silicon Valley Bank, whose CEO was on the Board of Directors of the Federal Reserve Bank of San Francisco. President Woodrow Wilson, in promoting public utility law and antimonopoly policy, remarked, "if there are men in this country big enough to own the government of the United States, they are going to own it."[213] Under our current arrangement, bank executives have been able to use their position to extract support from the government, further strengthening their position, creating a vicious circle that undermines democracy. The NNB system would break this doom loop, limiting the size of banks, the influence of bank executives, and the supracompetitive profitability of the financial sector.

* * *

The benefits of rebuilding our monetary and financial system on a foundation of public utility banks are manifold. If adopted, we expect that the NNB system we've outlined would accelerate economic growth and reduce waste, foreclose a leading cause of macroeconomic disasters, and mitigate inequality by reversing the structural transfer of wealth from ordinary households and businesses to asset owners, industrial conglomerates, and concentrated financial sector interests. We suspect the changes would be at once ordinary and profound—from faster and cheaper payments for households day-to-day to greater economic and political stability year-to-year and decade-to-decade.

III. HOW DO WE GET FROM HERE TO THERE?

In the aftermath of the 2008 financial crisis, policymakers pursued a far-reaching program of reform, touching virtually every aspect of American finance. Yet, because the role of private money did not figure prominently in contemporary diagnoses of what had gone wrong, the government did little to address the problems caused by shadow banking. Instead, reformers left our monetary and financial system structure largely intact, opting for a hypertechnical regulatory overlay.

The NNB system represents a very different approach—in some respects the polar opposite one. It is structural not technocratic, banking law not "finreg." Consequently, it is comparatively simple. It involves fairly surgical reforms to basic underlying components of the U.S. system of money and banking. And because the NNB system largely revamps and modernizes core components of our longstanding banking laws, it can be implemented through a series of incremental reforms.

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intermediaries, which would have both economic and democracy-enhancing benefits. *See* Kathryn Judge, *Intermediary Influence*, 82 U. CHI. L. REV. 573 (2015).

[213] Woodrow Wilson, *The New Freedom*, in ESSAYS OLD AND NEW 96 (Essie Chamberlin ed., 1926).

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In this Part we map one way to get from here to there. Section A lays out a set of targeted legal changes that would produce a reasonably close approximation of the NNB system. Section B singles out the proposed unauthorized banking provision—the only component of the NNB system that applies directly to *non*banks—for further elaboration.

A. Modernizing Banking Law

The following legislative changes would produce—to borrow a phrase from the startup world—a "minimum viable product" version of the NNB system, that is, a version that, while not full-featured, would still be workable:

1. *Require All Depository Institutions to be Insured Member Banks*. Amend the Federal Reserve Act to require that (1) all U.S. depository institutions join the Federal Reserve System as member banks and (2) all member banks maintain federal deposit insurance.[214] All U.S. depository institutions are insured member banks.

2. *Reinstate the Utility-Style Chartering Standard for Member Banks*. Amend the National Bank Act to reinstate the "public convenience and necessity" chartering standard that was excised by the Federal Deposit Insurance Corporation Act of 1991.[215] Require the FDIC to apply the same standard, in consultation with the other federal banking regulators, in approving deposit insurance applications. Bank chartering is franchising.

3. *Close the Unauthorized Banking Loophole*. Replace the existing unauthorized banking provision of federal law,[216] which relies on a formalistic "deposit" concept and lacks a civil enforcement mechanism,[217] with the unauthorized banking law described in section B below, or something like it. Money creation is confined to member banks and the federal government.

4. *Cap the Amount of Money Banks Can Create*. Amend the reserve requirement provisions of the Federal Reserve Act[218] to apply them to all bank money issued by Fed member banks, thereby placing a cap on the supply of bank money, which the Fed can adjust in the conduct of monetary policy. Public sector control of money creation is restored.

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[214] *Cf.* 12 U.S.C. § 222 ("Every national bank in any State shall . . . become a member bank of the Federal Reserve System . . . and shall thereupon be an insured bank . . . . ").

[215] *See supra* note 76.

[216] *See supra* note 35.

[217] *Cf.* Howell E. Jackson & Morgan Ricks, *Locating Stablecoins Within the Regulatory Perimeter*, HLS F. on Corp. Gov., Aug. 5, 2021.

[218] *See supra* note 41.

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5. *Insure all Bank Money.* Amend the insurance coverage provisions of the Federal Deposit Insurance Act[219] to fully insure, with no coverage caps, all member banks' outstanding bank money liabilities (and *only* their bank money liabilities—terminate insurance of long-term certificates of deposit). All money is nondefaultable.

6. *Require Banks to Fully Pay for Deposit Insurance*. Amend the risk-based deposit insurance assessment provisions of the Federal Deposit Insurance Act[220] to require the FDIC to keep charging such assessments even if the FDIC's insurance fund is fully funded, converting surplus fees into a fiscal revenue item. Instruct the relevant bank regulatory agencies to calibrate the fees so as to cause member banks to earn no more than a fair return on capital. The federal government earns seigniorage from member bank money creation.

7. *Reinstate Controls on Bank Money Interest Rates.* Reinstate administrative controls over interest on banks' monetary liabilities, which were largely eliminated in the Depository Institutions Deregulation and Monetary Control Act of 1980.[221] The Fed can once again administer bank money rates in the conduct of monetary policy.

8. *Close the Bank Powers Loophole.* Amend the corporate powers provisions of the National Bank Act[222] to tighten existing bank portfolio constraints. Implement a swaps push-out rule.[223] Require, as a condition of eligibility for deposit insurance, that member banks that are not national banks abide by these corporate powers limits.[224] Override the Supreme Court's decision in *Nationsbank of N.C. v. VALIC*[225] to clarify that national banks' corporate powers are to be strictly construed. Member banks' investment portfolios are relatively simple and advance their monetary purpose.

9. *Restore Monetary Sovereignty*. Supplement the existing Basel capital and liquidity accords[226] with an international accord in which each country agrees

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[219] *See supra* note 37.

[220] *See supra* note 47.

[221] *See supra* note 45.

[222] *See supra* note 33.

[223] *See supra* note 56.

[224] *Cf.* 12 U.S.C. § 1831a(c)(1) (prohibiting insured state banks from acquiring or retaining equity investments that are not permissible for national banks); *id.* at 1831a(b) (prohibiting insured state banks from engaging in insurance underwriting except to the extent permitted for national banks).

[225] 531 U.S. 251 (1995).

[226] *See supra* note 87.

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to prohibit its domestic financial institutions from issuing bank money denominated in nondomestic currencies. Also, empower the Federal Reserve to deny dollar clearing to foreign banks that are known issuers of dollar-denominated bank money. Monetary sovereignty is restored.

10. *Restore Structural Separations.* Reinstate the Glass-Steagall provision,[227] repealed by the Gramm-Leach-Bliley Act,[228] that prohibited conglomeration between commercial banks and investment banks. The separation of banking and commerce is restored.

That these measures can be described in a short list—and that they obviously would not require hundreds or thousands of pages of statutory text and implementing rules—reflects the essentially *structural* nature of the NNB system and of the existing, core body of U.S. banking law that it repairs and modernizes.

This "minimum viable" version of the NNB system omits some important features of the full system described in Part I. It doesn't, for example, eliminate state bank charters, put a federal government appointee on each member bank's board, place restrictions on ownership of member bank stock, specify a franchise area for each member bank, impose universal service requirements, or eliminate Fedwire charges. While not strictly needed, these additional measures would bring the public utility vision that undergirds the National Bank Act, the Federal Reserve Act, and the Banking Act of 1933 to even fuller realization.

B. Revitalizing the Federal Unauthorized Banking Statute

The NNB system's entry restriction provision requires a bit more explication. Unauthorized banking statutes, which prohibit any person or entity that lacks a bank charter from issuing bank money, are the essential linchpin of banking law. Long experience has shown that without such provisions, money creation bypasses chartered banks and the monetary governance framework banking law is designed to effectuate. Throughout the history of Anglo-American banking, lawmakers have adopted affirmative measures to confine money creation to the government and its chartered agents—to prevent private money issue.[229]

Perhaps the most famous unauthorized banking law was enacted in conjunction with the National Bank Act, when Congress and the Lincoln Administration imposed a prohibitive tax on bank notes issued by entities other than

[227] *See supra* note 68.

[228] *See id*.

[229] *See* Morgan Ricks, *Entry Restriction, Shadow Banking, and the Structure of Monetary Institutions*, 2 J. FIN. REG. 291 (2016) (tracing the history of unauthorized banking statutes).

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national banks.[230] The provision brought the issuance of bank notes (at that time, the predominant form of bank money) fully within the federal government's monetary framework, ensuring notes were sound, stopping their uncontrolled issuance, and spreading their issuance across the country.

The unauthorized banking statute that is on the books today, which prohibits all people and entities from maintaining "deposit" balances without appropriate governmental preclearance,[231] is a dead letter in important respects. Enacted as part of the Banking Act of 1933,[232] the provision has been actively undermined by federal officials over the decades. In the 1950s the Federal Reserve nurtured the growth of the repo market, despite warnings from congressional leaders and bankers that the repo liabilities of Wall Street broker-dealers were merely deposits by another name and hence were issued in violation of the provision.[233] In the ensuing two decades, the Fed further undermined the Banking Act by endorsing the emergence of, and then backstopping, the eurodollar market.[234] In the 1970s, the SEC got in on the action, asking the Justice Department to confirm that money market mutual funds—which were created expressly to issue deposit substitutes in the form of investment company shares—did not violate the provision. (Justice acceded.[235]) And in 1991, under lobbying from Wall Street (with Goldman Sachs taking the lead),[236] Congress amended the Federal Reserve Act to empower the Federal Reserve Banks to backstop all manner of private moneys, irrespective of the issuer,[237] supercharging their growth and setting the stage for the panic of 2008 and those that have followed.

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[230] *See* Act of March 3, 1865, ch. 78, § 6, 13 Stat. 469, 484 (as amended by Act of February 8, 1875, ch. 36, § 19, 18 Stat. 307, 311).

[231] *See supra* note 35.

[232] Banking Act of 1933, ch. 89, sec. 21, 48 Stat. 162, 189.

[233] *See* Lev Menand & Joshua Younger, *Money and the Public Debt: Treasury Market Liquidity as a Legal Phenomenon*, COLUM. BUS. L. REV. (forthcoming 2023); New York Clearing House Association, "A Study of the Interrelations of the Money Market and Government Securities Market," Report to the Federal Reserve Bank of New York (October 22, 1957); Benjamin Braun & Daniela Gabor, *Central Banking, Shadow Banking, and Infrastructural Power, in* INTERNATIONAL HANDBOOK OF FINANCIALIZATION (Philip Mader, Daniel Mertens & Nataschavan der Zwan, eds., 2020).

[234] *See* Benjamin Braun, Arie Krampf & Steffen Murau, *Financial Globalization as Positive Integration: Monetary Technocrats and the Eurodollar Market in the 1970s*, 28 REV. OF INT'L POL. ECON. 794 (2021).

[235] *See* Letter dated Dec. 18, 1979, from Philip B. Heymann and Lawrence Lippe, Criminal Division, U.S. Department of Justice, to Martin Lybecker, Associate Director, Division of Marketing Management, Securities and Exchange Commission (on file with the authors).

[236] *See* RICKS, *supra* note 10, at 197–98.

[237] Federal Deposit Insurance Corporation Improvement Act of 1991, Pub. L. No. 102-242, § 473, 105 Stat. 2236, 2386.

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We propose reinvigorating the federal unauthorized banking statute and recasting it in functional rather than formalistic terms.[238] Thanks in part to decades of research in the economics of money and banking, we know much more today about what types of instruments constitute money than was understood by lawmakers in 1933. But banking law has not been updated to reflect the state of our knowledge, and the concept of "deposit" on which the provision is based—never well-defined—is formalistic and effectively obsolete. In financial law, functional approaches are indispensable. Other cornerstone definitions in our financial laws—"security,"[239] "investment company,"[240] "the business of insurance,"[241] "swap,"[242] "proprietary trading,"[243] and so forth—are functional rather than formalistic.[244] While there are always some gray areas—witness recent debates over whether cryptocurrencies meet the legal definition of "security" and whether special-purpose acquisition companies meet the definition of "investment company"—this is the nature of law. By and large, these definitions *work*, and many of them have continued to work for decades without material amendment.

The appendix to this paper offers draft statutory text for an unauthorized banking provision in the NNB system. It specifies that only member banks may issue "money-claims" in meaningful quantities. Money-claims are defined as short-term debt instruments and their functional equivalents, subject to certain exclusions (such as trade credit and nonfinancial commercial paper). The proposed maturity cutoff is one year, but this could probably be shortened to as little as three months without losing much in the way of effectiveness.[245] (Financial economists have concluded that

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[238] For an interesting analogue to our approach, see the definition of "functional monetary equivalent" in the Stablecoin Classification and Regulation Act of 2020, H.R. 8827, 116th Cong. (introduced Nov. 30, 2020).

[239] Securities Act of 1933 § 2(1), 15 U.S.C. § 77b(a)(1).

[240] Investment Company Act of 1940 § 3(a)(1), 15 U.S.C. § 80a-3(a)(1*); cf.* Edmund H. Kerr, *The Inadvertent Investment Company: Section 3(a)(3) of the Investment Company Act*, 12 STAN. L. REV. 29 (1959).

[241] This term is defined in state laws.

[242] 7 U.S.C. § 1a(47).

[243] Dodd-Frank Act § 619, 12 U.S.C. § 1851(h)(4).

[244] See Howell E. Jackson, *Regulation in a Multisectored Financial Services Industry: An Exploratory Essay*, 77 WASH. U. L. Q. 319, 363-71 (1999).

[245] *Cf*. Financial Accounting Standards Board, "Statement of Cash Flows," Statement of Financial Accounting Standards 95, §§ 8–9 (three-month maturity cutoff for "cash equivalent"); Securities Exchange Act of 1934 § 3(a)(10), 15 U.S.C. § 78c(a)(10) (nine-month maturity cutoff for exemption of short-term debt from registration requirements under the federal securities laws); Basel Committee on Banking Supervision, "Basel III: The Net Stable Funding Ratio," October 2014, 2 (lower-bound maturity cutoff of one year for definition of

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the moneyness of even the highest-quality debt securities is negligible at maturities above one year.[246]) The provision also proscribes the issuance of "drawable facilities"—revolving credit facilities and their equivalents—by entities that are not member banks. Such facilities are functional substitutes for bank money,[247] and they are susceptible to self-fulfilling runs. The statutory text provides for certain de minimis exceptions, and it gives the monetary authority rulemaking powers for clarification and for preventing evasion.

From the standpoint of enforcement, the proposed provision has auspicious features. First, because banking is inherently a "law of large numbers" business, it is difficult to conduct clandestinely. Detecting unauthorized money augmentation is therefore easy compared to, for example, detecting currency counterfeiting, insider trading, money laundering, price fixing, and tax evasion. Second, because the provision is structural rather than technocratic, implementation would be relatively simple. Unlike, for example, capital regulation, the unauthorized banking statute does not rely on any *quantification* of risk exposures to feed into a ratio calculation. The quantification of such exposures is what makes capital regulation so vexing as applied to large, complex financial institutions.[248]

The proposed provision would have the effect of requiring all financial institutions that are not member banks to finance their operations in the capital markets and not the money markets. This prohibition would have major consequences for the financial system as it exists today. To a far greater extent than is commonly understood, our financial sector funds itself with extremely short-term debt. And the market for these private moneys is vast, far exceeding the insured deposit market in size. Under the blueprint sketched above, many financial firms that currently rely heavily on very short-term or demandable debt funding, such as the major Wall Street securities firms, would be precluded from doing so. Their current funding models would be incompatible with the NNB system. In practical terms, such firms would be required to either (1) "term out" their funding structures, that is, finance their operations in the longer-term debt and equity capital markets and not the money markets, or (2) fully reserve their account-money and cash equivalent liabilities with monetary instruments issued by the government or member banks. (The former option

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"stable funding" under the net stable funding ratio); 17 C.F.R. § 270.2a-7(d)(1)(i) (397 day maturity limit for MMF portfolio investments).

[246] Greenwood, Hanson, and Stein, *supra* note 93.

[247] A drawable loan commitment "behaves *just like a demand deposit*" and offers "a very similar service." Anil K. Kashyap, Raghuram Rajan& Jeremy C. Stein, *Banks as Liquidity Providers: An Explanation for the Coexistence of Lending and Deposit-Taking*, 57 J. FIN. 35 (2002).

[248] *Cf*. Cochrane, *supra* note 110 (noting that "detecting hidden run-prone financing . . . is an order of magnitude easier" than current forms of financial regulation, including capital regulation).

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would be suitable, for example, for securities dealers, while the latter would be suitable, for example, for payment companies like PayPal/Venmo as well as stablecoin issuers.) This requirement would be costly for these institutions and could bring significant changes to their business models. But we see no reason to regard Wall Street's current funding model as sacrosanct—particularly in view of the events of the past fifteen years. That the NNB system would mean big changes for Wall Street's current liability structure only goes to show how far money creation has bypassed our system of public control.

That said, nothing in the NNB system would lessen the financial system's capacity to produce socially valuable innovation. The blueprint above says nothing about what activities can take place outside the member banking system. It says only that those activities can't be financed with run-prone debt. In principle, we could imagine a very wide degree of latitude for nonbank firms, subject of course to appropriate standards of disclosure, antifraud, and consumer and investor protection. So securities firms and other nonbanks might be given free rein to engage in structured finance, derivatives, proprietary trading, and so forth. But they would not be allowed to "fund short."

It is sometimes suggested that securities firms and other nonbank financial firms "need" to fund themselves with short-term debt—that they somehow can't conduct their businesses otherwise. This argument needs to be put to rest. There is nothing about these firms' business models that requires unstable short-term funding. Securities firms could conduct all their current activities while financing themselves entirely in the capital markets, with equity and longer-term debt. Naturally their cost of financing would go up, reducing their profits; but so what? Nothing fundamental need change. Short-term wholesale funding is prevalent in the financial sector not because it is "necessary" or even "important," but merely because it is relatively cheap.

To be sure, the proposed unauthorized banking statute would have costs. Bid-ask spreads in at least some segments of the financial markets would probably rise, and trading would therefore get somewhat more expensive. Hedge funds would see higher prime brokerage borrowing rates, lowering their returns. And it is possible, though by no means assured, that consumers and nonfinancial businesses would see higher overall financing rates. But all of these costs are a natural incident to removing distortive subsidies from the financial sector. Removing a subsidy is always costly to its ultimate beneficiaries, but this is hardly a reason to keep the subsidy. Moreover, the market should be expected to adjust to the new constraints. For example, the proposed unauthorized banking statute would create incentives for participants in liquid securities markets to transition away from dealer-intermediated and toward "all to all" market structure based on central limit order books, which are more transparent and

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stable.[249] And even if there are costs, they must be weighed against the many substantial benefits we have enumerated.

Finally, a "minimum viable" version of the unauthorized banking provision is also possible. For example, repealing the tax deductibility of interest paid on money-claims issued by entities other than member banks,[250] and removing the entity-level tax exemption on investment funds (such as MMFs) that issue money-claims,[251] might go a long way toward suppressing money creation outside the NNB system. Because U.S. tax law lacks the needed extraterritorial reach, such a change would still need to be coupled with measures empowering the Federal Reserve to spearhead the Basel Accord supplement described above and to deny dollar clearing to foreign financial institutions engaging in dollar-based money augmentation abroad.

CONCLUSION

The recent panic and associated government response should come as no surprise. We've seen a similar dance three other times since 2008. Changing economic conditions trigger a run on defaultable money instruments. Public officials pursue extraordinary measures to backstop money instruments that would otherwise default. The run is halted. With each iteration, however, the pattern becomes further entrenched and expectations for future government intervention become ever greater. The latest choreography was remarkable in some of its specifics. For example, the March 2023 panic involved losses almost entirely associated with interest rate risk, as opposed to credit risk. It struck uninsured deposits within the banking system, rather than cash equivalents issued by shadow banks. And it threatened a concentrated and vocal set of economic interests. The response, meanwhile, involved an unprecedented expansion of the Fed's emergency lending authority, with the Fed's board concluding that a relatively routine bank failure constituted "unusual and exigent circumstances" and that banks were not able to "secure adequate credit accommodations from other

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[249] *See, e.g.,* Darrell Duffie, *Still the World's Safe Haven? Redesigning the U.S. Treasury Market After the COVID-19 Crisis,* Hutchins Center Working Paper No. 62 (June 2020) (examining all-to-all market structures); Alain Chaboud et al., *All-to-All Trading in the U.S. Treasury Market,* FRBNY Staff Report No. 1036 (Oct. 2022) ("[I]ncreased use of all-to-all trading in the Treasury market would encourage market resilience by providing additional opportunities for trading partners to match on a trade without use of an intermediary."); Department of the Treasury, Board of Governors of the Federal Reserve System, Federal Reserve Bank of New York, Securities and Exchange Commission, and Commodity Futures Trading Commission, *Enhancing the Resilience of the U.S. Treasury Market: Staff Progress Report* (Nov. 10, 2022) ("All-to-all trading can be contrasted with dealer-intermediated markets where most participants trade with dealers that hold inventories of assets on their balance sheets.").

[250] *See.* 26 U.S.C. § 163 (tax deductibility of interest).

[251] *See* 26 U.S.C. § 852 (taxation of regulated investment companies).

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banking institutions" even though they could easily borrow against the fair market value of their securities collateral.[252]

Perhaps unsurprisingly, then, the March 2023 episode has triggered a robust policy discussion in Washington. Already, the Biden Administration has proposed new ways to hold bank executives accountable when their institutions fail,[253] greater capital and liquidity requirements, new stress testing rules, and long-term debt mandates.[254] Other policymakers and commentators have highlighted the role played by the deposit insurance framework in enabling the run on SVB and setting off a massive deposit drain at smaller banks.[255] More systemic reform ideas are also circulating, including fundamental changes to bank governance[256] and government regulation and supervision.[257]

What is missing from the debate is a framework for understanding how these various modifications fit together with each other and with the existing legal edifice for money and banking. The deposit insurance debate is a case in point. One side sees value in having large quantities of uninsured deposits. At most minor adjustments are needed, they contend, perhaps a way to insure certain business deposits used for payroll. Another group proposes a much more expansive change in deposit insurance, which would eliminate traditional bank runs entirely. It is difficult, however, to evaluate the relative merits of these positions without understanding how they would affect the rest of the system. Our monetary architecture is an interconnected set of networks: changes in one area ramify, leading to responses in others. For example, the decision to design deposit insurance primarily for households is part of the reason a range of highly unstable shadow money instruments, including money market funds and repos, emerged in the second half of the twentieth century.[258] The rise of these instruments is part of the reason policymakers facilitated greater banking system concentration and conglomeration. The emergence of complex universal banks, in

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[252] *See* Federal Reserve Act § 13(3), 12 U.S.C. 347d(3).

[253] *See* Accountability Fact Sheet, *supra* note 61.

[254] *See* Fact Sheet: President Biden Urges Regulators to Reverse Trump Administration Weakening of Common-Sense Safeguards and Supervision for Large Regional Banks, The White House, Mar. 30, 2023. *See also* Stephen Cecchetti & Kim Schoenholtz, "The Extraordinary Failures Exposed by Silicon Valley Bank's Collapse," Money & Banking Blog, Mar. 20, 2023.

[255] For our view on this issue, see Lev Menand & Morgan Ricks, *Scrap the Deposit Insurance Limit*, WASH. POST, Mar. 15, 2023.

[256] *See* Saule Omarova, *Banks Can't Be Trusted. A "Golden Share" Might Help.*, N.Y. TIMES, Mar. 23, 2023.

[257] *See* Matt Stoller, "Fire the Fed," Substack, Mar. 16, 2023; *cf.* Aaron Klein, *SVB's Collapse Exposes the Fed's Massive Failure to See the Bank's Warning Signs*, BROOKINGS, Mar. 16, 2023.

[258] *See* Zoltan Pozsar, *Institutional Cash Pools and the Triffin Dilemma of the U.S. Banking System*, IMF Working Paper 190, Aug. 2011.

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turn, is part of the reason policymakers turned to gameable bright line capital rules and watered down discretionary bank supervision.

From our fragmented debate and patchwork approach to policymaking it may be hard to see how the dots connect. This paper, by providing a comprehensive plan for banking reform, offers a conceptual apparatus through which incremental adjustments can be evaluated. Using the NNB system as a guide, we can ask of any given proposal whether it tends to strengthen banking as a public utility or weaken it. Changes to the corporate powers and activities of banks, governance of balance sheets, constraints on ownership and control, and duties to the public that treat bank money creation more as a public function that is outsourced according to traditional public utility norms will likely be self-reinforcing across domains. Take deposit insurance. Were policymakers to uncap deposit insurance they would move the country closer to the public utility approach as regards corporate powers and activities. In turn, this shift would augur further changes to how banks are regulated and supervised, what fees they owe to the government, how deposit interest rates are set, and what sort of obligations they should be subject to when it comes to providing payment services in their communities.

We believe that rewiring our banking laws to treat banks as public utilities would have a broad range of substantial benefits. But we are under no illusions that such significant enhancements will be easy or that they can be enacted overnight. Yet we also do not believe that a better system is outside the set of potential legal frameworks over the medium term. Getting from here to there is the sort of transformation policymakers have wrought in the past. Indeed, the NNB system would be far less disruptive than the initial passage of the National Bank Act. It would be a more modest rebalancing than the Federal Reserve Act. And in its reparative ambition it would be no more challenging than the Banking Act of 1933. Moreover, because our proposal offers something for almost everyone—with aspects that should appeal to both the left and right, community and regional banks, nonfinancial businesses, and consumer groups—it could garner political support. Often the most salutary legislation has passed in the midst of or wake of a crisis. But we need not wait until economic and financial conditions deteriorate further to start pressing forward. In this sense, the current turmoil offers a chance to begin.

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APPENDIX: PROPOSED UNAUTHORIZED BANKING ACT[259]

This appendix offers statutory text for the unauthorized banking statute in the New National Banking system.

SECTION 101. UNAUTHORIZED BANKING.

(a) DEFINITIONS.—In this section, the following definitions shall apply:

(1) MONEY-CLAIM.—The term "money-claim" means:

(A) any debt instrument that is payable in cash or its equivalent and that has a maturity of less than one year, including any such instrument that is styled as a "deposit";

(B) any sale and repurchase agreement that functionally resembles the instruments described in paragraph (A);

(C) any equity instrument that functionally resembles the instruments described in paragraph (A); and

(D) any other financial instrument or arrangement, regardless of form, that functionally resembles the instruments described in paragraph (A), provided that in no instance shall the term "money-claim" include:

(i) trade credit; or

(ii) any obligation to deliver cash or its equivalent that is held on a custodial or passthrough basis.

(2) DRAWABLE FACILITY.—The term "drawable facility" means:

(A) any instrument, including any revolving credit facility, pursuant to which one party has an effective option to borrow cash or its equivalent from another party (the issuer of the facility) on an ongoing basis; and

(B) any other financial instrument or arrangement, regardless of form, that functionally resembles those described in paragraph (A).

(3) TRADE CREDIT.—The term "trade credit" means:

(A) any payment obligation that is incurred as an incident to the purchase of bona fide goods or services, including any such obligation

[259] Adapted from RICKS, *supra* note 10.

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that is classifiable as "accounts payable" under generally accepted accounting principles as in effect on the date of enactment of this section; and

(B) any ordinary settlement obligation that is incurred as an incident to the purchase of one or more financial or nonfinancial assets.

(4) MATURITY.—The term "maturity" means the length of the period from the original issuance of an instrument until earliest to occur of:

(A) the original stated date on which the principal amount is to be repaid, provided that if the principal is to be amortized or otherwise paid in installments, then the weighted average of the principal repayment dates shall be deemed to be the date on which the principal amount is to be repaid;

(B) in the case of an instrument with an embedded put option or other demand feature, the earliest date on which any substantial portion of the principal amount can be recovered through demand;

(C) in the case of an instrument that is designed to provide investor liquidity through a periodic auction process, the date of the earliest auction; and

(D) in the case of an instrument that has been called for redemption or prepayment, in whole or in part, the date on which the earliest redemption payment or prepayment is to be made, provided that the maturity of such an instrument shall continue to be determined in accordance with paragraph (A) if the issuer did not intend as of the issuance date to exercise such early redemption or prepayment.

(5) PERSON.—The term "person" means any person, firm, corporation, association, or other similar organization.

(b) PROHIBITION.—Except as hereinafter provided, it shall be unlawful for any person to issue or have outstanding any (1) money-claims or (2) drawable facilities.

(c) EXEMPTIONS.—The restrictions under subsection (b) shall not apply to:

(1) any member bank;

(2) any person whose activities are not predominately financial in nature;[260]

[260] *Cf.* Bank Holding Company Act § 4(k), 12 U.S.C. § 1843(k) (permitting bank holding companies to engage in certain activities that are "financial in nature").

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(3) any person (A) whose issued and outstanding money-claims are held by not more than five other persons and (B) whose issued and outstanding drawable facilities are held by not more than five other persons; or

(4) any person whose issued and outstanding money-claims, when combined with drawn amounts under the person's issued and outstanding drawable facilities, do not exceed $1,000,000 in the aggregate.

(d) RULEMAKING.—The monetary authority may prescribe such rules and regulations, including definitions of terms, as it deems necessary to effectuate the purposes and to prevent evasions of this section.

(e) PENALTIES.—

(1) The monetary authority may impose a civil penalty of up to $250,000 per violation on any person if it finds, on the record after notice and opportunity for hearing, that such penalty is in the public interest and that such person (A) has violated any of the provisions of this section or the rules promulgated thereunder, (B) has aided, abetted, counseled, commanded, induced, or procured such a violation by any other person, or (C) has failed reasonably to supervise another person who commits such a violation, if such other person is subject to the person's supervision.

(2) Any person who willfully violates any of the provisions of this section shall upon conviction be fined not more than $250,000 per violation or imprisoned not more than five years, or both, and any officer, director, employee, or agent of any person who knowingly participates in any such violation shall be punished by a like fine or imprisonment or both.

(f) CEASE AND DESIST PROCEEDINGS.—If the monetary authority finds, after notice and opportunity for hearing, that any person is violating, has violated, or is about to violate any provision of this section, or any rule or regulation thereunder, the monetary authority may publish its findings and enter an order requiring such person, and any other person that is, was, or would be a cause of the violation, due to an act or omission the person knew or should have known would contribute to such violation, to cease and desist from committing or causing such violation and any future violation of the same provision, rule, or regulation.

(g) EXTRAJURISDICTIONAL MONEY-CLAIM ISSUANCE.—

(1) The monetary authority shall seek to enter into international accord, under the auspices of the Basel Committee on Banking Supervision or any successor thereto, under which countries agree to prohibit domestic institutions from issuing money-claims denominated in nondomestic currencies.

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(2) The monetary authority shall deny dollar clearing services to foreign institutions that are known issuers of dollar-denominated money-claims.

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