THE MONETARY STRUCTURE OF ECONOMIC ACTIVITY: A CONSTITUTIONAL ANALYSIS

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By revealing a community in radical transition, constitutional crises expose money's relationship to the market. That essential dynamic is more easily disregarded in routine times. Modern commentators deflect analysis further by imputing a basic divide between real and monetary activity. This essay retheorizes that relationship using the Civil War experience as a setting. The exercise illuminates money as a practice that constructs the market architecture across crises and calms.

First, contriving a public unit of account creates commensurability in value and makes possible prices. That accomplishment is, at the same time, an arresting act of constitutional reorganization. To create a money, communities literally transmute political obligation into a unit and enable that entity to circulate: modern money is a sovereign liability that can offset individual indebtedness. Consonant with that faculty, the initiative expands public capacity and realigns private relations. Second, enabling money as a medium structures its operation. Money issues from public and private market actors who are advantaged by their ability to create it and it attracts users into its measurement system through their demand for that medium. Those features—discrete issue and particularized demand—are inherent to the phenomenon of circulation and, in turn, affect production. Third, a government curates exchange by enforcing those transactions in money that it approves. As it defines "commodities," shapes contract, and develops property, the polity dredges the monetary channels of exchange.

In the face of money's sweeping effects as a unit of account, medium of exchange, and mode of payment, its disregard in modern economic theory is a major default. Analyzing money creation exposes it as the structure that configures economic activity.

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I.
INTRODUCTION

In early 1862, Salmon Chase watched the money supply vanish before his eyes. It was a disturbing experience for the Secretary of the Treasury charged with financing the Civil War. As he put it later with elegant understatement, "a new policy became necessary" once coin had disappeared from circulation and state banks had suspended the convertibility of their notes.[1] Chase was writing then as Chief Justice about the Union's response to the predicament -- the government would create more than $450 million in paper money or "greenbacks." It was another member of the Court, Justice Joseph Bradley, who captured the reason the Union acted so dramatically:

> A constitutional government, notwithstanding the right of eminent domain, cannot take physical and forcible possession of all that it may need to defend the country, and is reluctant to exercise such a power when it can be avoided. *It must purchase*, and by purchase command materials and supplies, products of manufacture, labor, service of every kind. The government cannot, by physical power, compel the workshops to turn out millions of dollars' worth of manufactures in leather, and cloth, and wood, and iron, which are the very first conditions of military equipment. It must stimulate and set in motion the industry of the country. In other words, it must *purchase*.[2]

The disappearance of money devastated people as well as the government. They also needed "that great instrument of exchange" by which they transacted "all their own affairs with each other."[3] It was "that thing they must have, and which lies at the foundation of all industrial effort and all business in the community."[4]

Tasked with (re)creating a market, Congress constructed greenbacks out of credit. Each dollar was a promise of value made by the United States to its holder, a tiny non-interest-bearing I.O.U. that was crafted to circulate. As the Court held years later, Congress had the power to issue "obligations of the United States in such form, and to impress upon them . . . qualities as currency for the purchase of merchandise and payment of private debts."[5] The practice was well in "accord with the usage of sovereign governments."[6]

The drama that unfolded in Civil War America offers a window onto a critical and recurring dynamic: the structural relationship between money and the market. Scholars have long neglected theorizing that relationship. As Roy Kreitner observes, "orthodox economics does not actually theorize money, so

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1. Veazie Bank v. Fenno, 75 U.S. 533, 537 (1869). Federal "Treasury notes" had also become inconvertible into coin. *Id*.

2. Knox v. Lee, 79 U.S. 457, 563 (1870) (Bradley, J., concurring) (emphasis in original).

3. *Id.*

4. *Id.*

5. Julliard v. Greenman, 110 U.S. 421, 447 (1884).

6. *Id.*

much as it theorizes . . . its irrelevance."[7] Assuming that exchange effectuates an underlying barter, money merely expresses the comparative and pre-existing value of things. "There cannot," James Stuart Mill wrote, "be intrinsically a more insignificant thing in the economy of society than money. . . . [T]he relations of commodities to one another remain unaltered by money."[8]

As John Maynard Keynes demonstrated, Mill overstated his argument. People's proclivity to hold money disrupts the identities basic to classic economics. Much of modern macroeconomics focuses on the dynamics created as liquidity levels change and recognizes central banks as dominant actors in making economic policy.[9] Despite that accommodation, Mill's basic premise—that money is an instrumental entity that does not *or should not* affect comparative values—is widespread. As the eminent economist asked to write Palgrave's entry on money in 2008 responded, "what is universal and important is that something is chosen, not what is chosen."[10] The action is elsewhere—in the "real economy," not the nominal one, and in the market, not its measure. With breathtaking complacency, the approach sets aside the possibility that the medium actually shapes the product, as in language and literature or tonality and music.

Even those who recognize that the character of money as credit matters have undertheorized that process. To a surprising extent, those scholars assume that when a community makes money like the greenback—issuing a promise of value that it will honor as a claim against itself in the future—it is analogous but for scale to when an individual makes such a promise. Thus Hyman Minsky's ironic barb that "everyone can create money, the problem lies in getting it accepted"[11] is routinely interpreted—or misinterpreted—to suggest that credit issued by individuals is quite like that issued by publics but for the larger coercive authority of the latter. In fact, we have left virtually unexplored the way public money creation constructs what we know as "the market."

This Article considers the phenomenon at a theoretical level. The method is to expose the way making money also makes the market. In that sense, the argument is constitutional with a small "c." But the centrality of money and market-making at a critical moment in American history brought their relationships with the U.S. Constitution into contention, prompting jurists to articulate issues of existential crisis, sovereign power, value, popular need, and expectations about exchange. Their analyses provide an illuminating point of

7. Roy Kreitner, *Concepts, Contexts, Contests*, 87 LAW & CONTEMP. PROBS., no. 1, 2024, at 147, 150.

8. *Id.* (quoting JOHN STUART MILL, PRINCIPLES OF POLITICAL ECONOMY 296 (1848)).

9. *See, e.g.*, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, PURPOSES AND FUNCTIONS (2016).

10. JAMES TOBIN, Money 9 (Steven N. Durlauf & Lawrence E. Blume eds., Palgrave Macmillan 2d ed. 2008).

11. HYMAN MINSKY, STABILIZING AN UNSTABLE ECONOMY 228 (1986).

reference, one far more accessible than the elusive moments of origin we often imagine in the primordial past. In fact, money and markets are constantly made and just as actively remade and maintained. Far from sanctifying an imagined event, we should explain the phenomena before our eyes. When we look there, it turns out that our market, including its operation, character, and material consequences, depends on the money that makes it.

The next section briefly describes modern moneys, locating their identity as sovereign liabilities—that is, credit claims against the public—that can be transferred and used to extinguish personal and political obligations.[12] The Article then considers each element in the way we make money—its operation as a unit of account, a medium of exchange, and a mode of payment. The result is striking: each ingredient provides an essential dimension of the market.

First and foundationally, modern communities make a standard of value by packaging political obligation in the form of a credit and allowing that credit, reified into a unit, to circulate and settle debts. Aside from an amazing act of political creativity, the entity that results is an economic innovation: it literally entails material value, creating a quantum that is commensurable and shared. That allows people to measure value—a prerequisite for comparison and, in turn, prices. Polities expand capacity to mobilize resources using that unit of account; individuals realign their practices, creating fungible exchange in place of more socially dependent arrangements.

Second, money's identity as credit structures its work as a medium. It is issued by an originating agent that participates in the (developing) market and so operates with a unique advantange. In turn, money reaches others who orient their activity towards the medium as a productive resource. They will hold money that is non-interest bearing in exchange for its capacity as currency. The pattern – discrete issue and targeted demand – is replicated and amplified by strategies that multiply the public unit in further forms of credit. Banks, the modern method of creating an elastic medium, share the influence and advantage that comes with money creation. Their customers accept bank credit given its sanctioned role in the system. The reality that money issues from specific actors and attracts users drawn to its capacity is a perennial aspect within communities of exchange. It differentiates the actors producing and choosing a medium, thus formatting the exchange that takes place.

Finally, polities curate the use of money as they develop it, a third determinant in the market that results. By deciding when to support the transfer of the material claim that is money, they selectively build the legal economy (and thus the extralegal economy as well) defining "commodities" along with property, debt, contract, and other categories as they enforce certain transfers of money but not others. When successful, that work invites more traffic in a medium, augmenting demand for it. Polities then aim to stabilize the system they

12. Soverign liabilities comprise base or high-powered money, also called "outside" money. Private credit money, also called "inside" money, offers credit in outside money. See *infra* TAN 87-92.

have created given its importance. As in 2008 and 2020, that work pervasively shapes the results.

Each aspect of the triad captures a function commonly identified as monetary: the credit claim takes shape as a unit of account, a medium of exchange, and a mode of payment.[13] But when we consider the way communities engender each function – when we consider each function as a practice -- we unfold a much richer story. The process of money creation is, at the same time, constructing the market.

II.

MONEY AND THE CONSTRUCTION OF AN ECONOMY

The greenbacks issued during the Civil War illustrate public money creation at its most transparent. Given by the Union as payment for goods, land, labor, or military service, each note was a promise of value. It would be honored by the government as a material claim in that amount when taken back for obligations due the public and could travel hand-to-hand in the meantime.[14] No matter their position on other issues, the Supreme Court justices who later judged the system agreed that the notes were a kind of "national credit," one designed to borrow in a form that circulated as currency.[15]

As the Court also recognized, the government's credit could alternatively be issued by a national bank or a "banking apparatus."[16] That mode of sovereign money creation would become the norm. U.S. statutory law today defines the dollar issued by the Federal Reserve as a unit of sovereign debt, an "obligation of the United States" that will be taken back for taxes and can circulate in the meantime.[17] Federal legislation dictates the circumstances in which the central bank can produce dollars, providing that the bank can trade them for larger-value

13. *See, e.g.,* TOBIN, *supra* note 10, at 3. Economists often add "store of value" to the triad of money's identifiers. I treat that function, where monetary, as an aspect of the unit of account's capacity to substantiate material value. *Id.*

14. Greenbacks came in small amounts, were payable to bearer, and transferable by delivery. *See* Act of Feb. 25, 1862, ch. 33, 12 Stat. 345, 345 (1862); Julliard v. Greenman, 110 U.S. 421, 461 (1884) (Field, J., dissenting) (describing how notes were made suitable for circulation).

15. *See, e.g.*, Julliard v. Greenman, 110 U.S. 421, at 447, 461 (1884) (identifying greenbacks as "obligations of the United States" configured as currency and given for merchandise and to pay debts); Knox v. Lee, 79 U.S. 457, 561 (1870) (Bradley, J., concurring) ("Congress . . . by its right of eminent domain, may authorize the president to take private property for the public use and give government certificate therefor . . . It is an indirect way of compelling the owner of property to lend to the government. He is forced to rely on the national credit."); *id*. at 578–579 (Chase, C.J., dissenting) (identifying greenbacks as tax anticipation notes, equivalent to "the general credit" of the country when used to buy public bonds).

16. *See* Veazie Bank v. Fenno, 75 U.S. 533, 549 (1869); *Knox*, 79 U.S. at 556–58 (Bradley, J., concurring); *id.* at 561 ("I hold it to be the prerogative of every government . . . to anticipate its resources by the issue of exchequer bills, bills of credit, bonds, stock, or a banking apparatus.")

17. 12 U.S.C. § 411; 31 U.S.C. § 5103.

and longer-term public debt (or other assets) that will provide future value.[18] Other modern sovereign moneys operate on the same logic. Each nation's central bank issues "its own liabilities for use as money."[19] The nation will borrow in that liability, tax in that liability, and pay off public debt held by the central bank with that bank's own liability. By that method, the nation equates its liabilities with those of its central bank.[20]

In modern economies, commercial banks expand sovereign moneys in the figure of their own credit. Those banks draw on a substantial public infrastructure to operate, one that enables the clearing of bank liabilities, supports everyday exchange with credit advances and overdrafts, lends as a last resort, and furnishes a stable capital asset in the form of public debt.[21] Yet more basically, commercial banks depend on legal authority from the government to produce (private) promises to pay in the (sovereign) money. In the United States, the Civil War settled that issue as well: Congress has the responsibility and the corresponding authority to "restrain, by suitable enactments" the circulation of moneys not issued under its own authority.[22]

Money has been made according to other designs. In fact, communities surely make media that are not credit currencies at all.[23] But "money" as a label operates again and again in our vocabulary to pick out credit-based media. It may be that when we use the word, we functionally select for that phenomenon. Medieval coin, national bills of credit, greenbacks, money made by central banks—all fit within the category and are covered by the analysis here.[24] The match between those media and our semantics makes unnecessary a more universalist claim about money's definition. Understanding moneys made out of public credit can tell us an enormous amount, if not everything, about the

18. *See* Federal Reserve Act of 1913, Pub. L. No. 117-263, §§ 10(b), 13(3), 38 Stat. 251, 1, 31, 46 (codified at 12 U.S.C. §§ 347(b), 343(3)) (discounting); *id.* at §§ 14, 16 (codified at 12 U.S.C. §§ 353–59, 411, 412) (open market operations).

19. BANK FOR INTERNATIONAL SETTLEMENTS, THE ROLE OF CENTRAL BANK MONEY IN PAYMENT SYSTEMS 1 (2003); *see also id*. at 13–14 (noting safety of central bank money given explicit and implicit state support, and ability to "cover its obligations by issuing its own currency," with caveat that central banks are also responsible for maintaining price stability). The Bank of International Settlements in turn documents central bank liabilities as the major clearing asset for commercial banks. *Id*. at 1, 7–8.

20. *See* Christine Desan, *Money's Design Elements: Debt, Liquidity, and the Pledge of Value from Medieval Coin to Modern "Repo,"* 38 BANKING & FIN. L. REV. 331, 347 (2022) (reviewing logic and its application).

21. *See, e.g.*, Nadav Orian Peer, *Negotiating the Lender of Last Resort: The 1913 Federal Reserve Act as a Debate Over Credit Distribution*, 15 NYU J. L. & BUS. 367 (2019); MORGAN RICKS, THE MONEY PROBLEM: RETHINKING FINANCIAL REGULATION (University of Chicago Press 2016); Robert C. Hockett & Saule T. Omarova, *The Finance Franchise*, 102 CORNELL L. REV. 1143 (2017).

22. Veazie Bank v. Fenno, 75 U.S. 533, 549 (1869).

23. *See, e.g.*, James W. Bradley, *Re-Visiting Wampum and other Seventeenth-Century Shell Games*, ARCHAEOLOGY OF E. N. AM. 25, 26–27 (2011).

24. *See supra* DESAN, *supra* note 20, at 340–42 (coin); *id.* at 347–50 (commercial bank notes and central bank base money); Julliard v. Greenman, 110 U.S. 421, at 447, 461 (1884) (greenbacks); Christine Desan, *From Blood to Profit: Making Money in the Practice and Imagery of Early America*, 20 J POL. HIST. 26, 28 (2008) (early American paper money).

economies we inhabit.

Once money, so defined, is tamed into a financial asset, it is easy to overlook how transformative is its creation, issue and expansion, enforcement and support. Not so when we unpack that process. As that exploration shows, making a unit of account enables priced exchange. By the same stroke, it reorganizes the community, revises and reframes relationships. Enabling that unit as a medium in turn structures its circulation, shaping it according to the discrete influence of those issuing it and the particularized demand of those who want to use it. Finally, as polities determine what transactions to support in money, they define and draw upon rights and remedies in law. The process determines the boundaries and channels that money travels. The economic activity that results, endlessly contested and changed, is the phenomenon we call "the market."

A. Making the Monetary Unit: Material Credit in Commensurable Form

Consider, first, the spectacular oddity that is the unit of account. When the United States government gave a greenback for land or labor and agreed to take the note back for value, it identified the amount on the note's face with a political contribution the noteholder otherwise owed the government. In that moment, the government packaged a material obligation (the political contribution) into unit form (the dollar). That reified claim would then travel between people as a standard of value that, assuming the government maintained its pledge, would keep a stable value.[25]

According to Ariel Ron and Sophia Valeonti, the Union was superbly positioned to anticipate taxes—political contributions—in the form of a unit. By contrast with their neighbors to the South, Northerners had long accepted that they owed material support to their communities. They had developed both administrative capacity and a robust politics of debate around the ends and amounts of public spending. In 1862, Congress determined to "tax[] almost everything but the air Northerners breathed."[26] The populace remained remarkably compliant; their expectations and tradition contrasted dramatically with the disorganization, administrative incompetence, and ideological resistance that left the Confederacy unable to create an effective money supply.[27]

Northerners were not alone in their practice although notable in their commitment. Sustainable communities routinely depend on the contributions of

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25. *See* CHRISTINE DESAN, MAKING MONEY: COIN, CURRENCY, AND THE COMING OF CAPITALISM 45–50 (2014) (reviewing economic models of tax anticipation moneys). The Civil War justices understood the logic. *See, e.g.*, Knox v. Lee, 79 U.S. 457, 578 (1870) (Chase, C.J., dissenting) ("It is plain that a currency [supported by receivability for taxes and interest-bearing public loans] cannot depreciate more than the loans; in other words, below the general credit of the country.").

26. Ariel Ron & Sofia Valeonti, *The Money War: An Interpretation of Democracy, Depreciation, and Taxes in the U.S. Civil War*, 47 CAMBRIDGE J. ECONOMICS 263, 271 (2023) (quoting M.M. EDLING, A HERCULES IN THE CRADLE: WAR, MONEY, AND THE AMERICAN STATE, 1783–1867 206 (2014)).

27. *Id*.

their members. In non-monetary worlds, contributions come in resources, labor, or military service. In that case, the move towards money may begin as a kind of accounting, accomplished by booking contributions in order to track them.[28] The recordkeeping becomes more powerful when communities use it to mark advances given early with a unit that that can be returned later in lieu of another contribution. The device allows authorities to shift and reorder contributions over time, enlarging public capacity.[29]

But the practice does more than create credit or "link[] the present to the future," as Keynes put it.[30] It also creates a way to compare objects to a known and common denominator. That commensurability is both critical and singular. Recall the predicament that faced the Civil War Congress. Coin had never sufficed in the growing American economy. Before the war, commercial banks supplemented that supply with promises of credit that varied notoriously in value and reliability. "At the beginning of the rebellion," the Court later wrote, "the circulating medium consisted almost entirely of bank notes issued by numerous independent corporations variously organized under State legislation, of various degrees of credit, and very unequal resources, administered often with great and not unfrequently with little skill, prudence, and integrity."[31] Theoretically anchored on the specie dollar, the hodge-podge of bank credit furnished a sorry substitute for a constant standard. In that circumstance, let alone a society truly illiquid, the uniformity of value that came with a claim honored by a concerted public authority was novel.

I have argued elsewhere that we cannot presume a common standard that allows people to express the value of goods, services, and other entities in any commensurable way. Economic models like the Walrasian auction therefore posit a unit of comparison, the numeraire. The numeraire furnishes a point of reference that enables valuing all imagined commodities against all other imagined commodities in a common unit. The Walrasian auction limits itself to valuation, leaving transactional activity unaddressed. But imputing a numeraire in order to work in a common unit suggests that, at a theoretical level, money as a common unit must pre-date market exchange, understood as trade among strangers rather than one-off exchange among intimates. It is, precisely, an agreement among relative strangers—the creation of a collective credit unit—

28. *See, e.g.*, Robert M. Rosenswig, *Money, Currency and Heterodox Macroeconomics for Archaeology*, CURRENT ANTHROPOLOGY (2022).

29. For a model of the logic as in which a "stakeholder" mobilizes resources, see Desan *supra* note 25, at 42–50.

30. JOHN MAYNARD KEYNES, THE GENERAL THEORY OF EMPLOYMENT, INTEREST, AND MONEY 294 (Harcourt Brace 1936).

31. Veazie Bank v. Fenno, 75 U.S. 533, 536 (1869); *see also* STEPHEN MIHM, A NATION OF COUNTERFEITERS: CAPITALISTS, CON MEN, AND THE MAKING OF THE UNITED STATES (Harvard University Press 2007) (exploring chaos of antebellum bank moneys).

that produces the point of reference.[32]

But we need not go that far or that abstract. At the very least, we can say that a sound credit claim offered by a polity is an effective offer of commensurability in value, almost always the *most* successful offer of commensurability in value. In that case, the polity's claim will become the unit of account at the root of the market: people will buy and sell, seek credit and pay debts, in the sovereign unit of account. That activity generates prices, the very term of value at the base of market activity.

According to this approach, the unit of account is a *practice*, one that depends on a method of installing material value in that unit as a measure. It is not an abstraction or a denominational label – identifying the dollar as the American unit of account does not make it so, thus the difference between the "dollar" as an empty term and the "dollar" as a meaningful unit of account. The former is the assertion of a measure without content. The issue is how societies produce the latter.

Before the war, coined dollars comprised the national unit of account. Like the greenback, they were substantiated by their stature as public credit – credit that, as we will see below, carried collateral content in silver or gold metal.[33] Prices in the coined dollar furnished the reference point for value; they traveled at face value for payment.[34] By contrast, state-chartered bank notes were a derivative medium; their value depended in significant part on the credibility of their promise of coin.[35] When the greenback began circulating, it entered a national market made in dollar prices – and then remade those prices.

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32. Christine Desan, *The Key to Value 2.0: The Debate over Commensurability in Neoclassical and Credit Approaches to Money*, *in* CONSTITUTIONS OF VALUE: LAW, GOVERNANCE AND POLITICAL ECOLOGY (Isabel Feichtner & Geoff Gordon eds., 2023). I thank Helen Grela for her insight on the importance of the impersonal aspect of the market as exchange between strangers. The myth used to circumvent the logical impasse is that barter between individual actors creates a unit of account. That fiction contradicts the sequence assumed in the Walrasian model, which imputes the numeraire before valuation in it. *See, e.g.*, *id.*

33. *See infra* text accompanying notes 43–44.

34. *See* An Act Establishing a Mint and Regulating the Coins of the United States, 2d cong., sess. 1, ch. 16, sec. 16 (1792) (making silver and gold coins of specified content legal tender "in all payments whatsoever").

35. *See*, *e.g.*, RICHARD H. TIMBERLAKE, MONETARY POLICY IN THE UNITED STATES: AN INTELLECTUAL AND INSTITUTIONAL HISTORY 4, 15 (University of Chicago Press 1993) (identifying redemption in specie as anchor for note value); Veazie Bank v. Fenno, 75 U.S. 533, 536 (1869) (describing chaos of state-chartered bank notes of varying values). At least, bank notes issued at the sub-national level were *supposed* to be a derivative medium. American federalism amounted to guerilla warfare over monetary authority at certain points in the nineteenth century. *See, e.g.,* Briscoe v. Bank of Commonwealth of Kentucky, 36 U.S. 257 (1837) (exemplifying conflict between state and federal authority to create public credit-backed money). It is possible that certain state-backed currencies acted as local units of account insofar as they were treated as state-issued forms of public credit. *See id.* The federal government could also have supported the value of state-chartered bank notes as money, converting them into an unofficial high-powered money, by accepting them as taxes. That apparently happened in some periods. C*f.* TIMBERLAKE, this note, at 17.

The Civil War experience again supplies the real-world evidence. We have seen that the greenback was a pledge of value made by the government to those it paid and taken back for taxes. Confronted with a challenge to Congress's decision to make the greenbacks legal tender, the Court supported its analysis with the fact, undeniable in its view, that they had become "the universal measure of value."[36] When the greenback became a unit of account that circulated, it furnished the price that held in exchange. "Men have bought and sold, borrowed and lent, and assumed every variety of obligations contemplating that payment might be made with such notes," wrote the Court.[37]

Established as the public unit of account, no other price—including that in gold coin—could displace the price furnished by the greenback. The Court posed and answered affirmatively the key questions: Could Congress "constitutionally give to treasury notes the character and qualities of money?" Yes. Could it provide that such notes were "a legitimate circulating medium, having a defined legal value?" Yes. In that case, it would be the "grossest injustice" to determine that debts had to be repaid according to a different calculus rather than the price agreed in the greenback.[38] The notes—taken at the unit value they named—"must be available to fulfill all contracts (not expressly excepted) solvable in money."[39] Indeed, while the Court split over the quality of the greenback's circulation (see subpart B below), the Court easily confirmed that Congress could issue obligations of the U.S. government—political pledges of value—in a form that would act as money.[40] The Court's holding reiterated classic cases on the binding force of the unit of account.[41]

Recognizing the impact and legality of the greenback did not lay to rest the competitor that pre-dated the greenback and circulated outside the courthouse: gold coin appeared to carry value and provide a measure according to a more material logic. For critics both then and later, the greenback was a knock-off, a bastard imitation of money that, given its lesser status, traveled with lower value.

In fact, paper money and specie coin were both public credit forms. Each was a political pledge: the government defined the value of each and committed to taking it back at face value. To be sure, there was a difference: while paper money relied solely on a governmental commitment to honor it, coin carried metal collateral.[42] But the U.S. government defined both as dollar-denominated units

36. Knox v. Lee, 79 U.S. 457, 530 (1870) (grounding analysis on the penetrating spread of the greenback dollar as such).

37. *Id.*

38. *Id.*

39. *Id*.

40. *See supra* note 15.

41. *See, e.g.*, The Case of the Mixed Money (1605), 78 Davies's Rep. 114, 115; 2 James I.

42. Coin, in the medieval and American worlds alike, was produced by the government, which used it to make advances and committed to taking it back for value. The precious metal body of coin controlled its production and offered collateral to users; those practices configured the way specie operated. *See*

of account in the post-bellum period: each comprised the monetary base (high-powered money), and each acted as the sovereign reserve for commercial banks that would be established in the post-war decades.[43] In effect, the United States had produced two competing units of account.

The crisis that was the Civil War put the political pledge behind each money at issue. When users doubt that a community can support its own money—that is, honor its own credit commitments—they will gravitate towards money with metal collateral as the safer choice.[44] As with currencies compared in the international context, their preferences create an exchange rate.[45] For most of its career, the greenback traveled at a discount compared to gold coin; the difference turned on the metal collateral carried by coin. Across Civil War America, individuals and business squirreled away coin, sent it abroad, or exchanged it for foreign currency. That very activity established the greenback as the going unit of account in the American market. We are back to the Court's "universal standard of value." As the available dollar, it was the most effective—if not the only—unit of account. It provided the prices that made the domestic market.

As a unit of account produces prices and priced exchange, it dramatically affects a polity's capacity and character—including its ability to maintain a market. When a community monetizes recurring contributions, public authorities can hire people by task and skill, creating specialized workforces and salaried staffs. The community can support that spending while taxing a wider collective. The increased flexibility will make more diverse projects possible, including standing police forces, regular forums for dispute resolution, educational, welfare, or health initiatives. In his classic work, Max Weber summed up the

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DESAN, *supra* note 25, at 108–50 (analyzing dynamics of coin's production and use). The fact that coin was used in many polities drove up the value of silver and gold and secured demand for specie across borders—it could always be used to create (or stand in for) domestic coin. Greenbacks, like modern money today, relied directly on the pledge by the government to take them for taxes or otherwise recognize their value. They were receivable to purchase public bonds, for example, as are dollars today. Act of Feb. 25, 1862, ch. 33, 12 Stat. 345 (1862). *See infra*, note 45.

43. RICHARD FRANKLIN BENSEL, YANKEE LEVIATHAN: THE ORIGINS OF CENTRAL STATE AUTHORITY 263 (Cambridge University Press 1990); Act of Feb. 25, 1863, ch. 58, 12 Stat. 665 (1863); Act of June 2, 1864, ch.106, 13 Stat. 99, 109 (1864) (referring to "lawful money of the United States" required to be "on hand").

44. *See* Ron & Valeonti, *supra* note 26, at 264 (noting discount of greenback against gold). The movement is even starker when users doubt the political viability of a community, about which more below. *See, e.g.*, George J. Hall, *Exchange Rates and Casualties During the First World War* (Nat'l Bureau of Econ. Rsch., Working Paper No. 9261, 2004); Thomas J. Sargent, *The Ends of Four Big Inflations* (Nat'l Bureau of Econ. Rsch., Working Paper No. 158, 1981).

45. The government struggled to close the gap in exchange rates through the post-war period. One of the most contentious points of public policy was how and whether the greenback should be made redeemable in gold coin; as users converted paper into coin, the prices of the two would come together. *See, e.g.*, TIMBERLAKE, *supra* note 35, at 88–91, 97–117 (University of Chicago Press 1993). According to another strategy for tying the two prices together, the greenback could be used to purchase bonds that promised interest in specie. Veazie Bank v. Fenno, 75 U.S. 533, 537–38 (1869).

pattern, noting that "a money economy . . . is a presupposition of bureaucracy."[46]

While they overlook the formative constituent of money creation, modernization theorists virtually identify the advent of taxation in money with the transition to modernity. As Charles Tilly put it, "High-capacity contemporary regimes could only form if they built on exchange economies and created fiscal systems to benefit from exchange."[47] His observation assumes the enabling element highlighted here—the fact that exchange economies follow from a sovereign practice, the levy, that creates a circulating asset. A recent introduction to fiscal sociology indexes "activities of the state" to "reliance on taxation" in "fungible resources" (as opposed to conscripted service) that can be spent by the state, generally asserting that state capacity and such taxation rise together.[48]

The Civil War was a natural experiment in state-building of the type modernization theorists would love. Bereft of coin, both the Union and the Confederacy turned to issuing paper money—the grayback worked on the same theory as the greenback.[49] As the Court saw it, the stakes affected "the possible continued existence of the government . . . its means of self-preservation."[50] In Justice Bradley's words, the government needed a firm grip on "the two great sovereign instrumentalities of the *sword* and the *purse*":

> In certain emergencies government must have at its command, not only the personal service—the bodies and lives—of its citizens, but the . . . power of absolute control over the resources of the country. Its armies must be filled, and its navies manned . . . . Its material of war, its munitions, equipment, and commissary stores must come from the industry of the country.[51]

On the monetary battlefield, the Union would powerfully outcompete the Confederacy. At its worst, prices in the greenback rose by a factor of two, similar to the rate of dollar inflation the United States experienced in World Wars I and II. By contrast, the South failed miserably. Inflation in the grayback pushed prices up nearly ninetyfold;[52] the difference may well have determined the

46. MAX WEBER, *Bureaucracy*, *in* FROM MAX WEBER: ESSAYS IN SOCIOLOGY 201 (H. H. Gerth & C. Wright Mills eds., 1958). Conversely, the importance of taxation to the modern state suggests the relationship from another angle. Taxation can amount to 40% of GDP and, as measured by economic flow, is "the principal domestic undertaking of states in the West." Isaac William Martin et al., *The Thunder of History: The Origins and Development of the New Fiscal Sociology, in* THE NEW FISCAL SOCIOLOGY: TAXATION IN COMPARATIVE AND HISTORICAL PERSPECTIVE 26 (Cambridge University Press 2009).

47. Charles Tilly, *Foreword*, *in* THE NEW FISCAL SOCIOLOGY, *supra* note 46, at xiii.

48. Martin et al., *supra* note 46, at 4. For recent approaches emphasizing the transformative state-building power of taxation, see, for example, BENSEL, *supra* note 43; JOHN BREWER, THE SINEWS OF POWER: WAR MONEY AND THE ENGLISH STATE, 1688–1783 (Knopf 1988); MARGARET LEVI, OF RULE AND REVENUE (University of California Press 1988). Compare earlier work in the field, including one authority who notes simply that "*tax collection and assessment are indissolubly linked to an exchange economy.* The flow of goods and money are necessary for the understanding and especially for the evaluation of taxable materials." Tilly, *supra* note 47, at xiii (translating Gabriel Ardant).

49. Ron & Valeonti, *supra* note 26, at 267, 271.

50. Knox v. Lee, 79 U.S. 457, 529 (1870); *see also id*. at 532–33, 540–41 (similar).

51. *Id*. at 563 (Bradley, J., concurring); *see also id.* at 556–61 (similar).

52. Ron & Valeonti, *supra* note 26, at 264; TIMBERLAKE, *supra* note 35, at 90 (Table 7.1).

Union's victory.

Monetization changes more than state capacity; it also changes the way authorities relate to members and those members relate to one another. For Bradley, impressment figured as a method of war mobilization inevitably more oppressive than "purchase," even though purchase would be paid through taxation.[53] In the same vein, a stream of scholars from James Steuart to Charles Tilly have identified negotiation over monetized taxes as the birthplace of democracy, arguing that citizens holding wealth in money gain political leverage for many reasons, including that they can move money, come to protect it as personal property and, we might add, use it to finance resistance.[54]

Focusing on the coercive power of state authority, a number of contemporary scholars disagree. As they point out, the British Empire among others broke the monetary autonomy of other communities by taxing in an imposed unit of account.[55] Against that baseline, the way modernization theorists conceptualize monetized taxation looks more ideologically colored, a reflection of liberal theory rather than a universal pattern. Of course, the same could be said about critics of monetized taxation who reject Justice Bradley's view that in-kind levies were more burdensome than taxes imposed in money.

The cross-cutting insight is that the way a community assesses contributions powerfully shapes the way people theorize their community, its politics, and its legitimacy.[56] When authorities move to a monetized system, they are tapping some members and rewarding them with money, then levying contributions from a greater group to pay off the spending. The technique relates members of the polity in a new way, connecting them through the architecture of the state's revenue system and market. The effects penetrate deeply given that "taxation establishes one of the most widely and persistently experienced relationships that

53. For Bradley's argument, see supra text accompanying note 3.

54. *See, e.g.*, ALBERT O. HIRSCHMAN, THE PASSIONS AND THE INTERESTS: POLITICAL ARGUMENTS FOR CAPITALISM BEFORE ITS TRIUMPH 73–92 (twentieth anniversary ed. 1997); Charles Tilly, *Extraction and Taxation*, *in* THE NEW FISCAL SOCIOLOGY, *supra* note 46, at 180–82; ; *see also* Ron & Valeonti, *supra* note 26; Robin Einhorn, *Liberty, Democracy, and Capacity: Lessons from the Early American Tax Regimes*, *in* THE NEW FISCAL SOCIOLOGY, *supra* note 46, at 155 (finding democratic political traditions in northern colonies produced more sophisticated tax policy than hierarchical political traditions in the South).

55. *See, e.g.*, Mathew Forstater, *Taxation and Primitive Accumulation: The Case of Colonial Africa*, 22 POL. ECON. 51 (2005); *see also* K-Sue Park, *Money, Mortgages, and the Conquest of America*, 41 L. & SOC. INQUIRY 1006 (2016) (considering manipulation of native Americans into debt monetized in foreign currency).

56. The "new fiscal sociology" generally assumes moneyed contributions and considers variations in those moneyed regimes. *See, e.g.*, Martin et al., *supra* note 46; Fred Block, *Read Their Lips: Taxation and the Right-Wing Agenda*, *in* THE NEW FISCAL SOCIOLOGY, *supra* note 46, at 68–85 (considering deployment of individualistic ideology in tax coalition-building); Beverly Moran, *Adam Smith and the Search for an Ideal Tax System*, *in* THE NEW FISCAL SOCIOLOGY, *supra* note 46, at 201–15 (extrapolating tax policy from philosophical tenets of Adam Smith). But the shift *to* that mode of contribution introduces a yet more rudimentary transition.

individuals have with their government and—through their government—with their society as a whole."[57]

The point extends from political to personal relations. As people begin using a commensurable unit to mark and trade value, they fundamentally transform their own modes of exchange. Arrested by the richness of anthropological commentary on early societies, Karl Polanyi famously argued that pre-monetary communities created particular forms of mutual obligation. Each web embedded exchange within social relations, including principles of reciprocity and redistribution, even as they became extremely sophisticated.[58] A recent study about a process of de-monetization captures a similar phenomenon. As the Soviet Union and its currency crumbled, actors at the sub-national level struggled to coordinate material life within the collective. Dropping out of the monied economy, entities like power plants and municipal governments channeled resources from debtors—building materials, fuels, produce—to others with a claim to those goods or need for them. The arrangements returned economic players to a more local scale of concern and a more restricted repertoire of reciprocity.[59] The dynamics evoked Georg Simmel's argument that pre-monetary societies enmeshed participants "in a thicket of concrete dependencies."[60]

By contrast, people in a monetized order can purchase services "which have a money value and may therefore be carried out by any interchangeable person."[61] Recall Justice Bradley's contention that Congress acted not only for the war effort but for the civilian population, which "must be able to lay its hands on the currency—that great instrument of exchange by which the people transact all their own affairs with each other."[62] A flood of philosophers, social theorists, and political scientists have in turn taken up the debate how moneyed exchange revises human relation. Adam Smith, Karl Marx, Carl Menger, Georg Simmel, Karl Polanyi, Michael Sandel, and others split over whether moneyed exchange is a profoundly destructive force that alienates individuals from the product of their own labor and reduces them to calculating automatons or an emancipatory practice that allows people to escape dependency and irrigates human

57. Martin et al., *supra* note 46, at 3. Also see *supra* note 48 and accompanying text for comments on the importance of taxation.

58. KARL POLANYI, THE GREAT TRANSFORMATION: THE POLITICAL AND ECONOMIC ORIGINS OF OUR TIME 45–55 (Beacon Press 2nd ed., 2001). European feudalism likewise used a currency of military prowess as an organizational logic, even as money had a certain role. The warlord most able to control his peers became king and commanded contributions in knightly services. Repaying loyalty with land, the sovereign created a political order of protection. Wickham compares regimes based on land to "tax-raising states," identifying the latter as more stable. CHRIS WICKHAM, MEDIEVAL EUROPE 9–11, 217–18 (Yale University Press 2016).

59. DAVID WOODRUFF, MONEY UNMADE: BARTER AND THE FATE OF RUSSIAN CAPITALISM 135–37 (Cornell University Press 1999).

60. *Id*. at 137.

61. *Id*. at 18 (quoting GEORGE SIMMEL, THE PHILOSOPHY OF MONEY 300 (1900)).

62. Knox v. Lee, 79 U.S. 457, 563 (1870) (Bradley, J., concurring). Bradley also considered that "activity of the workshops and factories, mines and machinery, shipyards, railroads and canals of the loyal States" indispensable to the war effort, a "fountain of strength to the National cause." *Id.* at 564.

productivity. They agree, however, that priced exchange displaces or alters other registers of interaction. That practice constitutes the market in everyday life, at a material level and a conceptual one.

Monetary units are easily imagined, from the numeraire that furnishes the Walrasian auction with a common denominator of value to the abstract dollar in economics textbooks to the cigarettes that changed hands in P.O.W. camps.[63] But the reality is much more provocative. A unit of account packages political obligation and enables it to travel between users. The result is a material standard, one that will be enhanced by its ability to move between people at face value (see subpart B below). That activity produces prices. More, it changes political capacity and character as well as the way people relate to each other, building market exchange as it goes.

Taking the unit of account seriously does not mean that all value becomes priced or can be priced. To the contrary, it identifies as significant the very process of gaining a price. That phenomenon occurs through a particular practice: it happens when we tag goods with a measure that allows commensuration and comparison. When parties use that measure to mark and exchange goods, they bring prices into being. Prices do not reflect values in the abstract, fundamental or otherwise. Rather, prices reflect the process of money's creation and use. Given that, we need to explore money's entry and diffusion into a community.

B. Mapping the Medium of Exchange: The Structural Impact of Discrete Supply and Particularized Demand

Once a unit of account exists, we often imagine it changing hands without more. Account after account assumes that money transfers easily and automatically between parties. Just so, the description above slid naturally from identifying a unit of account to describing its use in exchange. Indeed, in a virtual tour de force, the Walrasian auction treats transferability as an activity that need not be modeled. The numeraire supplies a means of measure; market actors use it to compare value; so far as the auction tell us anything about the distribution of goods, the reordering that follows must happen as a matter of course. Transferability—that is, the act of exchange—is so trivial compared to measure that it simply drops out of the Walrasian picture. And consonant with the self-evident nature of the transaction, it occurs between parties who are basically

63. Often elevated as exemplars of money, cigarettes function in circumstances that should give free-market advocates pause. POW camps and prisons are totalitarian at the political level and socialist at the material level (supplying housing and sustenance). Those conditions are, of course, paid for by publics funded with dollars and deutschmarks rather than cigarettes. That is, only when an experiment externalizes the public architecture of the market does real activity appear to be independent of that monetary structure. For analysis, see Christine Desan, *Coin Reconsidered: The Political Alchemy of Commodity Money*, 11 THEORETICAL INQUIRIES LAW 361, 362–70 (2010).

alike, generic agents in the market.[64]

In fact, money's operation as a medium is distinctly structured. Demand for a particular medium and the discrete points of issue that furnish it configure a money's travel; they *format* circulation. Those features—particularized demand and discrete issue—are internal to the market made in any unit of account. They are the mode by which money moves beyond a bilateral accounting mechanism and becomes a currency. They reflect at the same time the differentiated nature of market participants, divided as it is between parties that create money and all others. Inherent to each market made in a unit of account, the structure of money's operation as a medium affects prices and therefore production.

We can start at the simplest level—the government's direct issue dollar. The Union could have used the Civil War greenback purely as a method of accounting between itself and its soldiers and suppliers. After all, the note was a tax credit issued by the government, a liability fully under its control. It could have made that credit specific to the person who received it, a mode of tracking their advances, just as I might write an I.O.U. to my sister and her alone. No third party need take a personal accounting note for value.

According to asset-pricing theories, a person advancing work now for payment later will discount the amount of work done up front. After all, he or she could otherwise put their sweat equity into alternative activity—planting, building, or crafting—that would produce more returns by time the tax is due. They can then pay the tax off and have those returns to boot. If the Civil War government was going to pay with single-use credits, it would have to pay more, coerce, or confiscate.[65]

Union officials did not need asset-pricing theory to understand the problem. They were already paying suppliers with credit vouchers by the handful, all taken at significant discounts.[66] The Union could not pay troops it needed desperately by giving them a credit that had no utility until it was taken for taxes in the future. Rather, it should pay them with a credit that soldiers could use immediately: the government need only allow the soldiers to transfer the credit, agreeing to take

64. *See, e.g.*, MARK BLAUG, ECONOMIC THEORY IN RETROSPECT 145 (Cambridge University Press 5th ed. 1996); ANDRÉ ORLÉAN, THE EMPIRE OF VALUE: A NEW FOUNDATION FOR ECONOMICS 13–14, 39–50 (M. B. DeBevoise trans., The MIT Press 2014); JAMES E. HARTLEY, THE REPRESENTATIVE AGENT IN MACROECONOMICS 23–30 (1997).

65. Put in terms of asset-pricing theories of money, the government would get fewer goods for the value of a credit compared to its equivalent in goods paid at the point of redemption. The unit of credit would slowly gain value (appreciate) towards its redemption time, when it would be taken at full value. Charles W. Calomiris, *Institutional Failure, Monetary Scarcity, and the Depreciation of the Continental*, 48 J. ECON. HIST. 47, 65–68 (1988); Farley Grubb, *Is Paper Money Just Paper Money? Experimentation and Local Variation in the Fiat Monies Issued by the Colonial Governments of British North America, 1690-1775* (Nat'l Bureau of Econ. Rsch., Working Paper No. 17997, 2012). For a round-up of asset-value theories, see DESAN, *supra* note 25, at 45–49.

66. MARK R. WILSON, THE BUSINESS OF CIVIL WAR: MILITARY MOBILIZATION AND THE STATE, 1861–1865 111–15 (2006). Contractors generally discounted vouchers with banks to raise cash, and the vouchers circulated informally. The Union soon began using "certificates of indebtedness" to pay creditors. Those instruments were interest-bearing. *Id.*

it back from anyone's hand as payment to the government.

At a stroke, that grant created a medium that could travel through the hodge-podge of private bank currencies with the known and uniform value it carried as a unit of account. More, the government could add to the appeal by recognizing the greenback as a dollar in all the transactions it enforced—sales and debts, damages and wage payments. "It would be absurd," editorialized the *New York Times*, "to compel the soldiers to take their pay" in anything merchants catering to them in the field could refuse.[67] In effect, the government could give a soldier assurance that a greenback dollar would operate in the ecosystem of exchange that the government curated, an ecosystem so large, so penetrating, that it is often taken for granted (see subpart C below).

When it offered access to a market made in its unit of account, Congress was following a well-worn playbook. Making its currency legal tender was "a power confessedly possessed by every independent sovereignty," the Court found in *Knox*; it confirmed that the United States could so do as well.[68] Even Chief Justice Chase, driven to dissent by the coercive potential of legal tender, argued only that it was unnecessary. Congress could use its credit as money, and people would adopt it as a medium on the substantive appeal of its generalized "receivability for debts due the government."[69] The currency would offer value as stable as "the general credit of the country," a matter ensured by fiscal discipline.[70]

Under either logic, a sound tax anticipation money provided a medium that people would bid up in value, selling goods for less to get it because they could *use* it again in exchange. They would rather hold that currency than the heterogeneous alternatives issued by unknown banks with "little skill, prudence, and integrity."[71] That was especially true as those banks folded under a prohibitive federal tax and the greenback became even more "convenient and useful for commercial purposes."[72] As they lowered their prices to get greenbacks

67. ROGER LOWENSTEIN, WAYS AND MEANS: LINCOLN AND HIS CABINET AND THE FINANCING OF THE CIVIL WAR 95 (Penguin Press 2022) (quoting *New York Times*).

68. Knox v. Lee, 79 U.S. 457, 529 (1870).

69. *Id.* at 578 (Chase, C.J., dissenting).

70. *Id.* Chase especially recommended making the greenback receivable for "loans bearing coin interest." More generally, he disparaged the dynamics of paper's travel, predicting that debtors would always favor it because they anticipated its depreciation. (Creditors would accede simply to avoid litigating for another mode of payment.) *Id*. Bradley countered that legal tender would protect debtors from private creditors who could otherwise demand gold. As debtors paid back their private creditors, those people also came to hold government liabilities—and thus become lenders, indirectly, to the government. *Id*. at 561, 565 (Bradley, J., concurring); *see also* SALMON P. CHASE, THE TREASURY DEPARTMENT; REPORT OF SECRETARY CHASE (1861) (available at https://www.nytimes.com/1861/12/10/archives/the-treasury-department-report-of-secretary-chase.html [https://perma.cc/8M9K-MT22]) (identifying appeal of notes given their "advantages of uniformity in currency; of uniformity in security; of effectual safeguard . . . against depreciation . . . .").

71. Veazie Bank v. Fenno, 75 U.S. 533, 536 (1869).

72. *Knox*, 79 U.S. at 544 (referring to the 10% tax on state-chartered bank notes upheld in *Veazie*).

rather than other notes, greenbacks would maintain or gain in value. After all, between issue and redemption, the greenback worked to purchase goods that could be put to productive use.[73]

Here, in the simple practice of people trying to trade, we can see the value of cash or "moneyness" take shape as a measurable quantity. People will gravitate towards an asset like the greenback, based on a future expected value (that is, the tax credit) if that asset is useful as a currency. Their collective demand for the medium installs greater value in the asset than it would hold as a method of paying a tax alone. As people choose the currency preferentially, they are effectively making a non-interest-bearing loan to the government—but they do so because they are getting something in return: a medium that provides cash services worth that foregone interest.[74] A credit that operates to that effect will issue at full value and remain stable: the discount that users would demand for taking credit redeemable in the future is washed out by the premium they gain from its utility as money in the present.[75]

Compare the approach taken in much economic theory. Walrasian models impute a numeraire of fixed value for any given auction.[76] Barter-based models assume a commodity or conventional money that emanates simply from exchange.[77] Both identify individuals and entities as interchangeable market participants, leaving those with capacity as money issuers unremarked within that activity.[78] The dynamic stochastic general equilibrium (DSGE) models that pervade contemporary theory follow in that hallowed tradition. We assume that market participants are representative agents with fungible features.[79] They use

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While Congress chose to support greenbacks by ordaining them legal tender, it had no reason to so privilege the liabilities of other parties, like state-chartered banks. The legislature would, in fact, "tax them out of existence" in order to make the greenback yet more "convenient and useful for commercial purposes." *Id*.

73. *See* Calomiris, *supra* note 65, at 51–52, 65–68; *see also* DESAN, *supra* note 25, at 48 (reviewing model). If a money has a set redemption date, the premium will decrease towards that date as the cash services it offers diminish over time. *See generally* Grubb, *supra* note 65.

74. *See* Calomiris, *supra* note 65 at 51–52, 65–68; *see also* DESAN, *supra* note 25, at 48 (reviewing model). Note apropos of subpart A that they would like gold coin better yet, and if they had any luck getting it, they would give even more for that collateralized money.

75. *See* DESAN, *supra* note 25, at 45–49, 73 (summarizing cross-cutting effects of discounting and cash premium).

76. One could also say that the Walrasian numeraire has a single value, given it deployment for a discrete moment of valuation. BLAUG, *supra* note 64, at 144 (assigning numeraire value of one for purposes of given auction).

77. *See, e.g.,* CARL MENGER. PRINCIPLES OF ECONOMICS, trans James Dingwall and Berthold Frank Hoselitz, 263 (New York University Press, 1981).

78. BLAUG, *supra* note 64, at 144 (assuming only individuals as market actors); *see also* Tobin, *supra* note 10, at 1 (describing the use of tokens or money in regular and multilateral bartering among individuals). Also see ROBERT H. FRANK & BEN S. BERNANKE, PRINCIPLES OF MICROECONOMICS 4–19 (2nd ed. 2004), for textbook pricing models of supply and demand.

79. *See, e.g.*, PETER SPIEGLER, BEHIND THE MODEL: A CONSTRUCTIVE CRITIQUE OF ECONOMIC MODELING 7, 120–27 (Cambridge University Press 2015) (identifying dominance of DSGE modeling

a money with atmospheric presence, almost like rain or even humidity.[80] It may be tuned up or down by governments acting from outside as monetary policy makers. All market participants spend and buy in an "integrated market."[81]

By contrast, a functioning medium structures circulation. The greenback's life began as the issue of an author that used its own liabilities to purchase. That money creator was a market participant with a war to run, not an outsider. That author, and its singular stake in the medium, is perennial.

Second and also at odds with the models, the war government that made the greenback added transferability to augment the value of those issues, a strategy that increased its own purchasing power. No generic representative agent here, but one that deployed an inherent advantage in the market. The government could buy immediately with a credit only called for value at a later date. Seignorage, the measure of that advantage, can be described as the opportunity cost of money-holders: the amount they forego by holding non-interest-bearing money instead of interest-bearing assets.[82] Policy-makers at the highest levels understood that the greenback was "at once a *loan* to the government without interest and a *national currency*."[83] Their experience exposes seignorage—and the unique status of money creative market participants—as intrinsic to the way

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and its reliance on assumption that markets involve representative agents, defined as private actors); Ricardo J. Caballero, *Macroeconomics after the Crisis: Time to Deal with the Pretense-of-Knowledge Syndrome* 2, 5–6, 9 (MIT Dep't of Econ., Working Paper No. 10–16, 2010) (noting DSGE models as "current core" of macroeconomics and describing relevant agents as households and firms whose activity is then aggregated); HARTLEY, *supra* note 64, at 19–30 (critiquing "representative agent" models as imputing needless homogeneity to "agents" nevertheless understood as private).

80. *See* PERRY MEHRLING, THE NEW LOMBARD STREET: HOW THE FED BECAME THE DEALER OF LAST RESORT 7–8 (Princeton University Press 2011) (describing approach to monetary policy that focuses on interest rate or inflation as sufficient indicators for calibration of private credit inflow); ROBERT J. BARRO, MACROECONOMICS 135 (adopting assumption of neutrality of money over changes in aggregate quantity) (MIT Press, 5th ed., 2000).

81. *See, e.g.*, Lance E. Davis & John Legler, *The Government in the American Economy, 1815-1902: A Quantitative Study*, 26 J. ECON. HIST. 514, 514 (1966) . If governments act as spenders, the neoclassical approach assimilates them to private actors, different simply in size. *Id.* (analyzing impact of government spending on regional economy only because market not fully integrated); *see also* HARTLEY, *supra* note 64, at 26 (noting models that add government sector as agent with its own budget constraints).

82. Manfred J. M. Neumann, *Seigniorage in the United States: How Much Does the U.S. Government Make from Money Production?*, 74 FED. RSRV. BANK ST. LOUIS REV. 29, 29–40 (2014). When the government makes the monetary base through central bank purchases or loans, seigniorage is often measured as real value of those assets, given their purchase with newly created money that represents the increase in money balances that users desire when they trade in the non-monetary assets. *Id*. at 30–31. Some economists add the interest from the non-governmental portion of those loans. *Id*. at 30–31,

83. E. G. SPAULDING, HISTORY OF THE LEGAL TENDER PAPER MONEY ISSUED DURING THE GREAT REBELLION 5 (Express Printing Company 1869) (Elbridge Spaulding was a key architect of the legal tender acts). While Secretary of the Treasury, Salmon Chase objected to the seigniorage flowing to state-chartered banks on the ground that it should go to the public. *Id*. at 8–9 (referring to a report written by Chase to Congress); *see also* TIMBERLAKE, *supra* note 35, at 94 (noting contemporary argument that greenbacks were "government debt issued without interest charges"); *cf.* Andrew Konove, "*The Prelude to Our Dissolution": Paper Money and the First Mexican Empire (1822-1823)*, WARREN CENTER WORKING PAPER 3 (tracing early attempt to use paper money in Mexico as loan to government).

a medium offered in a liability operates.[84]

The consequences ramify through the economy. A money-creative agent has singular power in a market. As others seek the resource it offers, they align their activity towards the money creator's purchasing and hiring needs.[85] Those needs have specificity. As the circumstances of the Civil War exemplify, the Union issued greenbacks because it wanted to mobilize particular resources, manpower, and industries. Generalized in-kind levies would not answer. (Here, recall Bradley's witness to the fact that an in-kind levy would *never* answer given the need to "command materials and supplies, products of manufacture, labor, service of every kind. . . . [and to] compel the workshops to turn out millions of dollars' worth of manufactures in leather, and cloth, and wood, and iron which are the very first conditions of military equipment.")[86] Rather, the government spent money as credit to particular ends. It was, by definition, an advance to some people relative to others; that was the very rationale for its creation. As the United States spent selectively, it configured economic activity.[87]

That observation leads to a third difference between real and modeled mediums. Making a medium is a societal process that invites participants into an ecosystem of exchange articulated in the unit of account. Thus, the Union offered the greenback as access to the economic activity in the dollar. As it did so, the government fostered a market that was far larger than its own sphere of enterprise.

The breadth and dynamism of that market explain a last and recurring feature in the structure money creates as a medium. Societies routinely build their unit of account out of a sovereign liability but the amount that a government spends into use may not satisfy private demand for money. To make matters worse, money issued according to a strictly fiscal pattern ebbs and flows with that rhythm. The federal government sharply expanded the money supply in 1862 when it issued the greenback. After the war, when the government taxed that

84. Economists today agree that the dollar, a fiat unit, supplies the monetary standard as a safe asset based on the government's pledge of credit and practice of honoring it, as well as assuming transferability. They often do not consider the value-added of legal tender. *See* Bruce D. Smith, *American Colonial Monetary Regimes: The Failure of the Quantity Theory and Some Evidence in Favour of an Alternative View*, 18 CANADIAN J. OF ECON. 533, 533–34 (1985) (modeling money as claim on future tax revenues with value dependent on such revenues in excess of expenditures); Scott Sumner, *Colonial Currency and the Quantity Theory of Money: A Critique of Smith's Interpretation*, 53 J. ECON. HIST. 139 (1993) (modeling value in claim as function of government's commitment to control supply and ensure demand); *see also* Desan, *supra* note 20, at 336–37 (reviewing safe assets literature and implications for money's definition).

85. When the public spends by creating money, the medium reaches first those the government decides to tap. That group may monopolize the privileged position because of skills, training, or circumstance during certain periods, as soldier and military suppliers did during the Civil War. Assuming that others want to have money for its cash qualities, they will compete for it, directing production towards the group holding money, differentiating the prices they charge, or signing up as soldiers. For further exploration of the complexities, see Desan, *supra* note 32, at 145–49.

86. Knox v. Lee, 79 U.S. 457, 563 (1870) (Bradley, J., concurring).

87. *See* Desan, *supra* note 32, at 144–49 (exploring selectivity of credit-based media).

currency back in, prices dropped and recession loomed. People and businesses had become reliant on the greenback currency.[88]

Polities across the ages have responded by designing ways to authorize and expand money forms for private use.[89] If that supply can be tied to the level of economic activity—if it is elastic to that demand—money can irrigate exchange more reliably. Recall how unified the justices were about Congress's power to authorize a money for commercial as well as public use. "Currency is a national necessity," Justice Bradley noted in his *Knox* concurrence, one that is essential for "private transactions" as well as government operations: it is the very "heart of the nation."[90]

In 1863, Congress moved to empower commercial banks as money-creative agents. The strategy, developed by the states before the war, would now operate nationally.[91] The federal government would charter institutions to issue private credit liabilities written in the dollar. They were to be backed by national debt, redeemable in base moneys—the greenback or coin—and accepted at other national banks at par.[92] Banks would be tied into private activity through their customers, expanding or tightening credit as demand for money rose or fell. Upholding measures meant to displace competing state bank issues, the Court in 1869 confirmed Congress's authority to delegate monetary power to national banks. Their notes, along with greenbacks, would supply a "currency [that] will perhaps satisfy the wants of the community, in respect to a circulating medium, as perfectly as any mixed currency that can be devised."[93]

When Congress shared its money-creative authority with commercial banks, it also shared its seignorage advantage. At the simplest level, banks offer their own promises-to-pay-the-public-unit-of-account when they lend. Borrowers treat those promises *of* money *as* money, given the work they do as money, holding them in the form of bank notes or demand deposits without expecting

88. The government would reverse itself, recirculating greenbacks for another several decades. *See* TIMBERLAKE, *supra* note 35, at 88–91 (discussing Congress's actions post-war).

89. Societies have supplied money for private use by selling money at the mint (free minting) or lending it directly. For an overview, see Christine Desan, *The Constitutional Approach to Money: Monetary Design and the Production of the Modern World*, *in* MONEY TALKS: ESSAYS IN HONOR OF VIVIANA ZELIZER 109, 119–21, 24–25 (Nina Bandelj & Fred Wherry eds., Princeton Univ. Press 2017).

90. Knox v. Lee, 79 U.S. 457, 563–64 (1870) (Bradley, J., concurring).

91. *See* Act of Feb. 25, 1863, ch. 58, 12 Stat. 665 (1863) (establishing the requirements to open a bank and the powers it possesses).

92. *Id*. National Bank notes were legal tender for public obligations (with some exceptions) but not for private obligations. *See id.* at 670.

93. Veazie Bank v. Fenno, 75 U.S. 533, 549 (1869) (greenbacks appear under their official name, "United States notes"). The Court upheld a prohibitive tax on state-chartered bank issues. "Congress may restrain, by suitable enactments, the circulation as money of any notes not issued under its own authority." *Id.*

much, or any, interest.[94] At the same time, banks gain the going interest rate on the loans they make. Even when the profit on that difference is reduced by extra costs (capital, reserves, insurance, and other regulatory requirements), the business model is powerful. So far as retail banks operate as part of the national payments system, they are using de facto money creation—their short-term, money-like deposits—to fund their longer-term lending. As contemporary economists recognize, the way that "financial intermediaries engage in private money creation," allows them to "captur[e] the same monetary convenience premium" as the government.[95] Just so, Chief Justice Chase had berated the windfall long claimed by state-chartered banks as "a loan without interest from the people" to those banks before the Civil War.[96]

Banks' remarkable privilege to engage in money creation gives them unparalleled importance as lenders. Because they can lend more cheaply than their competitors, access to bank credit sets apart the success of families "financing the purchase of homes, automobiles, and consumer goods," as well as business enterprises "obtaining working capital."[97] Recall the impact that the government had by virtue of its selective spending; banks wield the same advantage. As the dominant source of credit, their allocative decisions determine access to liquidity.

That impact now dwarfs the money creation done by the government. Almost ninety percent of the credit that lubricates retail transactions today is bank deposit credit.[98] Out of that total bank deposit credit, the great majority is due to "liquidity creation" rather than "the supply of cash deposits."[99] A recent study finds the amount of bank deposit credit due to liquidity creation to average $10.7 trillion per year between 2011 and 2020, or fifty-seven percent of U.S. GDP.[100] Banks are not like other market actors, in other words, even large market actors. They are large market actors in significant part because they are money-creating

94. For a more detailed review including the importance of the mutual credit clearing that allows credits to expand the monetary base, see Nadav Orian Peer, *Money Creation and Bank Clearing*, 28 FORDHAM J. CORP. & FIN. L. 35 (2023).

95. Robin Greenwood, et al., *A Comparative-Advantage Approach to Government Debt Maturity*, J. FIN. 1683, 1684–85 (2015); *see also, e.g.*, Morgan Ricks, et al., *FedAccounts: Digital Dollars*, 89 GEO. WASH. L. REV. 113, 140–41 (2021) (explaining how FedAccounts would generate fiscal revenue from money creation as a result of remittances from assets in the Fed's portfolio).

96. SPAULDING, supra note 83, at 8–9 (quoting CHASE, *supra* note 70).

97. CHARLES W. CALOMIRIS & STEPHEN H. HABER, FRAGILE BY DESIGN: THE POLITICAL ORIGINS OF BANKING CRISES AND SCARCE CREDIT 7 (Princeton Univ. Press 2014).

98. *See Money Stock Measures – H-6 Release*, BD. OF GOVERNORS OF THE FED. RSRV. SYS. (June 2023), https://www.federalreserve.gov/releases/h6/current/default.htm [https://perma.cc/QPM9-J6ZJ] (showing that .87 M1 comprises deposit balances less currency); JOSH RYAN-COLLINS, ET AL., MODERNIING MONEY 48 (Positive Money 2012) (showing 97% in UK). The calculation leaves aside capital market exchange and its near-money lubricants, by the same logic also selective in allocation.

99. Anjan Thakor & Edison Yu, *Funding Liquidity Creation by Banks* 1 (Federal Reserve Bank of Philadelphia Working Paper No. 23-02 2023), https://ssrn.com/abstract=4104804.

100. *Id.* at 4. Bank deposits due to liquidity creation comprise 92% of bank deposits, leaving 8% accounted for by cash. *Id*.

market actors.

The takeaway about the medium we use in everyday life is architectural. That medium is not atmospherically infused, the result of decentralized decision-making, or otherwise emergent from exchange. The dollar is instead issued into circulation from discrete sources. The allocative decisions made by those sources operate constantly; they format circulation at the public level and its private overstory. Users decide whether or not to opt into the monetary project centered on specific units of account. Those dynamics are organized, not aggregative.

The real world is never so clean as the schema. But the Civil War experience strongly suggests the structure distilled here. We have seen that the Union used tax anticipation to create a paper unit of account in the dollar. Scholars have clearly documented the greenback's fiscal backbone, as well as the challenges to public credit that undermined the greenback's value during wartime.[101] Its premium as cash—the value that people gave it as a medium—is more difficult to break out quantitatively; it is swamped by the wartime fluctuations in the greenback's fiscal value and by the expansion of bank credit written against it as a reserve.[102] The government did, however, spend the greenback at relatively stable values for some six months in 1862, as would have occurred if people imputed transactional value to the greenback.[103] Likewise, by 1878 prices had returned to their 1862 baseline, suggesting that value could have remained stable independent of fiscally driven turbulence.[104]

More generally, the greenback drew people into using it during and after the war. It issued to Army paymasters so bereft of cash that one put up a sign reading "No Money" in his office to save himself from queries for the medium "fifty times a day or oftener."[105] "Wherever the Northern troops advanced, the Federal 'greenback' followed," wrote a later observer, "and found its way into general circulation."[106] That included the South, an ominous sign for the Confederacy.[107] Gold coin did not travel as money during or after the war; a congressional report issued in 1869 labeled it "but an article of merchandise" as far as the domestic

101. *See, e.g.*, Ron & Valeonti, *supra* note 26, at 266–67 (reviewing scholarship that identifies fiscal anchor to greenbacks value); BENSEL, *supra* note 40, at 262–63 (flagging receivability of greenbacks for public and private debts). A money based on public credit, as are all major modern moneys, is only as good as that credit. Polities vary in their credibility for countless reasons, and public credit is notoriously difficult to maintain in wartime. As Americans worried about the fortunes of the North or South on the battlefield or doubted its fiscal discipline, they depreciated the currency. *See* Ron & Valeonti, *supra* note 26, at 264–66 (reviewing sources that identify correlation of price changes to fiscal backing).

102. We also have no way to match particular issues with specific retirements dates.

103. *See* WESLEY C. MITCHELL, GOLD, PRICES, AND WAGES UNDER THE GREENBACK STANDARD 5 (Table 2) (The Univ. Press 1908).

104. *See* TIMBERLAKE, *supra* note 35, at 90, 116 (Table 7.1).

105. WILSON, *supra* note 66, at 111 (quoting Chief Quartermaster Dickerson).

106. LOWENSTEIN, *supra* note 67, at 104 (quoting John C. Schwab).

107. *Id.*

market, albeit an important standard in international exchange.[108] By that time, Congress was actively moving to slow the greenback's rise in value, given its dominant role as a medium. Greenbacks also traveled at higher value than national bank issues in times of money demand, like the harvest season. As legal tender for both public and private obligations and the medium in which national bank notes (and deposits) were redeemed, greenbacks were "the superior currency."[109]

That said, national bank notes and deposits would proliferate, eventually furnishing some seventy-five percent of the expansion in the money supply and, except in periods of stress, taken interchangeably with greenbacks.[110] Like that currency, national bank notes would return to parity with gold coin by 1878.[111] And with greenbacks, national bank notes were at the heart of political debate for decades, as Congress struggled to meet demands for a more abundant and elastic money supply.[112] When both media contracted towards Resumption—the restoration of convertibility to gold coin—calls for other forms of money, including bimetallism, free greenbacks, and Populist credit, escalated.[113]

The government and the national banks spent their new moneys into circulation selectively, configuring the economy as they did so. The North's outlays were enormous—roughly $1.8 billion over four years—and reshaped both governance and business in lasting ways.[114] "[W]orkshops and factories, mines and machinery, shipyards, railroads and canals"—all flourished.[115] The fortunes of whole sectors turned on the government: Army procurement refigured the garment industry among others, at first building a significant public workforce, with substantial political clout. By 1865, the army and navy paid a "giant civilian workforce" of some 130,000 individuals.[116] Ultimately, the army would tilt towards private contractors, creating what some call a mixed economy and others brand "an unregulated capitalist market."[117] The decision was driven by policy and contingency, including problems with maintaining the flow of money to public payrolls.[118]

The geography of the army supply system affected regional development; munitions, clothing, food, rail, and shipbuilding were concentrated in the certain

108. TIMBERLAKE, *supra* note 35, at 92 (quoting THE GOLD PANIC INVESTIGATION, COMMITTEE ON BANKING AND CURRENCY, H.R. REP. NO. 31-41 (1869)).

109. *See* BENSEL, *supra* note 43, at 263–64 (discussing the interchangeability of greenbacks and bank notes).

110. TIMBERLAKE, *supra* note 35, at 90, 103 (Table 7.1).

111. *Id*. at 90, 116 (Table 7.1).

112. *See id*. at 89–91, 97–102 (reviewing congressional and Treasury efforts to manage supply of National Bank notes).

113. *Id*. at 110–13.

114. WILSON, *supra* note 66, at 1.

115. Knox v. Lee, 79 U.S. 457, 564 (1870) (Bradley, J., concurring).

116. WILSON, *supra* note 66, at 78.

117. *Compare id*. at 2, 72–106, *with* BENSEL, *supra* note 43, at 233–37.

118. WILSON, *supra* note 66, at 73.

areas.[119] Public payment drew lines towards human capital as well. After the war, the United States directed a steady stream of money to New England to pay the pensions of veterans. Although the region was growing at a relatively slow pace demographically, it received an astonishing amount of federal money in pensions, some three dollars per capita. With about the same population as South Carolina, three northern states combined -- Maine, New Hampshire, and Vermont -- received twenty times as much in federal pensions.[120] That inflow came in an era when banks in the southern and border states, where the financial system had been devastated, "issu[ed] notes at just over one-tenth the per capita rates" of the East.[121] In the former Confederacy, national bank note issues measured *in cents* per capita through 1877.[122] Richard Sylla has documented the way statutory requirements and other barriers to bank entry in those regions diverted liquidity to financial centers in the north and east, fueling industrial development there.[123]

The impact of Civil War spending reshaped the federal government. National procurement displaced state spending, just as bureaucratic reach remade administrative authority.[124] The outlay of modern government—based in part on money newly created—has only grown. In 2022, the United States spent an amount equal to about twenty-five percent of GDP.[125] Yet more striking, the Union government had also jumpstarted the rising place and power of the finance.[126] That momentous story requires analysis beyond the bounds here, in part because it rerouted money creation to occur against longer-term government debt. The indirection made money creation less visible and changed the channels of its distributive impact.[127]

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119. *See id*. at 73–78 (explaining how the need for uniforms, food, and other esstential needs by a larger army affected local and regional businesses); Davis & Legler, *supra* note 81, at 514–19 (assessing regional differences in military-related expenditures). Davis and Legler assume that the market was an integrated whole, but for transportation and similar obstacles, attributing regional disparities to those causes rather than considering the government's unique influence as source of liquidity. *Id*. at 514.

120. Davis & Legler, *supra* note 81, at 517 n.8.

121. BENSEL, *supra* note 43, at 271.

122. *Id*. (noting that for former Confederate states, national bank note issues were 9, 68, and 89 cents per capita in 1865, 1869, and 1877 respectively).

123. Richard Sylla, *Federal Policy, Banking Market Structure, and Capital Mobilization in the United States, 1863-1913*, 29 J. ECON. HIST. 657, 657–63, 670–86 (1969).

124. WILSON, *supra* note 66, at 5–33; LOWENSTEIN, *supra* note 67, at 107–32.

125. CONGRESSIONAL BUDGET OFFICE, The Federal Budget in Fiscal Year 2022: An infographic, https://www.cbo.gov/publication/58888 [https://perma.cc/GL3K-SE6W]. The amount of public spending based specifically on money creation requires analysis. *See* discussion *infra* note 127.

126. *See* BENSEL, *supra* note 43, at 238–365 (exploring the federal government's involvement in financial markets after the Civil War).

127. Governments today generally spend in existing funds, collected as revenue or borrowed by issuing public bonds; they then increase the money supply (creating new money claims) when their central banks purchase the public bonds. Christine Desan, *How To Spend a Trillion Dollars: Our Monetary Hardwiring, Why It Matters, and What We Should Do About It* 10 (Harvard Pub. Law, Working Paper No. 22-04, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4056241

If the allocative impact of public money creation in the figure of the greenback mattered, the allocative impact of private money creation mattered even more given the increasing dominance of commercial banks in that role. The view that finance leads growth is strongly established in the economic literature.[128] The point here is compatible but independent. It is that, when we put great money creative power in certain hands, the way those hands select borrowers matters in ways not easily captured by measures of growth or efficiency per se.

Money creation by commercial banks actively rather than passively shapes conditions of production. Most obviously, banking differs radically from other modes of creating monetary elasticity. Land banks in the colonial era had sanctified agricultural development and rural self-determination.[129] Minting on demand in the medieval world had created the complex incentives that drove competition for gold and silver while locating sovereign authority over money at the mint.[130] The Civil War delegation to banks gave profit-driven actors the privilege of multiplying the dollar, a strategy sufficiently novel that the courts had to sort out the banks' obligations to depositors.[131] It defined those actors as the gatekeepers for credit, an exclusivity that fueled the financial industry. And when the Supreme Court shortly afterwards confined responsibility for discrimination to state actors alone, the banks gained great latitude to dictate the flow of liquidity.[132]

Industrial production boomed in the late nineteenth century. Funding flowed from agricultural to urban areas. Savings rates rose and liquid capital became more accessible.[133] At the same time, reference to their own profit left commercial bankers free to exclude Black Americans from access to credit, plunging the recently freed population into new modes of exploitation.[134] In case after case, white bankers maximized their customer base by denying service to

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[https://perma.cc/XW45-4P2E] (reviewing system); Desan, *supra* note 32, at 147–48; *see generally* Will Bateman, *The Fiscal Fed* (February 2, 2023), http://dx.doi.org/10.2139/ssrn.4516824 [https://perma.cc/BLP9-QCLB](documenting frequency of public debt monetizing by Fed).

128. *See* CALOMIRIS & HABER, *supra* note 97, at 8–9 (reviewing the literature showing that faster financial development encourages faster growth).

129. *See* E. James Ferguson, *Currency Finance: An Interpretation of Colonial Monetary Practices*, 10 WM. & MARY Q. 153, 168–71 (1953) (reviewing operations of land banks); Desan, *supra* note 25, at 28–33 (exploring social and political facets of early American paper money).

130. *See supra* note 42.

131. *See, e.g.*, Thompson v. Riggs, 72 U.S. 663 (1866) (determining that banks owned money deposited as opposed to holding it as a bailment).

132. *See infra* TAN 156-157.

133. *See, e.g.*, Richard Sylla, *American Banking and Growth in the Nineteenth Century: A Partial View of the Terrain*, 9 EXPLS. ECON. HIST. 197, 223–24 (1971) (tracking rise of pools of loanable funds in American banks); *see also* Sylla, *supra* note 123 (documenting flow of late-nineteenth century capital to financial centers in the north and east).

134. *See, e.g.*, MEHRSA BARADARAN, THE COLOR OF MONEY: BLACK BANKING AND THE RACIAL WEALTH GAP (Harvard Univ. Press 2017) (exploring historical roots of racial wealth gap in the United States).

Blacks, wrote contracts that extracted higher fees from Black borrowers, or supported white businesses that suppressed Black competitors. When Black Americans responded by organizing their own banks, white-owned banks failed to extend reciprocity in times of crisis, condemning their counterparts to failure.[135] In the decades that followed, commercial banks financed mortgage loans on discriminatory terms, funding the segregated American landscape.[136]

Lending determinations shaped the emerging economy of the South and Southwest in similarly dramatic terms. In the post-war period, millions of poor Southerners, white and Black, worked the land in debt peonage. Borrowing seeds and supplies from local merchants each spring, farmers mortgaged their land and produce at high rates in return. The debt generated each year rolled over, crushing borrowers to the benefit of merchants and those that funded them. Agrarian populism, perhaps the largest social mobilization in American history and one with some momentum towards inter-racial inclusion, was born as a result. The barrier was, however, the commercial banks. Concerting their resistance, those banks declined to lend to organized farming groups with collateral, breaking the agrarian movement. The disarray that followed consolidated immiserating labor conditions and the divisive horrors of Jim Crow.[137]

Elsewhere, bankers moved creatively to realign labor relations. The American Bankers Association itself recommended that banks decline to lend to employers who ran a union shop. In the ABA's judgment, that anti-union policy promised to amplify the profits that business, and therefore banks, could claim.[138] Indeed, the calculation made devilish sense as an intervention at the level of industrial policy. As far as I know, the impact of the moratorium on lending has not been studied.

Left to their own devices, in other words, bankers fashioned a market that, in self-fulfilling fashion, delivered profits to them. Here, in a dark example, the monetary structure again defined economic activity—not to mention social relations and political dynamics.

The indeterminant logic of profit-seeking, its capacity to unmake parities assumed by market models and to compound advantages incompatible with them, returns us to governance. To identify the parameters for banking behavior

135. *Id*. at 73.

136. *See* LOUIS HYMAN, DEBTOR NATION: THE HISTORY OF AMERICAN IN RED INK 63–67, 149 (Princeton Univ. Press 2012) (mapping channels of discrimination against urban African Americans in mortgage lending).

137. *See, e.g.*, LAWRENCE GOODWYN, THE POPULIST MOMENT: A SHORT HISTORY OF THE AGRARIAN REVOLT IN AMERICA (Oxford Univ. Press 1978); *see also* Christine Desan, *The Impact and Malleability of Money Design*, LAW & POL. ECON. PROJECT (Mar. 25, 2019), https://lpeproject.org/blog/the-impact-and-malleability-of-money-design/ [https://perma.cc/6B7A-RB38] (discussing the legacy of discriminatory money creation policies on American race relations).

138. RICHARD BOECKEL, LABOR'S MONEY 71–74 (1923).

and for exchange more generally, we have to ask about the last dimension of money's operation. Money's definition as a mode of payment molds the market rather than following from it.

C. Curating the Mode of Payment

The market is routinely imagined as a place with commodities that are self-evident and transactions that stick—recall the auction model of economic activity. But those elemental ingredients do not, in fact, effectuate themselves. The "commodity" is what a society has determined can be alienated for money. The same is true for a "transaction"-- it has meaning so far as a community enables it to last. As John Commons observed almost a century ago, "Economic rights are, indeed, equivalent to [legal] rights of action, for only in so far as the citizen has power to bring an action in court does he have a right that has security of economic value."[139]

People interacting with one another create the setting for that activity. Each time they use money to pay for something, their use raises the issue: Can a person treat that thing as an asset that can be monetized? If they do, will both parties to an exchange agree about the consequences that attach to the transfer of that asset? If not, can the person left dissatisfied successfully invoke the community's assistance to resolve the dispute? Commons assumed a particularly formal level of response, one I will work within given our nineteenth-century context. But he captured a more general point: a polity that issues money also informs its use. That work supplies a currency with its effectiveness as a medium, increasing private demand for it when successful. At the same time, the activity curates the market recognized by the community.

A polity deploys its authority each time it enforces a transaction in money, determining which contracts merit support and under what conditions, what property can be sold and who can sell, what injuries can be redressed and what injuries are beyond (or below) compensation in cash. That activity privileges an official money by supporting it, alone among all other assets (and often other monetary competitors), for those uses the government approves. Its courts and public officers recognize their money as a measure and mode of payment that satisfies contracts, settles debts, compensates injuries, and transfers property. In other words, as the polity institutionalizes its money as a mode of payment, it is *defining* commodities, *identifying* valid transfers of property, *establishing* the conditions of contracting, and *decreeing* the extent of damages. As the government empowers its asset for certain uses, it is actually *building* the legal market.[140]

139. JOHN COMMONS, INSTITUTIONAL ECONOMICS: ITS PLACE IN POLITICAL ECONOMY 689 (1934).

140. The non-use of the asset will raise a similar issue, if one party to the exchange believes it should have been used. In the case of money's use, the permission to use it often amounts to a prohibition on alternative modes of action. *See* Duncan Kennedy, *The Stakes of Law, or Hale and Foucault!*, 15 LEGAL

It is hard to imagine a more dramatic struggle over what could pass for money (and thus over the character of the American market) than the Civil War. Witnessing to the proposition that every commodity requires a definitional act, auction had horrific operation in the antebellum United States. Enslaved people were chattels personal, a stunning societal determination that allowed them to be sold on the block for money. That was not a one-off, a discrete instance, or an historical anomaly. Defining people as commodities was at the root of the national economy.

Between 1815 and 1860, cotton picked mainly by enslaved Black Americans made up more than half of all U.S. exports. While debate about their reach continues, Southern plantation owners had become enormously important players, controlling one of the industrial age's most important commodities and the one most widely traded globally.[141] By the 1830s, Britain's booming manufacturers imported eighty percent of their cotton from the South. It was "scarcely less necessary than bread," one merchant complained, the source of "the materials for clothing half the civilized world," marveled another.[142] Enslaved Black Americans picked 2.1 billion bales of cotton in 1859;[143] their work arguably sparked the "great divergence" in Western rates of production from those elsewhere.[144] The single largest financial asset in the American economy, four million human souls were capitalized at $3.5 billion on the eve of the Civil War—worth more than railroads and manufacturing combined.[145]

A generation of scholarship has mapped the way wider production, northern finance, and European capital animated the economy built on human commodification. Textile workers, tool manufactures, and shipbuilders in New England fed their products to southern plantations, supporting and profiting

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STUD. F. 327, 333 (1991) (discussing the distributional impacts of permissive legal rules versus prohibitions). The point is that enabling money's use is not a neutral act; it is a political determination that draws the lines of monetized activity.

141. SVEN BECKERT, EMPIRE OF COTTON: A GLOBAL HISTORY 119 (2014); *see also* Edward E. Baptist, *Toxic Debt, Liar Loans, Securitized and Collateralized Human Beings, and the Panic of 1837*, *in* CAPITALISM TAKES COMMAND: THE SOCIAL TRANSFORMATION OF NINETEENTH CENTURY AMERICA 74 (Michael Zakim & Gary J. Kornblith eds., 2012) ("By the 1830's, the cotton that enslaved people grew in the new states . . . was the most widely traded commodity in the world."); compare GAVIN WRIGHT, SLAVERY AND AMERICAN ECONOMIC DEVELOPMENT (2013) (differentiating forms of enslaved labor).

142. BECKERT, *supra* note 141, at 119–20; *see also* Baptist, *supra* note 141, at 75 (discussing the impact of cotton production on the British textile industry).

143. Baptist, *supra* note 141, at 75.

144. *Id.* at 74 (noting the Western world "achieved sustained rates of economic growth never before seen in human history"). *See generally* KENNETH POMERANZ, THE GREAT DIVERGENCE: CHINA, EUROPE, AND THE MAKING OF THE MODERN WORLD ECONOMY 20–23, 264–85 (Princeton Univ. Press 2000) (identifying production by enslaved people as critical factor in European breakthrough).

145. Ta-Nehisi Coates, *Slavery Made America*, THE ATLANTIC (June 24, 2014), https://www.theatlantic.com/business/archive/2014/06/slavery-made-america/373288/ [https://perma.cc/232U-S8JQ].

from the work done there. Waged labor was thus imbricated into the coerced workforces of the South, just as it was in industrializing Britain, where factories employed men, women, and astonishing numbers of children by the hour.[146] The Second Bank of the United States prioritized commercial paper, a lending strategy that fortified the exchange circuits built on cotton, and linked plantation owners with bankers and middlemen in Philadelphia, New York, Charleston, and London.[147] European financiers in London, Amsterdam, and Paris placed bond issues from southern states that supported planter-owned banks.[148]

Transactional work made in money undergirded each element of the antebellum economy. As they adjudicated whether payment had rightfully changed hands, courts sorted out rules around the sales of enslaved persons. They effectively created doctrine on contract and caveat emptor, recission, and defenses in the case of "defective" individuals.[149] Rejecting claims for monetary recompense, courts determined that the manifold injuries entailed by slavery itself had no tort remedy.[150] They shaped doctrines about whether enslaved people could make contracts, act as agents, and own property.[151] Case by case, courts determined that owners could put up those they enslaved as collateral and that creditors could seize those people as forfeit.[152] State legislatures participated in setting parameters for money's flow, determining how to tax wealth in enslaved individuals and negotiating regimes of compliance.

At the same time, northern jurisdictions elaborated different webs of statutory and common law for waged labor and private ownership. Those webs were allied or undermined by custom, social acceptance, and resistance.[153] They were also vectors of market change. As law-makers considered what constituted consideration in contract, what sufficed for offer and acceptance, how far

146. *See, e.g.*, SETH ROCKMAN, SCRAPING BY: WAGE LABOR, SLAVERY, AND SURVIVAL IN EARLY BALITMORE 231–58 (2009); Beckert, *supra* note 141, at 175–98; *see also* Baptist, *supra* note 141, at 74–75 (discussing contribution of slave-labor to industrial production). The fusing of enslaved and wage (including child) labor undermines liberal assurances about property and contract as the "constitution" of capitalism. *See* David Singh Grewal, *Book Review: The Laws of Capitalism*, 128 HARV. L. REV. 262, 655–57 (2014) (discussing property and freedom to contract as foundations to capitalism).

147. Sharon Ann Murphy, *The Financialization of Slavery by the First and Second Banks of the United States*, 87 J. S. HIST. 385, 390–92 (2021). By the early 1830s, a third of the Bank's lending issued from its New Orleans and Natchez branches. Baptist, *supra* note 141, at 77.

148. Baptist, *supra* note 141, at 81–83, 85–87.

149. *See* William Fisher, *Ideology and Imagery in the Law of Slavery*, in PAUL FINKELMAN, ED., SLAVERY AND THE LAW 43, 51 (Madison House 1997); William Wiecek, *The Statutory Law of Slavery and Race in the Thirteen Mainland Colonies of British North America*, 34 WM. & MARY Q. 258, 258–80 (1977) (surveying the slave codes and session laws that governed the legal rights of African Americans during the colonial era); THOMAS D. MORRIS, SLAVERY AND THE LAW, 1619-1860 102–31 (1996) (considering development of contract law involving sale of slaves).

150. Keith N. Hylton, Slavery and Tort Law, 84 BOSTON UNIVERSITY LAW REVIEW 1209, 1213–14 (2004).

151. *See* Fisher, *supra* note 149, at 43.

152. *See* Murphy, *supra* note 147, at 388.

153. Fisher, *supra* note 151, at 43–46.

doctrines of unconscionability protected bargaining parties, and whether executory contracts had binding force, they were configuring economic development. When they determined how to compensate those damaged by new transportation infrastructure and industrial development, what actions violated the law against nuisance, and whether to assert strict liability or demand evidence of negligence, they were distributing costs and benefits between parties.[154]

The law channeling money was layered and complex; its baselines regressed indefinitely with defaults, varying across jurisdictions and shifting over time. As generations of legal scholarship have taught us, the project was at once immense and contested, formal and informal. By the same token, it was not obvious, self-defining, or voluntarist. A society—not decentralized actors—created and curated the conduits for money.

Those conduits remained controversial after the war, as they do today. The post-bellum economy operated through legal conduits just as complex and value-laden as its predecessor. The very meaning of contract was at stake. Determining when money was due determined what counted as coercion in the employment relation (union activity, wage and hour constraints?), what evidenced consent (express versus implicit agreement in business relations? in domestic relations?), what was lawful hedging as opposed to illegitimate gambling (futures markets?) – and defining contract was only one project among many.[155] In an example particularly immediate to money creation, neither legislatures nor courts saw fit to articulate obligations on the part of banks to lend fairly as well as profitably, thus shutting equal access to credit down for Black Americans, farmers cooperatives, and unions among others. When the post-war Court immunized private actors from liability for discriminatory action, banks took shelter despite the public nature of the medium they advanced into circulation.[156] Their responsibilities remain modest today.[157]

Curating the market is so routine—such a background function of

154. *See, e.g.,* MORTON J. HORWITZ, THE TRANSFORMATION OF AMERICAN LAW, 1780-1860 (Harvard Univ. Press 1977), 63-107, 160-210.

155. *See, e.g.*, ROY KREITNER, CALCULATING PROMISES: THE EMERGENCE OF MODERN AMERICAN CONTRACT DOCTRINE (Stanford Univ. Press 2007); AMY DRU STANLEY, FROM BONDAGE TO CONTRACT: WAGE LABOR, MARRIAGE, AND THE MARKET IN THE AGE OF SLAVE EMANCIPATION (Cambridge Univ. Press 1998).

156. *See* The Civil Rights Cases, 109 U.S. 3, 10–11 (1883) (limiting congressional power under the 14th Amendment to policing discriminatory state legislation).

157. The Civil Rights Act of 1964 (public accommodations law) does not include banks. *See* 42 U.S.C. §2000a(b) (2018); Emily Flitter, *Senate Bill Would Outlaw Bank Discrimination for the First Time*, NEW YORK TIMES (Oct. 21, 2020). The Community Reinvestment Act imposes few enforceable duties. BARADARAN, *supra* note 134, at 232–33. The Equal Credit Opportunity Act prohibits discriminatory behavior but contemporary law is exacting about the evidence that demonstrates that discrimination. John H. Matheson, *The Equal Credit Opportunity Act: A Functional Failure*, 21 Harv. J. on Legis. 371, 377–91 (1984), *available at* https://scholarship.law.umn.edu/faculty_articles/132 [https://perma.cc/2HBR-YRUW].

governance—that we often overlook it altogether. The Legal Tender cases were a remarkable exception: they explicitly identified the vocabulary of transactional work as monetary. The issue was whether a buyer could pay for a flock of sheep (*Knox*), a parcel of land (*Parker v. Davis*), or a hundred bales of cotton (*Julliard*) in greenbacks. According to the majority in *Knox*, the question was one of elemental justice. Disallowing debtors from using the Union medium to discharge obligations would make the government "an instrument of the grossest injustice" and load up individuals with obligations "it was never contemplated they should assume."[158] "[S]uch must become the demand for gold to satisfy contracts, that ruinous sacrifices, general distress, and bankruptcy may be expected."[159]

The cases were also forward-looking. While Congress labored to establish a national currency after the war, people skirmished over what medium to use in everyday life. They anticipated public practice to inform their choices. Transactional doctrines had, in other words, quantitative as well as qualitative impact. People will use a particular kind of cash when they can predict that the government will assist them if disputes arise; their demand will reinforce the cash premium that money carries. We can imagine that money could have created an emancipatory order. Reconstruction can be understood as just that project, attempted and abandoned. At the very least, the post-bellum world did expand the universe of those using the federal dollar.[160]

More broadly, "the rational expectations" that economic models impute to economic actors rely on a forcefield of legal, political, and social work, the "all-pervasiveness of sovereignty . . . guiding the transactions of the present upon the expectations of the shape which force will take in the future."[161] In 1884, the Court confirmed that the greenback could operate as money in peacetime as long as Congress so dictated.[162]

The government's exclusivity in treating its own asset as a privileged medium returns us to its role as author of the unit of account (see subpart A). Judges, legislators, police, and administrators are the deliberating and enforcement agents of the very party issuing the debt asset. That public party can empower

158. Knox v. Lee, 79 U.S. 457, 530 (1870).

159. *Id.*

160. Conversely, we can understand fractures within communities of money's use: the money substitutes that women and Black Americans used when they could not legally contract in cash, the wager that southerners who abandoned the Confederate grayback made in favor of the greenback when Northern troops advanced. For fascinating work on the way women and Black inhabitants improvised modes of exchange in the 1820s and 30s, see Laura Edwards, *Textiles, Popular Culture, and the Law*, 64 BUFF. L. REV. 193, 197–98 (2016) (discussing how individuals excluded from property rights and legal standing created other ways to transact).

161. COMMONS, *supra* note 139, at 696. As Commons put it, the ability to count on public enforcement for a monetary transfer amounts to the authority of a citizen "to issue specific commands or instructions *changing* the legal relations of himself or others, which commands are then enforced in the future if necessary as though they were the general commands of the sovereign." *Id.* at 695.

162. Julliard v. Greenman, 110 U.S. 421, 450 (1884).

them to support the use of *its* asset as opposed to the assets or instruments of other issuers whose actions and reliability it does not control. Their work underscores the singular role that money creative agents have. Markets, it turns out, are not diffuse clouds of exchange, but dynamic constructions of complex communities (see subpart B). So finally, public actors interacting with individuals who comply, dispute, and diverge produce the highly peculiar, contingently curated market we experience (see subpart C).

The argument here is not that money *makes* contract, property, tort, and other legal doctrines. It is, however, that *money's presence matters* in the character of those doctrines. That is because they provide the crucial scaffolding for the market. That market is, at least as we know it, a monetary phenomenon.

III.

CONCLUSION

According to advocates of the gold standard in post-war America, trade produced a commodity to act as money; commensurability in value was as obvious as measuring distance or weight; and public credit irredeemable in gold, like the circulating greenback, was a shameful expedient for any country. "We may invent, and devise, and try to circumvent the natural laws on this subject to the end of time, and we shall end just where we began. There can be but one universal standard of value . . . an actual, positive, and irresistible specie value."[163] As the era matured, the Court moved to naturalize contract and property themselves, arguably understanding their logic as universal and the market as their obvious consequence.

In the image, economic activity pre-existed money and, perhaps, communities. Money emerged from exchange, a matter of private consensus rather than political decision. That event occurred without obviously realigning governance or reorganizing relationships. Because transactions had an integrity that was pre-political, collective work defining an exchange community dropped away, along with issues of public capacity and decision. In the sequence, political and legal activity would happen afterwards or outside the core dynamic. Money was a commercial product rather than a civic project.

The image was tremendously enabling. Perhaps most notably, it suggested that money had a nominal role, inviting economics to divorce money from the "real economy" and impute significant autonomy to the latter. In the marginalist models of the late nineteenth century, individuals consulting their own preferences could indeed order the world. The Walrasian auction was back on—it was a product of the time.

163. J.S. PIKE, THE RESTORATION OF THE CURRENCY 24–25 (1868), quoted in Bruce G. Carruthers & Sarah Babb, *The Color of Money and the Nature of Value: Greenbacks and Gold in Postbellum America*, 101 AM. J. SOCIOLOGY 1556, 1572 (1996).

Theorizing the public credit aspect of money and considering the practices that constitute it as a unit of account, medium of exchange, and mode of payment flip the analytic order. Far from imagining a market that, without more, produces money, it demonstrates how establishing money makes possible the market. More precisely, it indicates that making money is a material project that enables particular prices, certain patterns of circulation, and societally specific relations of exchange.

In that process, individuals make decisions about value. They recognize as assets resources that the larger community has identified as alienable for money, assigning others to different registers of value. They work within a web of exchange enabled by the community, approved and extended by those who understand their office to operate in that community's medium. The medium is itself a domestic product, a unit that creates commensurability out of political obligation.

That unit comes to hand from sources situated within the market it is making: the author of the public liability and its delegates spend and spread it into circulation. In the modern world, governments and banks send money preferentially to certain hands. As streams of money issue, they irrigate the exchange that grows into the economy we experience. Far from appearing, innate and self-evident, in some state before money and the project that produces it, value in all its relative glory takes shape through that very process. A different monetary world would produce different constellations of value.

In fact, governments have invented money by creating monetary claims—identified here as sovereign liabilities received at face value for taxes and enabled as cash—time and time again: thus the long line of moneys that exhibit that same structure, including the dollar that circulates as currency, the high-powered money held by the U.S. Reserve, the greenbacks that the Supreme Court confronted, earlier American paper moneys, notes produced by national banks, and medieval commodity money like the silver penny.[164]

Their strategies echo each other while differing in the determinations that ultimately construct each market. As they work out forms of traveling credit, communities are developing political capacity and realigning personal relations. As they spend money into circulation, they are directing access to liquidity that will shape production. And as communities decide what transactions to support, they are operating all the levers of law we saw above to define commodities, settle debts, shift ownership, and constitute damages. None of their determinations—to make a unit, to enable it as a medium, to enforce its operation—are self-effectuating or universal. Their character creates the channels for exchange. Far from an instrument derivative of economic activity, money instead structures the market.

164. *See supra* DESAN, *supra* note 25.