

# **BANKING: INTERMEDIATION OR MONEY CREATION**

## **C. Desan, The Power of Paradigms in Histories of Economic Development**

March 12, 2020

**Christine Desan, Harvard Law School**

An iconic article published by Douglass North and Barry Weingast in 1989 identified the growth of banking in early modern Britain as a development “for pooling the savings of many individuals and for intermediation between borrowers and lenders.” The distinctive contribution of banks, argued the authors, was that they “brought individual savings into the financial system.” Men were “less concerned than their fathers . . . to keep quantities of coin, bullion, and plate locked up in safes or buried in their orchards or gardens.”<sup>[1]</sup>

For most of the last century, the intermediation paradigm has dominated popular accounts of banking. That approach to banking has, likewise, saturated histories of the industrial revolution. In its light, the change in finance that mattered for economic development seemed clear: the British triumphed by making the world safe for investment. That commonsense has obscured a fundamentally different possibility: the key breakthrough may have been the creation of novel forms of credit that acted as money (and near-money). In that case, the catalyst was the result of institutional change that produced unprecedented amounts and kinds of liquidity, not the accumulation and redeployment of existing funds.

Participants in this Roundtable have exposed the stakes in the debate over banking paradigms. For some, the choice of a paradigm shapes regulatory policy (Ricks; Tarullo).<sup>[2]</sup> For

others, the stakes of the debate go to the way we understand public and private power (Hockett and Omarova). And for still others, the argument is about disciplinary assumptions (Marglin).<sup>[3]</sup> By contrast, Tucker and Jackson approach the debate as one of expositional fit, noting that certain explanatory approaches suit particular times or perspectives.<sup>[4]</sup> I want to add another dimension to the picture that is emerging from the debate. The paradigm adopted to understand banking informs – and is informed by – accounts of economic development as an historical reality. Those accounts have real impact on all the dimensions we have discussed, including regulatory policy, ideas about public authority and private agency, and the shape of economic orthodoxy. As for expositional fit, it appears to signal real and lasting differences in our operating assumptions.

For decades, scholars of the industrial revolution have assumed intermediation as axiomatic. The financial contribution to growth that must be explained is cast in quite literal terms as how the hoards so tangibly evoked by North and Weingast came to be unlocked, aggregated, and applied.<sup>[5]</sup> The intuition entrenched here is that the accumulation of savings and advance of that capital were the essential elements in the process. That orientation has deflected attention from the alternative suggested by the money-creation model. According to that model, the financial contribution to growth that must be explained is how institutions install monetary value in an accessible form, how that value is allocated and managed, and how those practices configure the productive life of a society. The intuition implicit here is that the design and provision of money made from credit, including cash that penetrated to the retail level for wages and payments to strangers, was an essential element, perhaps the essential element, of the breakthrough.

Recall that the economic development taken to be talismanic

occurred in the early modern period, in northwestern Europe. "Between 1780 and 1870, Britain's real GDP/person almost doubled. . . leaving the United Kingdom about 20% ahead of the Netherlands (previously the leading European country), 70% ahead of both France and Germany, and about a third higher than the United States." The same development set Britain apart from China, Japan, and India.<sup>[6]</sup> Recent accounts have added that the breakthrough came after a slower but steady buildup in GDP over the previous decades.<sup>[7]</sup> The "great divergence," as it came to be called, set scholars from a wide variety of disciplines a lasting puzzle: What drove such an extraordinary upturn in economic development? What had Britain done to set itself so far apart from other nations?

The debate has expanded and deepened over the last century, producing an enormously rich narrative. An organizing assumption, one congruent with the economic orthodoxy identified by Marglin, has also become clear. According to that assumption, the breakthrough – and economic growth generally – depend on production in the *real* economy, including drivers of individual preference. We look, therefore, to natural resources, labor, technology, and trade relations, empire and extraction, as well as cultural proclivities, religious commitments, and scientific learning, in order to understand economic growth.<sup>[8]</sup>

Saved assets – accumulated capital (wealth) – are part of the real economy and thus fit neatly into the story. And they logically enable investment. The place for finance seems to follow: it makes moving assets from savers to borrowers (i.e. entrepreneurs) possible – effective intermediation in other words.<sup>[9]</sup> According to North and Weingast, that activity occurred after the British made the world safe for investment by protecting rights to property, including property in financial assets.<sup>[10]</sup> More recent intermediation-oriented histories take a sharply different tack, noting that most

early industrial enterprises depended on reinvested profits rather than bank finance.<sup>[11]</sup> (Ironically, they claim that finance thus posed something of a brake on English economic development.) In either event, the role for banks is clear. To the extent that they pooled savings and moved them to borrowers, they supported economic development as *intermediators*.<sup>[12]</sup>

But the finding that bank funding played a limited role in Britain's early breakout suggests that the intermediation approach, thus conceived, is incomplete at best. I want to suggest that it may actually mis-identify the distinctive contribution made by British banking. That contribution is better captured by the money-creation paradigm – I suspect that is because money creation is a more accurate description of what modern banks do. In the rest of the essay, I propose that a series of institutional innovations engineered by the British in the early modern period led to an explosion of productive liquidity – an enormous increase in the money stock and near-money instruments. That explosion of liquidity fed exchange, expanded waged labor, fueled effective tax collection and law enforcement, and eased access to credit even for those unable to tap accumulated savings. The same institutional innovations channeled the profits of economic development, contributing to the severe distributive inequalities of the 19<sup>th</sup> century.

The argument, speculative but consistent with some of the richest descriptions of early British banking, is that the financial revolution in Britain was transformative *in kind*, not (or not only) in degree.<sup>[13]</sup> Contrary to the entrenched wisdom, the British did not merely develop existing forms of credit – bills of exchange, merchant clearing-houses, forms of forced public lending. They actively (and often accidentally) *re-made* credit so that it radically expanded the money stock and related forms of liquidity. The leap in productivity that

scholars identify – in particular that jump in productivity that occurred between 1780 and 1820 – occurred just when British banking came into its own.<sup>[14]</sup> At that point, the Bank of England had developed into a powerhouse that added significantly to the monetary base. Britain's circulating public debt stabilized money markets that supported inter-bank lending to a swell of country banks. And those banks, later to convert to joint-stock banks, irrigated the late 18<sup>th</sup> and 19<sup>th</sup> century countryside with the most abundant retail money supply in European history.<sup>[15]</sup>

Here, I take Charles Kahn in this roundtable to agree that, given latent demand and potential supply, money creation from credit would be far more important to economic production than accumulated funds. And those conditions likely existed for centuries in Britain and much of Europe. The baseline for the modern explosion of liquidity was the wrenching monetary scarcity of the medieval world. There is copious evidence demonstrating how vexed that environment was at the level of everyday exchange. An expensive resource-intensive medium, insufficient small change, instability in existing supplies of coin, and uncertainty about their value – all meant that many ordinary transactions were difficult until at least the 17<sup>th</sup> century, when increased silver from the Americas eased problems (if only episodically) in England.<sup>[16]</sup> The unwieldy nature of a money stock tied to metal supplies made it difficult for governments easily to expand the amount of coined money and to spend for social welfare. Deflation, a force particularly destructive to borrowers, i.e., entrepreneurs, was a persistent damper on economic activity.<sup>[17]</sup>

Medieval forms of credit were not able to cure the problem. Neither the ingenious networks of trade credit established by merchants nor the experiments in city finance managed by Italian city-states remedied the difficulties that haunted

exchange at the retail level nor the significant constraints on public spending.<sup>[18]</sup> Nor did British innovations remain true to existing mercantile credit forms, forms that are easy to conceptualize as modes of intermediation. Bills of exchange did not operate effectively as cash, nor evolve into it, as many accounts assume.<sup>[19]</sup> Nor was the Bank of England “patterned after the Bank of Amsterdam,” as a recent account steeped in the language of intermediation suggests.<sup>[20]</sup> Rather than a clearinghouse for mercantile credit (including overdrafts), the Bank of England broke precedent and issued currency that could circulate among strangers.

The distinctive step taken by the British was to create a system that monetized both public and private credit in novel yet sustainable ways. We know many pieces of the story, but need to put them together into a new narrative, one about the explosion of productive liquidity that occurred in the early modern period. A brief look at the sequence illuminates the importance of money creation; it also undermines the argument that creating money out of credit simply collapses into intermediation.

Experimenting under wartime conditions, the British first commissioned the Bank of England to issue new bank notes against government debt. When the government accepted those notes back in payment, it recognized them as money on par with the Crown’s own coin, ordaining them part of the monetary base. By 1800, that inflow added some £15 million of new money clearly treated as such to a coin supply of approximately £44million. Bank of England notes would surpass coin as a component of the money supply in the 19<sup>th</sup> century.<sup>[21]</sup>

Soon after the Bank’s founding, the British government institutionalized markets for circulating public debt. Given the scarcity of currency, much of that debt issued in order to purchase goods, not to borrow existing money. The British then

literally swapped the debt into equity, endured the debacle of the South Sea Bubble, and re-issued debt in ways that could be carried forward indefinitely at a relatively low interest rate. Unlike the Dutch, the British thus anchored new capital markets with national reach on the stabilizing medium of public debt.<sup>[22]</sup>

The short end of those markets, the money market for discounting bills, soon came to support inter-bank lending. Around 1750, banker-brokers began working there as agents for the burgeoning number of county banks. The London Clearing House was established in 1773 to carry the “rising volume of inter-bank payments” made through the money market, due in part to “the increasing country business.”<sup>[23]</sup>

Country banking inaugurated a geyser of new cash within that network of supportive institutions. Tradesmen and industrialists began issuing their own notes in order to provide a means of payment to their employees and to buy local goods. Denominated in pounds, the notes often represented that value within retail loops of reciprocity: wages paid in notes could be spent on company products, shopkeepers paid in notes could return them to manufacturers for products to sell in their stores, strangers could accept and use notes given the hatchwork of exchange. Using the networked institutions that connected the countryside to London, users converted local notes into Bank of England money and coin.<sup>[24]</sup>

By the end of the 18<sup>th</sup> century, country banks had added another £10 million to the money stock; the quantity of notes rose steeply over the next two decades when British money was inconvertible into gold coin.<sup>[25]</sup> Employers had, in many other contexts, issued tokens and other money substitutes. In Britain, however, money creation by country banks became part of the national monetary architecture. Country bankers, London bill brokers, the Bank of England, and the British government

had developed, or perhaps more accurately stumbled, into elaborating a country-wide, coordinated, and cash-abundant economy.

Over the course of the next several decades, the money supply, including bank-issued currency and corrected for inflation increased, some 8-fold.<sup>[26]</sup> Displacing country banks, modern joint-stock banks expanded lending in notes and deposits that could be used as cash effective immediately. By the end of the 19<sup>th</sup> century, those credit forms had surpassed Bank of England notes as components of the money supply (M1). Between 1688 and 2009, the order of expansion, corrected for inflation, was about 65-fold in the UK. That explosion of liquidity surely fueled a surge of exchange – aggregate demand at the retail level. It created funding opportunities that depended on the promise of productivity, rather than existing wealth. That promise was repayable in the same new money that financed productivity. It led to an upsurge in waged labor. It fed an expansion of government capacity along with revenue collection. And it secured the banking industry (including the central bank) as the source of all funds. The story comes full circle as the Bank of England developed its capacity as the anchor of the system and lender of last resort in the second half of the 19<sup>th</sup> century.

The roundtable picks up here with a debate about how we conceptualize banking. Calling an operation that permanently and exponentially expands the money supply “intermediation” strikes me as, at the very least, weird. It is much more apt to recognize the operation as money creation. What, then, is at stake in the term?

If the hypothesis above is right, overlooking the activity of money creation and/or conflating it with intermediation misleads us for at least three reasons:

First, it gets development wrong. It overstates the importance

of accumulated capital, including foreign capital (as opposed to foreign exchange, an essential for imports but not wealth creation *per se*). And it understates the importance of money and credit as vectors of development. Along the way, it fetishizes the rights of creditors as putative holders of wealth rather than partners in a negotiation over the distribution of benefits from the credit architecture. Credible commitment is not irrelevant in my reading, but neither is it the solvent that simply releases investment into economic use.<sup>[27]</sup> For that matter, investment is not irrelevant either in my reading – but it could only amplify development once British banks had created the credit-based money that responded so powerfully to the immense demand for liquidity.

Second, the intermediation axiom gets money wrong. Money, and liquidity more broadly, appear in this period as newly remade institutions of credit. The legal and political design of those institutions made *all* the difference. Rather than doubling down on medieval instruments for moving assets, the British improvised in ways that created cash and forms of liquidity that moved between strangers. Engrossed with private law property rights to capital (its accumulation and transfer), we have disregarded the public project that exponentially swelled Britain's national money and elaborated the machinery that allocated it as credit.

Third, the intermediation axiom leaves us in the dark about the relationship between money and the “real” economy stressed by traditional approaches. Categorizing money as an instrumental factor that lubricates exchange but leaves it otherwise unaffected has cut off inquiry into monetary drivers of productivity – but also monetary drivers of distribution and distributive inequality. In order to understand those effects, we need to map the way our system of bank-based money creation channels funds to certain hands, assets, and opportunities.<sup>[28]</sup> Further, we need to explore the relationship between modern money's design and governance, the interaction

between money made at the center with the social practices that deploy, sustain, and/or subvert that money<sup>[29]</sup>, and the dynamics created by changing modes of money and finance when they cross borders on a global scale.

The stakes could not, in my view, be bigger.

1. Douglass C. North and Barry R. Weingast, "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England," *The Journal of Economic History* XLIX, no. 4 (1989): 825; see also Peter Temin and Hans-Joachim Voth, *Prometheus Shackled: Goldsmith Banks and England's Financial Revolution After 1700*, (Oxford: 2012), 34. ↑
2. Ricks argues that intermediation vocabulary has nurtured a deregulatory orientation: insofar as its terms deny the distinct character of money creation by banks, the intermediation approach elides the importance of entry restrictions traditionally attached to banking. By contrast, Tarullo argues that categorizing liquidity creation as either intermediation or money creation is unhelpful. For him, the underlying goal is regulating risky maturity mismatches that produce liquidity but install instability, whatever their label. ↑
3. According to Marglin, the main disagreement is between those who believe that money creation can affect only prices (orthodoxy) and those who believe that money creation can affect both prices and real output (heterodoxy). The orthodox view assumes that the central bank determines the quantity of reserves and the banking system magnifies that monetary base. In a system that is fully loaned up, money creation does not drive the real economy. ↑
4. Tucker argues that arithmetic "money multiplier"

expositions comported more closely with monetary policy built around control of reserves. Jackson's point is that, from the point of view of a single banker, attention to deposits and their accumulation provides practical guidance that is extremely useful. †

5. I recognize that this is a particular way to conceptualize "intermediation." We might instead so label the act of taking onboard liquidity risk: the bank stands between (and in that sense intermediates) parties insofar as it ensures that long-term credits can be used immediately in the form of purchasing power. Understood that way, "intermediation" can co-exist with money creation. My argument is that, regardless of that reformulation, banking operations are routinely described in much more concrete terms as pooling and conveying the capital of investors to the hands of entrepreneurs. See Rondo E. Cameron et al., *Banking in the Early Stages of Industrialization; a Study in Comparative Economic History*, (New York: 1967), 54 (criticizing approach to country bankers as "brokers" vs. "engines of credit"). The writing of no less than Walter Bagehot, the dean of central bankers, is a case in point: it celebrates Britain's distinctive banking structure in terms that emphasize the pooling and transferring capital, e.g., Walter Bagehot, *Lombard Street: A Description of the Money Market*, (New York: 1873, 1999), 5-6, 11-12, even as it describes an enormously nuanced elaboration of credit that locates the origins of deposit banking in advances independent of savings (pp. 84-92), recognizes Bank of England issues as legal tender that can be issued without gold coin backing (pp. 22-25, 28-29), and argues that the British system ultimately shares essentials with the French approach that recognizes the public character of the national reserve (pp. 69-74). Banking operations understood as capital transfer appear a transactional

matter. Understood as a construction of monetary credit, they represent an encompassing legal project of money creation by agents with public power and place. I thank Paul Tucker and Steve Marglin for discussion of these issues. ↑

6. Nicholas Crafts, "Forging Ahead and Falling Behind: The Rise and Relative Decline of the First Industrial Nation," *Journal of Economic Perspectives* 12, no. 2 (1998): 195. For discussion about whether England or Europe should be the unit of analysis, see Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy*, (Princeton: 2000), 6-7. ↑
7. Crafts, "Forging Ahead and Falling Behind: The Rise and Relative Decline of the First Industrial Nation"; Nicholas Crafts and C. Knick Harley, "Output Growth and the British Industrial Revolution; A Restatement of the Craft-Harley View," *Economic History Review* 45 (1992). ↑
8. According to leading histories of change, it was (variously) access to coal that made local manufacturing feasible, combined with imperial exploitation of the New World; it was a technological edge, sharpened by a profit-oriented allocation of resources and high labor productivity in research; it was improvements in transportation; it was the scientific culture; it was the high cost of labor paired with the cheap cost of energy. See respectively Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy*; Crafts, "Forging Ahead and Falling Behind: The Rise and Relative Decline of the First Industrial Nation", 197-198; Rick Szostak, *The Role of Transportation in the Industrial Revolution: A Comparison of England and France*, (Montreal and Kingston: 1991); Margaret Jacob, *The Cultural Meaning of the Scientific Revolution*, (New York: 1988); Robert C.

Allen, *The British Industrial Revolution in Global Perspective*, (Cambridge 2009). ↑

9. By contrast, with a few notable exceptions, see Nuno Palma, "Money and Modernization in Early Modern England," *Financial History Review* 25, no. 3 (2018) and Forrest Capie, "Money and Economic Development in Eighteenth-century England," in *Exceptionalism and Industrialisation: Britain and Its European Rivals, 1688-1815*, ed. Leandro Prados de la Escosura (Cambridge University Press, 2004), accounts set aside money or money creation per se as if it is not worth investigation. Granted that it lubricates exchange, once we are beyond barter, money appears as a nominal factor. Changes in the money supply affect only price levels, eventually in ways that are deemed to equilibrate across markets. ↑
10. See North and Weingast, "Constitutions & Commitment"; Fernand Braudel, *Afterthoughts on Material Civilization and Capitalism*, (Baltimore: 1979). ↑
11. Temin and Voth, *Prometheus Shackled*: 35 (noting similar pattern in modern economies); see also Richard Sylla, "Comparing the UK and US Financial Systems, 1790-1830," in *The Origin and Development of Financial Markets and Institutions, From the Seventeenth Century to the Present*, ed. J. Attack and L. Neal (2009). ↑
12. Indeed, in ways that would feed into the deregulatory approach to finance, the more intermediation, the better. Temin and Voth, *Prometheus Shackled*: 35. ↑
13. See Cameron et al., *Banking in the Early Stages of Industrialization; a Study in Comparative Economic History*: 52-59; L. S. Pressnell, *Country Banking in the Industrial Revolution*, (Oxford: 1956). ↑
14. See Crafts, "Forging Ahead and Falling Behind: The Rise

and Relative Decline of the First Industrial Nation”, 195; Capie, “Money and Economic Development in Eighteenth-century England”, 232. ↑

15. For amounts, see Christine Desan, *Making Money: Coin, Currency, and the Coming of Capitalism*, (Oxford: 2014), 399 n.152 (more than four-to-seven-fold expansion in money supply, corrected for inflation between 1831 and 1885, using figures from Rondo Cameron); Nuno Palma, “Money and Modernization: Liquidity, Specialization, and Structural Change in Early Modern England,” *EUI Working Papers* (2016): 236. The Scottish story, a case of money creation along a somewhat different path, may be an even more extreme case of the phenomenon. See Cameron et al., *Banking in the Early Stages of Industrialization; a Study in Comparative Economic History*, 60-99. ↑
16. See generally Desan, *Making Money*; Thomas J. Sargent and François R. Velde, *The Big Problem of Small Change*, (Princeton, NJ: 2002). For the impact of silver on English exchange, the failure of the Spanish to institutionalize such effects, and the continuing obstacles to monetary abundance in the 18<sup>th</sup> century, see Palma, “Money and Modernization in Early Modern England”, 235-251; Nuno Palma, “American Precious Metals and their Consequences for Early Modern Europe,” *EHES Working Paper Series* (European Historical Economics Society, 2019). ↑
17. See Palma, “Money and Modernization in Early Modern England”, 232-235, 243, 245, Fig. 4. ↑
18. See Carlo M. Cipolla, “Currency Depreciation in Medieval Europe,” *The Economic History Review* 15, no. 3 (1963): 417-418; Palma, “Money and Modernization in Early Modern England”, 238-241, 256, 261. ↑
19. Compare Kahn, this Roundtable, citing Stephen Quinn and

William Roberds, "Responding to a Shadow Banking Crisis: the Lessons of 1763," *Journal of Money, Credit and Banking* 47, no. 6 (2015) with Capie, "Money and Economic Development in Eighteenth-century England", 227; Raymond De Roover, "New Interpretations of the History of Banking," in *Business, Banking, and Economic Thought in Late Medieval and Early Modern Europe: Selected Studies of Raymond de Roover*, ed. Julius Kirschner (The University of Chicago Press, 1974), 216-217. Gorton is not to the contrary: the median amount of a bill in his sample is £100, or about £8000 in today's pounds; a £10 bill, still worth about £800, was uncommon. See Gary B. Gorton, "Private Money Production without Banks," NBER Working Papers (National Bureau of Economic Research, 2020), 15 n.34, 8-9, 14. Approaching bills as an instrument of exchange, Gorton does not consider how they functioned to link country bank notes into the larger payments system. ↑

20. Temin and Voth, *Prometheus Shackled*: 13-14. Temin and Voth do describe the Bank's note issues later, *ibid.*, 31. ↑
21. See Rondo Cameron, "England, 1750-1844," in *Banking in the Early Stages of Industrialization*, ed. Rondo Cameron (Oxford University Press, 1967), 42; Capie, "Money and Economic Development in Eighteenth-century England", 224; Desan, *Making Money*: 404-406. ↑
22. Larry Neal, "How It All Began: The Monetary and Financial Architecture of Europe from 1648 to 1815," *Financial History Review* 7, no. 2 (October) (2000). ↑
23. DM Joslin, "London Private Bankers, 1720-1785," *The Economic History Review* 7, no. 2 (1954): 184-185. By 1785, Bank of England dominated the discounting business. *Ibid.*, 175, 185. ↑

24. Consider, for example, that a farmer might give a bill of exchange to a local banker for country bank notes, dictating that it be paid by an exporter who would hold the farmer's proceeds in Bank of England notes. The local banker may meanwhile have discounted the bill on the London money market. ↑
25. Pressnell, *Country Banking*: 12-36, 136-189; Cameron, "England, 1750-1844", 44. ↑
26. Desan, *Making Money*: 399. Geographical scope of the UK differs across these calculations but their order of magnitude is correct. ↑
27. See, e.g., Odette Lienau, *Rethinking Sovereign Debt: Politics, Reputation, and Legitimacy in Modern Finance*, (Cambridge, MA: 2014). ↑
28. Consider, for example, the distributive effects inherent in the fact that bank-created money issues only for certain kinds of credit, Christine Desan, "The Key to Value: The Debate over Commensurability in Neoclassical and Credit Approaches to Money," *Law and Contemporary Problems* (forthcoming), and Mehrling's demonstration that that credit made in monetary form can be sustainably parked long-term in the purchase of financial assets. See, e.g., Perry Mehrling, "Payment vs. Funding: The Law of Reflux for Today," INET Working Paper No. 113 (January 28, 2020). ↑
29. See David M. P. Freund, "State Building for a Free Market: The Great Depression and the Rise of Monetary Orthodoxy " in *Shaped by the State: Toward a New Political History of the Twentieth Century*, ed. Brent Cebul, Lily Geismer, and Mason B. Williams (University of Chicago, 2019). ↑