

Private Markets, Public Options, and the Payment System

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The speed at which money moves between people and businesses in the United States lags well behind international standards. Slow payment speeds lead to inefficiency across the economy, drive demand for high-cost credit products, and have hampered the federal response to 2020’s pandemic-driven economic crisis. To speed up the payment system, the Federal Reserve (“Fed”) has announced its intention to build “FedNow,” a publicly operated, real-time payment platform, which would compete with a privately run platform in the interbank payment market. Critics claim that the Fed’s plan represents a historically unprecedented—and possibly illegal—encroachment on turf that properly belongs to the private sector. Against the Fed’s critics, we argue that the FedNow plan holds the capacity to achieve three objectives at the heart of payment policy in the United States: to catalyze innovation, enhance access to developing payment networks, and shore up financial stability. We also argue for expanded use of alternative Fed tools to achieve payment objectives. We show how the Fed can harmonize its activities as operator, market participant, supervisor, and regulator of the payment system to press system development forward. More broadly, we argue that the Fed’s multiple roles are not troublesome bugs or unfortunate byproducts of political compromise, but rather are valuable features that afford the Fed a range of creative tools to motivate development and adoption of faster payment platforms in the United States.

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Introduction

The speed at which money moves through the complex institutional circuitry known as the payment system matters greatly.¹ Among people who live paycheck to paycheck, even a day’s delay in payment speed can produce dire consequences.² A late rental payment triggers fees and risks eviction,³ and

1. We describe the basics of this circuitry *infra* Part I.

2. As Mehrsa Baradaran has written, “[w]ithout a financial cushion, every mistake, unexpected problem, or minor life change can quickly turn into a financial disaster.” MEHRSA BARADARAN, HOW THE OTHER HALF BANKS: EXCLUSION, EXPLOITATION, AND THE THREAT TO DEMOCRACY 138 (2015). For evidence that a single day of delay in money-transmission matters to those at the economic fringe, see Clayton P. Gillette, *Rules, Standards, and Precautions in Payment Systems*, 82 VA. L. REV. 181, 249 n.179 (1996) (describing people who possess bank accounts but nevertheless pay for check-cashing services to avoid the “hold[er]” period before deposited funds are available for withdrawal); and Ronald Mann & Jim Hawkins, *Just Until Payday*, 54 UCLA L. REV. 855, 862 (2006) (describing demand for weekend check-cashing services); see also Aaron Klein, *The Fastest Way to Address Income Inequality? Implement a Real-Time Payment System*, BROOKINGS (Jan. 2, 2019), <https://www.brookings.edu/research/the-fastest-way-to-address-income-inequality-implement-a-real-time-payment-system> [<https://perma.cc/L4RW-7QAZ>] (estimating the extent to which demand for short-term consumer financial products is driven by payment delays); *infra* Section II.B (discussing evidence of timing-driven demand for costly financial services).

3. See MATTHEW DESMOND, EVICTED: POVERTY AND PROFIT IN THE AMERICAN CITY 154, 358 n.3 (2016) (describing the spiraling consequences of late rent payment).

a missed payment for insulin risks even death.⁴ Slow payment speeds thus are not merely inconveniences. As lawmakers, regulators, and scholars alike acknowledge—and as the slovenly disbursement of welfare payments to nearly fifty million Americans during the 2020 coronavirus crisis has recently demonstrated—they present a serious policy problem.⁵ This Article examines the potential roles that the Federal Reserve (Fed)⁶ might play in response.

Fed experimentation with these potential roles is ongoing and controversial. Most prominently, in August 2019, the Fed proposed to do something it has not done in over forty years—build and operate an entirely new payment platform.⁷ If built, the platform—called “FedNow”—would be designed to hasten the adoption of new, faster payment methods not only among banks, but also among individuals and corporations.⁸ It would function as a public option—a government program that “provides an important service at a reasonable cost” and “coexists . . . with one or more private options

4. Cf. MICHAEL S. BARR, *NO SLACK: THE FINANCIAL LIVES OF LOW-INCOME AMERICANS* 5 (2012) (describing how living paycheck to paycheck leaves people “vulnerable to medical or job emergencies that may endanger financial stability”); Alli Knothe, *Are Payday Lenders Like Tampa-Based Amscot a Necessary Part of the Banking Industry?*, TAMPA BAY TIMES (July 23, 2016), <https://www.tampabay.com/news/business/are-payday-lenders-like-tampa-based-amscot-a-necessary-part-of-the-banking/2286447> [<https://perma.cc/W74F-37Q5>] (describing a payday loan taken out to cover immediate insulin costs).

5. See Yonatan Arbel, *Payday*, 98 WASH. U. L. REV. (forthcoming 2020) (examining the costs of current payment practices and advocating for legislative solutions); Aaron Klein, *70 Million People Can't Afford to Wait for Their Stimulus Funds to in a Paper Check*, BROOKINGS (Mar. 31, 2020), <https://www.brookings.edu/opinions/70-million-people-cant-afford-to-wait-months-for-their-stimulus-to-come-in-a-paper-check> [<https://perma.cc/2TVJ-6V4Y>] (estimating that over 48 million Americans would receive crisis-related welfare disbursements as paper checks); Zachary Warmbrodt & Victoria Guida, *Jerome Powell: Fed 'Seriously Considering' Faster Payments System*, POLITICO (July 31, 2019), <https://www.politico.com/story/2019/07/31/powell-fed-faster-payments-system-1629984> [<https://perma.cc/3LWX-KVE9>] (describing the view of Federal Reserve Chairman Jerome Powell); Austin Weinstein, *Elizabeth Warren Wants to Stop Banks from Dominating Trillions in Payments*, BLOOMBERG (July 24, 2019), <https://www.bloomberg.com/news/articles/2019-07-24/warren-wants-to-stop-banks-from-dominating-trillions-in-payments> [<https://perma.cc/CCE7-FZGA>] (quoting Senator Warren as saying, “People living paycheck-to-paycheck shouldn’t have to wait up to five days for a check to clear so that they can pay their rent, cover child care, or pick up groceries”).

6. Throughout, this Article follows convention by using “Federal Reserve” or “the Fed” to refer to entities composing the Federal Reserve System. Of course, the Fed is “a ‘they,’ not an ‘it.’” PETER CONTI-BROWN, *THE POWER AND INDEPENDENCE OF THE FEDERAL RESERVE* 13 (2016). Crucially for purposes of this Article, the Federal Reserve Banks constitute “corporate instrumentalities of the Federal Government created by Congress for the performance of governmental functions,” including, in particular, interventions in the payment system. *Id.* at 106 (internal quotation marks omitted). The Board of Governors of the Federal Reserve System, in addition to all else it does, promulgates regulations governing the Fed’s payment systems. See 12 U.S.C. § 248-1 (2018); 12 C.F.R. § 210 (2019). We provide more background on the Fed’s structure *infra* Section III.A.

7. See Federal Reserve Actions to Support Interbank Settlement of Faster Payments, Notice and Request for Comment, 84 Fed. Reg. 39297, 39327 (Aug. 9, 2019); Governor Lael Brainard, Fed. Reserve Bd. of Governors, Digital Currencies, Stablecoins, and the Evolving Payments Landscape, Address at the Future of Money in the Digital Age Conference, Peterson Institute for International Economics (Oct. 16, 2019) (stating that FedNow would be the Fed’s “first new payment service in more than 40 years”).

8. See *infra* Section II.C. “Good funds” is a colloquial term for withdrawable, spendable money. See Hal Scott, *Corporate Wire Transfers and the Uniform New Payments Code*, 83 COLUM. L. REV. 1664, 1670 (1983).

offering the same service”—offered to all financial institutions that participate in the U.S. banking system.⁹ The FedNow idea is still proceeding through the notice-and-comment rulemaking process, but the Fed seems intent on going forward with the project—to the point that Fed Chairman Jerome Powell has reported to Congress that the project is “ahead of schedule.”¹⁰

Supporters and critics of FedNow largely agree on the goal of promoting the adoption of faster payments in the United States, which lags behind international standards for payment speed.¹¹ But they disagree vehemently on the wisdom and legitimacy of a public option as a means toward that goal. Not only have FedNow’s critics taken issue with the project’s details; they have attacked it at a fundamental level, arguing that it represents an historically unprecedented—and possibly illegal—encroachment on financial turf that properly belongs to the private sector.¹² Amid presidential efforts to undermine the Fed’s independence and political campaigns to “End the Fed,” these critiques raise the stakes for what has long been considered an entirely technocratic subject: the role of the Fed in the payment system.¹³

This Article draws on law, history, and theory to show that the debate about whether or not the Fed should operate a new payment platform rests on false premises. The salient question is not whether the development of faster payments in the United States should be a private or public project. It is how the Fed should structure its multifaceted authorities as an operator, market participant, and regulator to accomplish the public policy goal of promoting faster payments. By weighing in on this question, our aim is to clarify and deepen the legal and administrative aspects of a debate that has already drawn in legislators,¹⁴ regulators,¹⁵ presidential candidates,¹⁶ and the key op-ed pages

9. ANNE ALSTOTT & GANESH SITARAMAN, *THE PUBLIC OPTION: HOW TO EXPAND FREEDOM, INCREASE OPPORTUNITY, AND PROMOTE EQUALITY* 2 (2019). Most prominent public options involve public provision of important services directly to individuals; FedNow would exemplify a public option providing important services to other institutions. For discussion of proposed public options for banking services for individuals, see *id.* at 169-81; BARADARAN, *supra* note 2, at 183-226; Morgan Ricks, John Crawford & Lev Menand, *Digital Dollars*, 88 GEO. WASH. L. REV. (forthcoming 2020); K. Sabeel Rahman, *The New Utilities: Private Power, Social Infrastructure, and the Revival of the Public Utility Concept*, 39 CARDOZO L. REV. 1621, 1657-65 (2018). These banking proposals assume the existence of a payment platform to interconnect public-option accounts; the payment proposals we discuss below are therefore complementary to (or at least compatible with) the banking proposals. For an argument in favor of a public option in the credit-card clearing market, see Adam J. Levitin, *Public-Private Competition in Payments: The Role of the Federal Reserve* (Georgetown Law & Economics Research Papers, Paper No. 1420061, 2009), <https://ssrn.com/abstract=1420061> [<https://perma.cc/GE3L-YFZN>].

10. John Heltman, *Fed’s Faster Payments Network Likely Ahead of Schedule*, AM. BANKER (Nov. 14, 2019), <https://www.americanbanker.com/news/feds-faster-payments-network-likely-ahead-of-schedule-powell> [<https://perma.cc/8MTZ-C56V>].

11. See *infra* Section II.D.

12. See *id.*

13. For discussion of the “End the Fed” campaign and its political stakes, see Neil H. Buchanan & Michael C. Dorf, *Don’t End or Audit the Fed: Central Bank Independence in an Age of Austerity*, 102 CORNELL L. REV. 1 (2016).

14. See, e.g., John Heltman, *Democrats Try to Force Fed’s Hand on Faster Payments*, AM. BANKER (July 24, 2019), <https://www.americanbanker.com/news/elizabeth-warren-other-democrats-look-to-force-feds-hand-on-faster-payments> [<https://perma.cc/3JUQ-S964>] (quoting Senator Chris Van

of the financial press,¹⁷ but has fallen outside the purview of academic legal literature.

Descriptively, this Article situates debates over faster payments in their statutory, regulatory, and historical context. Financial instruments and technologies that facilitate payment are fundamental to commerce,¹⁸ but the role of nation-state central banks in providing payment platforms is modern, uneven, and still controversial.¹⁹ Through an examination of its origins and evolution, we provide a detailed account of the Fed’s statutory and prudential role as a promoter and operator of payment platforms. This account reveals that the debate about faster payments is not only about frustratingly jargon-laden issues of payment technology and regulation, but also about statutory interpretation, administrative history, and even political theory about the proper functions of society’s basic financial infrastructure. Since its creation in 1913, the Fed has uneasily straddled the public-private divide. Its evolving role in the payment system provides a window onto the tensions inherent to the Fed’s hybridity.

The Fed’s “essential hybridity” at the intersection of state and market can be seen across its functions, from its banking services to its control over the

Hollen as saying, “I’ve pushed the Federal Reserve to develop a [new] system . . . , but progress has been too slow”).

15. See U.S. DEP’T OF TREASURY, A FINANCIAL SYSTEM THAT CREATES ECONOMIC OPPORTUNITY: NONBANK FINANCIALS, FINTECH, AND INNOVATION 156 (July 2018), <https://home.treasury.gov/sites/default/files/2018-07/A-Financial-System-that-Creates-Economic-Opportunities---Nonbank-Financi....pdf> [<https://perma.cc/9SPK-Q9BB>] (“Treasury encourages the Federal Reserve to move quickly in facilitating a faster retail payments system, such as through the development of a real-time settlement service that would allow for more efficient and widespread access to innovative payment capabilities.”).

16. See Jesse Hamilton, *Fed’s Real-Time Payments System to Compete with Wall Street*, BLOOMBERG (Aug. 5, 2019), <https://www.bloomberg.com/news/articles/2019-08-05/fed-plans-real-time-payments-system-to-compete-with-wall-street> [<https://perma.cc/5UKZ-T8NF>] (describing praise from Senator Elizabeth Warren); Ron Paul, *Trump Is Right, the Fed Doesn’t Know What It’s Doing and It Could Get Worse*, FOX BUS. (July 19, 2019) (criticizing the Fed’s plan).

17. See Editorial Board, *Jay Powell’s Public Option*, WALL ST. J. (Aug. 2, 2019), <https://www.wsj.com/articles/jay-powells-public-option-11564786958> [<https://perma.cc/2N4K-8L65>] (criticizing the Fed’s plan); Editorial Board, *The Very Political Fed*, WALL ST. J. (Aug. 5, 2019), <https://www.wsj.com/articles/the-very-political-fed-11565047502> [<https://perma.cc/M6HY-TW5A>] (same); *The Fed Says It Will Build a Real-Time Interbank Payments System*, ECONOMIST (Aug. 10, 2019), <https://www.economist.com/finance-and-economics/2019/08/10/the-fed-says-it-will-build-a-real-time-interbank-payments-system> [<https://perma.cc/5Z2T-CNJU>] (same).

18. See generally BENJAMIN GEVA, THE PAYMENT ORDER OF ANTIQUITY AND THE MIDDLE AGES: A LEGAL HISTORY (2011) (providing a history of payment methods over the *longue durée*).

19. As Annelise Riles has written, “[w]hen central bankers assert that their work is technocratic and not political, they point to . . . mundane activities” such as “the work of designing and maintaining the payment system”—work that central bankers use “to confer legitimacy on central bank practices,” and which “turn[s] out to have important consequences” for the deep structure of markets. ANNELISE RILES, FINANCIAL CITIZENSHIP: EXPERTS, PUBLICS, AND THE POLITICS OF CENTRAL BANKING 32 (2018); see also LAWRENCE BROZ, THE INTERNATIONAL ORIGINS OF THE FEDERAL RESERVE SYSTEM 10 (1996) (highlighting the role of “pressure to remake the payments system” in the origins of the Fed).

money supply.²⁰ Even so, its contingent participation in the payment system as a public-private entity demands additional policy justification. Normatively, the Article examines whether the Fed's public-option approach holds the capacity to achieve three objectives at the heart of payment policy in the United States. Specifically, we ask whether it has the capacity to catalyze innovation, enhance access to faster payments, or shore up financial stability. Our assessment leads us to conclude that public options have delivered on these objectives in the past; there are theoretical reasons to believe that they are likely to do so in the future. Fed participation in the payment system and public-private competition are not troublesome bugs or unfortunate byproducts of political compromise. Rather, they represent valuable features of the Fed's hybrid system.

In making this argument, we draw out implications for the Fed's new efforts to facilitate faster payments. In particular, we argue that far from representing an illegitimate departure from historical precedent and statutory authority, FedNow would fit squarely within the Fed's longstanding role in the financial-system structure entrenched by the Federal Reserve Act of 1913. While the Fed's status as participant in and supervisor of the payment system produces tensions, they are the defining tensions of public central banking—and have been for centuries.

Beyond engaging with the role of the Fed as purveyor of public options, we build on the idea of public-private hybridity to identify a range of other tools that the Fed may use to foment faster payment development. In particular, we show that the Fed holds a range of policy levers, which we place on a continuum from market-participation to straightforward coercion. To hasten the development of faster payments in the United States, the Fed has the ability to leverage its powers not only as a payment system operator, but also as a user of payment systems, and the principal regulator and supervisor of those systems.

The Article proceeds as follows. Part I provides background on the payment system—an ever-evolving collection of public, private, and hybrid institutions that facilitate different kinds of monetary transactions for different kinds of parties. Part II introduces the debate over faster payments and FedNow. By presenting the legal literature's first account of its policy rationale, administrative underpinnings, and prominent critiques, we situate the rest of the Article's analysis of the Fed's hybrid role in the payment system. In Part III, we examine legal and prudential justifications for the Fed's role as provider of interbank, public-option payment platforms. This account intertwines the history of the U.S. payments system—including Congress's establishment of the Fed as both supervisor of that system and participant within it—with contemporary policy justifications. In particular, we argue that the Fed has beneficial roles to play as a promoter of interbank competition, as a

20. See Katharina Pistor, *A Legal Theory of Finance*, 41 J. COMP. ECON. 314 (2013) (describing finance as “occupy[ing] an essentially hybrid place between state and market”); Perry Mehrling, *Essential Hybridity: A Money View of FX*, 41 J. COMP. ECON. 355 (2013).

funder of payment innovation spillovers, and as a guarantor of payment-system stability. In Part IV, we elaborate on the hybrid view of the Fed's role in the payment system by looking beyond provision of interbank platforms. In particular, we evaluate a suite of Fed tools to promote the private development of faster payments in the United States, whatever comes of FedNow in the medium- or long-term. We present this menu along a spectrum ranging from noncoercive market activity to coercive regulatory authority, revealing how the Fed's hybrid role affords it a plethora of levers to promote payment innovation and competition.

I. Background: A Simple Taxonomy of Payment Platforms

To situate our account of the Fed's hybrid role and its implications for faster payments, this Part provides background on the institutions that facilitate payment in the United States. While scholars have offered other broad overviews of payment platforms in the United States,²¹ our description of these institutions emphasizes the importance of public-private interaction in the construction of the payment system as a whole.

Payments are legal acts that put "money in motion."²² In a world where most money is held on the books of financial institutions—think account balances at your preferred bank or brokerage—the most important methods of putting money in motion involve transfers between accounts.²³ Simplifying a bit, these transfers take place in two basic steps. First, payment is initiated between two "end users" of the financial system—say, two businesses in a supply chain, or a tenant and a landlord. The platforms that facilitate this step

21. See, e.g., MICHAEL S. BARR, HOWELL E. JACKSON, & MARGARET E. TAHYAR, FINANCIAL REGULATION: LAW AND POLICY 751-76 (2016); LYNN M. LOPUCKI, ELIZABETH WARREN, DANIEL KEATING, RONALD J. MANN, & ROBERT M. LAWLESS, COMMERCIAL TRANSACTIONS: A SYSTEMS APPROACH 359-65 (6th ed. 2016).

22. Joseph Sommer, *Where Is the Economic Analysis of Payment Law*, 83 CHI.-KENT L. REV. 751, 753 (2008); see also EDWARD L. RUBIN & ROBERT COOTER, THE PAYMENT SYSTEM: CASES, MATERIALS AND ISSUES 1 (2d ed. 1994) ("Payment instruments are devices for transferring value from one person to another, with value being defined as the power to purchase goods and services in the market.").

23. Cf. Fairfax Leary, Jr., & Patricia B. Fry, *A "Systems" Approach to Payment Modes: Moving Toward a New Payment Code*, 16 U.C.C. L.J. 283, 287 (1984) ("Conceptually, all [noncash] payment modes are alike in that the ultimate object is the safe transfer of deposit institution credit from the institution used by a debtor or donor to deposit institution credit in the creditor-donee's selected institution."). As Morgan Ricks puts it, account money can be thought of as "uncertificated" money, while coins and bills can be thought of as "certificated" money. *Money as Infrastructure*, 2018 COLUM. BUS. L. REV. 757, 760-61. Despite reports of its desuetude, cash is still in heavy use. A representative sample from 2017 used cash in thirty percent of reported consumer transactions. See Claire Green & Joanna Stavins, *The 2017 Diary of Consumer Payment Choice*, FED. RES. BK. OF ATLANTA RESEARCH DATA REPORTS, 18-05, at 14 (2018). But the other seventy percent of their transactions involved account money. *Id.* Nonconsumer transactions are likely to lean even more heavily toward account money. See KENNETH ROGOFF, THE CURSE OF CASH: HOW LARGE-DENOMINATION BILLS AID CRIME AND TAX EVASION 48-49 (2016).

of the payment process are called *retail* payment systems.²⁴ Second, the two banks that provide accounts for those end users must settle up between themselves. The payment platforms that operate between and among banks are called *interbank*—or *wholesale*—payment systems.²⁵

When individuals and small firms pay each other, they usually use a retail method—paper cash, a handwritten check, a credit card, Venmo.²⁶ With the exception of cash, each of these retail methods enables its users to transfer money between accounts at financial institutions—usually banks, but sometimes nonbank payment-service providers.²⁷ Users see money come and go from these accounts every time they make or receive retail payments.

This ground-level view raises a fundamental question: How does money sitting in the bank of, say, a tenant, make its way to the account of her landlord?

The answer to this question points to the second, wholesale step of the payment process, and it sheds light on where FedNow aims to enter the scene. Throughout the day, the customers of Banks *A*, *B*, and *C* make many payments between each other. How do Banks *A*, *B*, and *C* figure out how to adjust their accounts to settle up all the activity? In the earliest days of capitalism, banks would have “walk clerks” literally carry paper payment instruments back and forth and hand them to each other in exchange for cash.²⁸ Today, they use specialized electronic platforms for transfers of money held on the books of a

24. See FEDERAL FINANCIAL INSTITUTION EXAMINATION COUNCIL, RETAIL PAYMENT SYSTEMS BOOKLET 2 (2016).

25. There is no “definitive division between retail and wholesale payments.” *Id.* at 3. The division instead is an attempt to locate platforms at the edge or the core of the broader system. *Cf.* Perry Mehrling, *The State as Financial Intermediary*, 34 J. ECON. ISSUES 365, 365-66 (2000); Pistor, *supra* note 20, at 316 (distinguishing between a systemic “apex” and its periphery). For more discussion of these divisions, see Dan Awrey & Kristin van Zwieten, *The Shadow Payment System*, 43 J. CORP. L. 775, 781-82 (2018).

26. While paper methods like the check used to dominate, most retail payments today are electronic. See Clare Greene & Joanna Stavins, *The 2017 Diary of Consumer Payment Choice*, FED. RES. BANK ATLANTA 6-7 (Sept. 17, 2018), <https://www.frbatlanta.org/-/media/documents/banking/consumer-payments/research-data-reports/2018/the-2017-diary-of-consumer-payment-choice/rdr1805.pdf> [<https://perma.cc/D7VL-U2TH>]; David B. Humphrey, Moshe Kim, & Bent Vale, *Realizing the Gains from Electronic Payments: Costs, Pricing, and Payment Choice*, 33 J. MONEY, CREDIT & BANKING 216, 217 (2001) (noting that only twenty-three percent of noncash payments in the United States were electronic in 1996). Note that while Greene and Stavins distinguish between ACH-intermediated electronic funds transfers and payments intermediated by the card networks, we treat them both as constituents of the broader “electronic” category.

27. See Awrey & Van Zweiten, *supra* note 25, at 800.

28. As Gary Gorton and Ellis Tallman describe the “walk clerk” process, On any day, the Corn Exchange Bank will hold many checks drawn on Butcher’s and Drover’s Bank and vice versa. One way to clear these checks held by Corn Exchange Bank and drawn on Butcher’s and Drover’s Bank is for Corn Exchange Bank to send a clerk, called a “walk clerk,” to take the checks to Butcher’s and Drover’s Bank and receive or pay cash. The walk clerk has to carry money in case he needs to pay. And if he receives cash, then he returns to Corn Exchange Bank with the cash. Meanwhile, Butcher’s and Drover’s Bank sends its own walk clerk to do the same thing.

GARY B. GORTON & ELLIS W. TALLMAN, FIGHTING FINANCIAL CRISES: LEARNING FROM THE PAST 13 (2018).

third party. Some of the platforms that facilitate these transfers are offered by private operators, but the most important of these enable transfers between balances held by financial institutions on the books of the Federal Reserve.²⁹

The Fed operates multiple payment platforms that its thousands of accountholders—mainly banks, government entities, and private financial utilities—use to transmit over three trillion dollars between their Federal Reserve bank accounts on a daily basis.³⁰ These include a check-clearing system; a system for “automated clearing house” (ACH) transfers called FedACH; and the behemoth of them all, an instantaneous wire-transfer system called Fedwire.³¹ If it is built, FedNow will join these ranks.

The Fed, however, is not the only provider of interbank payment systems in the United States. It directly competes with private operators. For instance, FedACH competes with a private platform called the Electronic Payments Network (EPN), which is operated by a cooperative of banks called The Clearing House.³² In 2018, FedACH cleared almost 15 billion transactions and \$25 trillion per year,³³ compared to 8 billion transactions and \$26 trillion cleared on the private EPN.³⁴ Though The Clearing House’s private ACH platform has different membership and different pricing, it uses substantially the same rules and procedures as the Fed.³⁵ Similar competition exists between public Fedwire and the private Clearing House Interbank Payment System (CHIPS).³⁶ And similar competition will exist between public FedNow and a

29. See PERRY MEHLING, *THE NEW LOMBARD STREET: HOW THE FED BECAME THE DEALER OF LAST RESORT* 13 (2010) (“When one bank makes a payment to another, the mechanism involves changing entries on the balance sheet of the central bank; there is a debit to the account of the bank paying and a credit to the account of the bank being paid.”).

30. See BD. OF GOVERNORS OF THE FED. RESERVE SYS., *104TH ANNUAL REPORT: 2017*, at 92-93 (2018) (noting that “[w]hen one bank makes a payment to another, the mechanism involves changing entries on the balance sheet of the central bank”). This figure underestimates the Fed’s daily volumes because it does not include the Fed’s settlement service for private clearinghouses, the National Settlement Service. See *id.*

31. See *id.*

32. See *ACH, THE CLEARING HOUSE*, <https://www.theclearinghouse.org/payment-systems/ach> [<https://perma.cc/X83C-HLF3>].

33. See *Automated Clearinghouse Services, Commercial Automated Clearinghouse Transactions Processed by the Federal Reserve*, BD. OF GOVERNORS OF THE FED. RESERVE SYS. https://www.federalreserve.gov/paymentsystems/fedach_yearlycomm.htm [<https://perma.cc/M2GM-3BHA>].

34. Statistics on EPN are not available directly, but the combined ACH statistics (from which the Fed numbers, *id.*, were subtracted) are available from the National Automated Clearing House Association. See *ACH Network Moves 23 Billion Payments and \$51 Trillion in 2018*, NAT’L AUTOMATED CLEARING HOUSE ASS’N (Feb. 19, 2019), <https://www.nacha.org/news/ach-network-moves-23-billion-payments-and-51-trillion-2018> [<https://perma.cc/3XG7-UQPL>].

35. See Steven L. Harris, *Introduction to Rethinking Payments Law*, 83 CHI.-KENT L. REV. 477, 487 (2008). To effectuate final transfers between the banks that use it, the Clearing House’s EPN sends a simple file to the Federal Reserve on a daily basis explaining to the Fed which accounts to adjust and by how much. See BANK FOR INT’L SETTLEMENTS, *PAYMENT SYSTEMS IN THE UNITED STATES* 442 (2003) (stating that EPN settles through the National Settlement Service).

36. See Awrey & Van Zweiten, *supra* note 25, at 792.

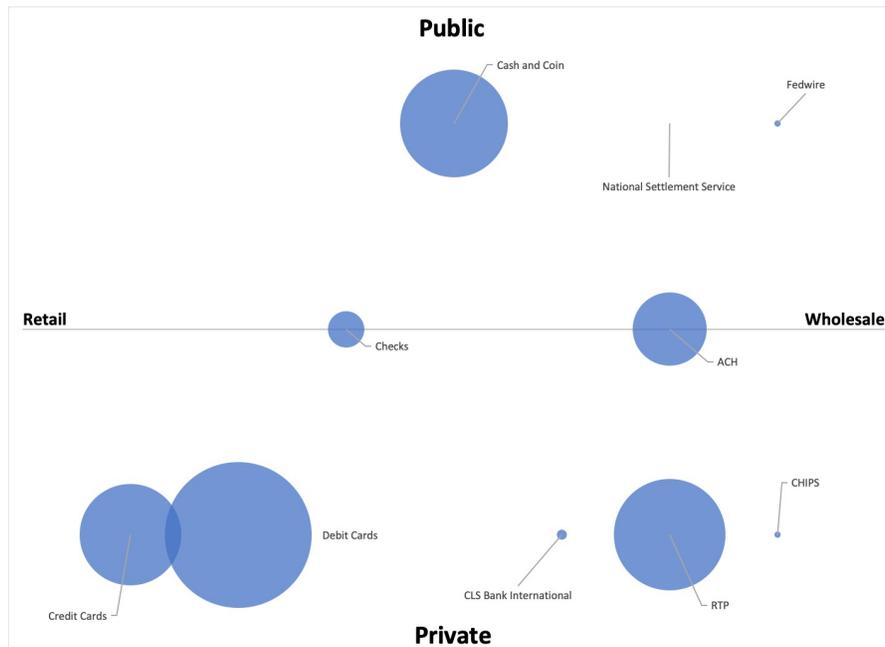
private system called RTP.³⁷ It is this last zone of competition that is stirring significant controversy.

Figures 1 and 2 illustrate the relative size of these different payment platforms in the United States by charting each according to the volume of transactions they carry annually, and the total value of those transactions in dollars, respectively.³⁸ Ownership by private entities is denoted by an open bubble; public by a closed one.

37. See *infra* Section II.C.

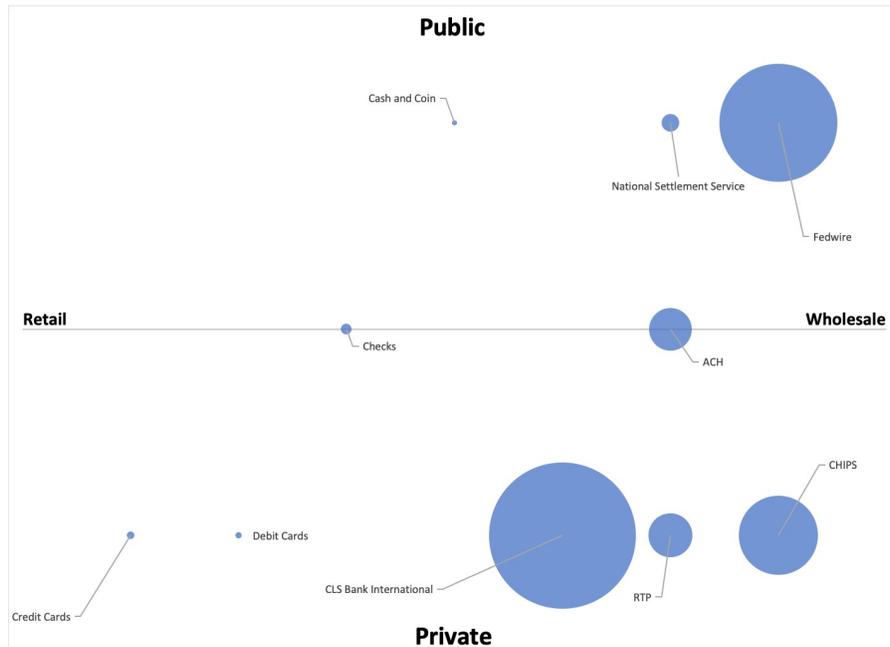
38. As noted above, the “wholesale” terminology is clumsy and does not cleanly delineate different kinds of payment systems. See discussion *supra* note 25. Suggesting, for example, that “retail” systems—those on the left in our figures—are *solely* consumer-oriented and that “wholesale” systems—those on the right in our figures—are *solely* for banks is a simplification. For instance, when a real estate buyer wires money to close a purchase, the payment is likely intermediated over Fedwire. See, e.g., Brad Dashoff & John Antonacci, *Organizing Transaction Closings*, in *THE COMMERCIAL REAL ESTATE LAWYER’S JOB: A SURVIVAL GUIDE* ch. 19 (2009). We nevertheless adopt that terminology because of its ubiquity in the payments literature and because it speaks to important patterns of use.

Figure 1: Public and Private Payment Platforms in the United States, by Transaction Volume³⁹



39. All data are for 2015, the last year for which all data were available. For the sources of Figures 1 and 2, see *CHIPS Annual Statistics from 1970 to 2019*, CLEARING HOUSE, https://www.theclearinghouse.org/-/media/new/tch/documents/payment-systems/chips-volume_v2.pdf [https://perma.cc/3V3N-92E4] (for data on values and volume for CHIPS); *Currency and Coin Services*, BOARD GOVERNORS FED. RESERVE SYS., https://www.federalreserve.gov/paymentsystems/coin_data.htm [https://perma.cc/7SX9-VAY5] (for data on values and volume of currency and coin); *Fedwire Funds Service*, BOARD GOVERNORS FED. RESERVE SYS., https://www.federalreserve.gov/paymentsystems/fedfunds_ann.htm [https://perma.cc/2TYU-MVXF] (for data on values and volume of Fedwire); *Introduction to CLS*, FED. RESERVE BANK N.Y., (May 2015), <https://www.newyorkfed.org/medialibrary/media/banking/international/14-CLS-2015-Kos-Puth.pdf> [https://perma.cc/CNX6-RXR D] (for data on average daily values and volume for CLS); *National Settlement Service*, BOARD GOVERNORS FED. RESERVE SYS., https://www.federalreserve.gov/paymentsystems/natl_ann.htm [https://perma.cc/JQB3-PJCU] (for data on values and volume of the National Settlement Service); *The Federal Reserve Payments Study 2016*, BOARD GOVERNORS FED. RESERVE SYS., <https://www.federalreserve.gov/paymentsystems/2016-payment-study-accessible.htm#figure2> [https://perma.cc/PSR9-3T9W] (for figures on 2015 volume and value for checks, debit cards, credit cards, and ACH).

Figure 2: Public and Private Payment Platforms in the United States, by Value⁴⁰



These figures illustrate the two central divides in the payment system—retail versus wholesale, and public versus private. It also illustrates two important phenomena. First, the number of transactions cleared and settled through wholesale platforms is substantially fewer than the number of transactions cleared through retail platforms; the opposite is true when we look at the dollar value of these transactions.⁴¹ Second, it illustrates the significance in the wholesale market of public-sector provision.

With this background in place, we are now ready to engage with the debate over FedNow and place it in the broader context of the Fed’s role in the payment system.

II. The Fed’s Proposed Public Option: Context and Critiques

To ground the Article’s engagement with deeper questions of law and theory regarding the Fed’s role in the payment system, this Part describes the rationale for, and the administrative process undergirding, the proposed

40. See *supra* note 39.

41. We discuss one reason for this dynamic *infra* text accompanying notes 45-46 (describing deferred net settlement).

FedNow platform. It then describes the range of public opinion regarding FedNow, with particular emphasis on commentators whose criticisms sound in a legal register.

A. *The Question of Settlement Speed*

Payment with cash is simple and speedy. A book-buyer hands a twenty-dollar bill to a bookseller, and legal title to the twenty dollars transfers in an instant.⁴² Not so with money our book-buyer holds in account with her financial institution. When she goes to pay with a credit card, Venmo, or another retail payment method, the bookseller will only receive good funds after the successful completion of a process through which multiple financial institutions ensure the payment is authorized, identify whose accounts should be adjusted, and coordinate those changes in account balances. This process requires an extraordinary amount of coordination, technology, and law.⁴³ As a result, even with advanced computing and telecommunications technology, leading retail systems in the United States typically take between a day or two to settle—and sometimes much longer.⁴⁴

One aspect of the complete process—and one determinant of payment speed from the perspective of the book-buyer and bookseller—involves interbank settlement. As we mentioned in Part I, the platforms that facilitate interbank settlement are designed to carry a lower volume of transactions than retail systems, but with much higher per-payment value. The predominant mode of settlement on these systems (with the exception of Fedwire) is known

42. See, e.g., *Chapman v. Cole*, 78 Mass. (12 Gray) 141, 143 (1858) (“Even when money is stolen, and it is passed by a thief, it becomes property of him to whom it is passed for a valuable consideration, and without knowledge that it was stolen.”). Jeanne Schroeder refers to this as money’s “super-negotiability.” Jeanne L. Schroeder, *Bitcoin and the Uniform Commercial Code*, 24 U. MIAMI BUS. L.J. 1, 15-16 (2015).

43. Fairfax Leary and Patricia Fry, for instance, enumerate eight “essential stages common to all payment modes,” including “authorization from the debtor” to initiate the payment, transmittal of a message from the debtor to the debtor’s bank, processing by the debtor’s bank, transfer of credit between deposit institutions, and the sending of a “completion signal.” Leary, Jr. & Fry, *supra* note 23, at 288-89.

44. For instance, under the Expedited Funds Availability Act, banks must provide withdrawable funds within two days for checks of “local” origin, and within five for “out-of-town” checks. See David Gray Carlson, *Check Clearing and Voidable Preference Under the Bankruptcy Code*, 73 BUS. LAW. 627, 698 (2018). But due to Federal Reserve regulation, “almost all checks are considered local these days.” *Id.* Credit- and debit-card transactions usually settle within two days, via a deferred net settlement over Fedwire or ACH. See Susan Herbst-Murphy, *Clearing and Settlement of Interbank Card Transactions: A MasterCard Tutorial for Federal Reserve Payment Analysts*, FED. RESERVE BANK OF PHILA. 12 n.25, 18, fig.1 (Oct. 2013), <https://www.philadelphiafed.org/-/media/consumer-finance-institute/payment-cards-center/publications/discussion-papers/2013/D-2013-October-Clearing-Settlement.pdf> [<https://perma.cc/P7XG-RTBY>]. In 2018, a new service called “Same-Day ACH” accounted for less than one percent of transactional volume. See *2018 ACH Network Volume and Value*, NAT’L AUTOMATED CLEARING HOUSE ASS’N (2019), <https://www.nacha.org/sites/default/files/2019-04/2018%20ACH%20Network%20Volume%20and%20Value.pdf> [<https://perma.cc/YK7T-3R9F>]. This indicates that nearly all ACH-intermediated payments settle, at the earliest, on a next-day basis.

as “deferred net settlement.”⁴⁵ Imagine three banks, *A*, *B*, and *C*, each of which holds an account of its own at the Federal Reserve. Imagine further that the customers of banks *A*, *B*, and *C* make payments to each other throughout the business day via a retail platform. At the end of each daily cycle, the three banks “net out” the total dollar amounts flowing to and from their respective accountholders on that retail platform, and then each make or receive a single payment on the books of the Federal Reserve to cover the day’s transactions. Through the act of netting, which offsets outgoing payments with incoming payments occurring during the same settlement cycle, banks greatly reduce the reserves necessary to support a given level of end-user payment activity.⁴⁶

While deferred net settlement is an elegant model, it creates problems for the speed of payment. To see this, let us consider its role in holding back the advance of faster payments in the United States.

In the financial industry, “faster payment” refers to any payment method that enables the end users of the financial system—households, businesses, universities, municipalities, and the like—to send and receive account money in or close to real time.⁴⁷ The United States is a laggard when it comes to faster payments. In contrast to nearly a dozen other countries, where a major portion of retail payment activity transpires over faster payment systems, the United States lacks serious volume on its faster payment platforms.⁴⁸ Instead, retail activity remains mainly focused on cash, card, check, and ACH.⁴⁹ This is because in the United States today, the leading faster payment platforms either operate outside the traditional banking network, and thus are not viable large-scale options at present, or they are in their incipency.

The present limitations on faster payment systems that operate outside the traditional banking system can be seen through the cases of the two most prominent: Venmo and Square Cash. Venmo—a mobile phone-based payment system operated by PayPal Holdings—enables anyone who has downloaded

45. See David Humphrey, *Payments and Payment Systems*, in THE OXFORD HANDBOOK OF BANKING 418 (Allen N. Berger et al. eds., 2015).

46. See, e.g., Morten Bech & Bart Hobjin, *Technology Diffusion Within Central Banking: The Case of Real-Time Gross Settlement*, 3 INT’L J. CENT. BANKING 147, 154 (2007) (explaining that deferred net settlement systems require less intraday liquidity than real-time gross settlement systems).

47. Potential Federal Reserve Actions to Support Interbank Settlement of Faster Payments, Request for Comments, 83 Fed. Reg. 57351, 57352 (Nov. 15, 2018) (noting that “[t]he term ‘faster payments’ is broadly used in the payment industry to indicate simply that increased speed, convenience, and accessibility are essential features for the future of the payment and settlement system,” and emphasizing that “[f]aster payments allow end users to initiate and receive payments at any time of the day, any day of the year, and to complete those payments in near-real time (from the end users’ perspective), such that, within seconds, the recipient has access to final funds that can be used to make other payments”).

48. See FIS, FLAVORS OF FAST REPORT 2018, <http://empower1.fisglobal.com/rs/650-KGE-239/images/FLAVOR-OF-FAST-Report-2018.pdf> [<https://perma.cc/BH6V-RF5T>] (presenting a survey of faster payment systems around the world, and indicating that U.S. lacks volume on its systems, whereas other countries see significant volume on theirs).

49. See discussion *supra* note 23.

the Venmo app to pay other members of the Venmo network.⁵⁰ But these payments do not move between users' bank accounts. Rather, they move between users' *Venmo* accounts. Users who hold funds in their Venmo accounts in reality hold a claim against the assets of PayPal Holdings.⁵¹ The Square Cash mobile system functions similarly.⁵² These systems operate with efficiency because they hold the accounts of all users on a single set of books. This has helped them garner popularity, especially for peer-to-peer payments between friends and family. But despite their specialized utility, Venmo, Square Cash, and similar “on-us” payment systems are deficient in two ways when compared to systems that intermedicate between the books of multiple financial institutions.

First, Venmo and Square Cash raise serious customer-protection problems because they operate at the perimeter of the federal apparatus for bank regulation.⁵³ While funds held for network members on the books of Venmo and Square Cash are segregated from corporate funds,⁵⁴ they are not nearly as safe as assets deposited in traditional bank accounts. That is because they lack the federal deposit insurance protections accorded to bank depositors in the wake of the Great Depression. In the event of the insolvency of PayPal or Square, accountholders would not have access to the usual \$250,000 in Federal Deposit Insurance Corporation coverage available to customers of insolvent banks.⁵⁵ Instead, accountholders would have unsecured claims against the bankrupt estate—possibly leading to long waiting periods for access to pennies on the dollar.⁵⁶

50. See *I Paid a New User!*, VENMO, <https://www.help.venmo.com/hc/en-us/articles/217532047-I-paid-a-New-User-> [<https://perma.cc/S62P-4SDV>] (“Any time you pay an email address or phone number that isn’t associated with an active Venmo account, we consider it a payment to a New User. This is usually because your friend hasn’t added that email address or phone number to their Venmo account, or they haven’t created a Venmo account yet. If your friend wants to accept the money, please have them follow the instructions to sign up or add the additional email address to their Venmo account.”) The same is true with payments on PayPal itself between users, but the PayPal UX intentionally blurs the distinction between a user’s PayPal balance and traditional bank-based checking, debit, and credit card accounts.

51. See Awrey & Van Zweiten, *supra* note 25; *User Agreement*, VENMO, <https://www.venmo.com/legal/us-user-agreement> [<https://perma.cc/FX2S-YWZ7>] [hereinafter *Venmo User Agreement*].

52. See Fitz Tepper, *Square’s Cash App Now Supports Direct Deposits for Your Paycheck*, TECHCRUNCH, (Mar. 3, 2018), <https://www.techcrunch.com/2018/03/07/square-cash-now-supports-direct-deposits-for-your-paycheck> [<https://perma.cc/6W9U-A2GT>].

53. On this, see Awrey & Van Zweiten, *supra* note 25. For general accounts of the regulatory perimeter, see Eric Biber, Sarah E. Light, J.B. Ruhl & James Salzman, *Regulating Business Innovation as Policy Disruption: From the Model T to Airbnb*, 70 VAND. L. REV. 1561 (2018).

54. See *Venmo User Agreement*, *supra* note 51; *Additional Cash Terms of Service*, SQUARE, <https://cash.app/legal/us/en-us/tos> [<https://perma.cc/LS75-E9YK>] [together hereinafter *User Agreements*].

55. 12 U.S.C. § 1821(a)(1)(E) (2018).

56. See *User Agreements*, *supra* note 54; Awrey & Van Zweiten, *supra* note 25. Defenders might retort that PayPal and Square do not engage in risky practices and thus are much less susceptible as a practical matter to runs. But this argument is the refuge of all financial institutions—until they turn out to have been risky after all.

Second, these systems also operate on the economic perimeter of the financial system. To transfer money from a Venmo or Square Cash account to a traditional bank account—in order to pay one’s utility bills, rent, or credit card bills—one must wait between one and three days for Venmo or Square to make the transfer using the traditional electronic payment system, ACH.⁵⁷ This cost of transfer effectively places accountholder funds in a walled garden. The funds are easily spendable in transactions with payees who are willing to receive Venmo-account money, but not those who wish to receive traditional, flexible bank-account money. In a world where households and businesses naturally want to engage in diverse transactions—necessitating access to diverse payment systems—it is extremely valuable to hold one’s assets in a single location that interconnects with each of those systems.⁵⁸ This is the banking system—the old standby with the Fed’s interbank settlement systems at its core.

While Venmo and Square Cash are presently deficient because they operate outside the traditional banking network, the leading in-network faster payment platform—called Zelle—is in its incipency.⁵⁹ The Zelle network was developed initially by a joint venture of three of the most prominent retail banks in the country—Bank of America, Wells Fargo, and JPMorgan Chase—and began operating in 2016.⁶⁰ It now serves over 750 financial institutions,⁶¹ and its network can reach the bank accounts of over 95 million consumers in

57. See *User Agreements*, *supra* note 54. One may also transfer a Venmo balance to a debit card in thirty minutes, albeit for a one-percent transfer fee. *Venmo User Agreement*, *supra* note 51.

58. See Clayton P. Gillette & Steven D. Walt, *Uniformity and Diversity in Payment Systems*, 83 *CHI-KENT L. REV.* 499 (2008) (analyzing the value of diversity among payment systems). It bears noting that cryptocurrency-based payment systems suffer from the same deficiency as Venmo and Square on this front. In a dollar-denominated economy, if someone possesses Bitcoin or another cryptocurrency, they must convert their asset to dollars in order to spend their wealth. This requires a costly bridge between the cryptocurrency system and the common payment rails that people who accept dollars use to receive them.

59. While other faster payment systems are in the early phases of development and deployment, they do not currently compare to Zelle in terms of market penetration or ability to push money directly to bank accounts, as opposed to debit card accounts. See, e.g., *Mastercard Send*, MASTERCARD, <https://www.mastercard.us/en-us/issuers/products-and-solutions/customer-needs/consumer-solutions/mastercardsend.html> [<https://perma.cc/FCE7-AN4R>]; *Shazam Bolt\$*, SHAZAM, <https://bolts.shazam.net/ShazamWebPortal/index.php> [<https://perma.cc/HZ2S-FHJS>]; *Visa Direct Enables Fast Payments to Over a Billion Cards Worldwide*, VISA, <https://usa.visa.com/run-your-business/visa-direct.html> [<https://perma.cc/U893-YA2D>]. Other prominent, technologically advanced systems like Apple Pay and Amazon Pay do not compete on underlying settlement speed. Instead, they employ novel end-user technologies like QR Codes, Near-Field Communications, and sleek web interfaces to alter the user experience associated with existing payment methods. In the words of Howell Jackson, Michael Barr, and Margaret Tahyar, such services are “new technologies running on old rails.” BARR, JACKSON, & TAHYAR, *supra* note 21, at 796.

60. See Sarah Perez, *Zelle, the Real-Time Venmo Competitor Backed by Over 30 U.S. Banks, Arrives this Month*, TECHCRUNCH (June 12, 2016), <https://www.techcrunch.com/2017/06/12/zelle-the-real-time-venmo-competitor-backed-by-over-30-u-s-banks-arrives-this-month> [<https://perma.cc/8SSR-CFQR>].

61. See *Innovation. Powered by Partnerships.*, ZELLE, <https://www.zellepay.com/partners> [<https://perma.cc/9ZLH-5PLQ>].

the United States.⁶² Because of this reach, and the prominence of its backers, Zelle is likely to gain significant traction in the banking system.

Yet despite its promise, Zelle's growth is presently limited by its own policies. Most banks that participate in Zelle impose periodic limits on gross inflows to and outflows from each account. For instance, PNC Bank imposes \$1,000 daily and \$5,000 monthly limits on its accountholders.⁶³ These limits reflect the variable costs incurred by banks to post Zelle transactions—currently much higher than variable costs for comparable payments like checking or e-bill pay. They also reflect business decisions about whether and how to prioritize different payment services. Finally, they reflect the fact that the banks that intermediate Zelle payments bear more risk to ensure that end users receive funds in near-real-time.

Some of this risk arises due to the role of deferred net settlement to Zelle's operations. Zelle is the appearance of real-time settlement without its reality.⁶⁴ The banks themselves are not transmitting funds between each other in real time. In other words, while users of Zelle get to feel like they are sending money as it were an email, “the funds are actually settled behind the scenes afterwards.”⁶⁵ During the interim, the banks bear the risk of loss if they advance funds before receiving final settlement.⁶⁶ Because of this risk, they impose their periodic limits on the use of the platform.

Due to these limits, and many other factors as well, Zelle presently facilitates only a small portion of retail payments made in the United States. While Zelle intermediated payments of almost \$200 billion in 2019, this represents less than ten percent of the value intermediated by credit cards—despite a much lower per-payment value for card transactions—and less than one percent of the value intermediated by the supposedly dead checking system.⁶⁷ These figures indicate the low levels of adoption of even the leading

62. *See id.*

63. *PNC Together with Zelle*, PNC BANK, <https://www.pnc.com/en/personal-banking/banking/online-and-mobile-banking/zelle.html> [<https://perma.cc/7JL9-8654>].

64. *Cf.* Tom C.W. Lin, *Infinite Financial Intermediation*, 50 WAKE FOREST L. REV. 645, 656 (2015) (describing the “mirage of disintermediation” involved with many financial technology ventures).

65. *Understanding Zelle*, AM. BANKERS ASS'N 5, <https://www.aba.com/Tools/Function/Technology/Documents/UnderstandingZelle.pdf> [<https://perma.cc/NWK5-MM9A>].

66. *See* Potential Federal Reserve Actions to Support Interbank Settlement of Faster Payments, Request for Comments, 83 Fed. Reg. 57351, 57358 (Nov. 15, 2018) (“Because the recipient’s bank makes final funds available to the recipient before interbank settlement occurs, DNS arrangements for faster payments inherently generate interbank credit risk for the recipient’s bank. If a sending bank in the arrangement fails to pay a net obligation, receiving banks are at risk of losing the full value of funds that they have already made available to recipients. In addition, this scenario could generate liquidity risks for receiving banks if, subsequent to a sending bank’s failure to pay, settlement amounts are recalculated and banks may receive less or have to pay more than expected.” (footnote omitted)).

67. *See* Press Release, Zelle, Gift Giving Helps Zelle Wrap Up 2019 with Double Digit Growth (Jan. 28, 2020), <https://www.zellepay.com/press-releases/gift-giving-helps-zelle-wrap-2019-double-digit-growth> [<https://perma.cc/F8ZX-A3DM>].

faster payment system by payors and payees to date. Given how central network effects are in payment systems,⁶⁸ this failure must be reversed if faster payments are to succeed.

B. The High Cost of Slow Settlement

Why do policymakers care about faster payments? For some—particularly those with a financial cushion—slow settlement is an inconvenience. It adds an element of complexity to the management of cash inflow and outflow, but it seems perhaps not worth much public policy attention.⁶⁹ This view is incorrect for many reasons. To foreground just one, it reflects the luxurious budgeting of those far from a financial emergency. In fact, slow settlement contributes to demand for multiple consumer financial products that raise serious policy concerns. These financial products—check-cashing services, overdraft protection, and payday loans—offer “just-in-time” money, but they come at a high cost.⁷⁰ Their high effective interest rates regularly push poor households into financial distress.

To understand the basic fact pattern through which slow settlement contributes to the demand for risky short-term consumer credit products, take a stylized scenario. Imagine a person named Simon, who, like a large percentage of Americans, has fewer than \$400 in liquid assets.⁷¹ Imagine also that he owes \$600 in rent, due next Friday, and expects to receive \$300 in wages the same day. If Simon’s payment comes in cash, and his landlord accepts cash for rent, then settlement will be immediate. But if he is paid via check or ACH, or must pay rent via check or ACH, it is unlikely he will be able to pay his rent on time. When payday is on the last day of the month ahead of a weekend, or during a three-day holiday weekend, the delays are only worse.⁷²

68. See, e.g., OZ SHY, *THE ECONOMICS OF NETWORK INDUSTRIES* 201-10 (2001).

69. Even on its own, the extra administrative burden would have important distributive consequences worthy of policy attention. See Elizabeth F. Emens, *Admin*, 103 *GEO. L.J.* 1409 (2015) (analyzing the equity and efficiency stakes of the managerial and secretarial work it takes to run a household).

70. Some of the foundational literature on short-term credit includes Oren Bar-Gill & Elizabeth Warren, *Making Credit Safer*, 157 *U. PA. L. REV.* 1 (2008); Kathleen C. Engel & Patricia A. McCoy, *A Tale of Three Markets: The Law and Economics of Predatory Lending*, 80 *TEX. L. REV.* 1255 (2002); and Ronald Mann & Jim Hawkins, *Just Until Payday*, 54 *UCLA L. REV.* 855 (2006). Recent valuable contributions include Natasha Sarin, *Making Consumer Finance Work*, 119 *COLUM. L. REV.* 1519 (2019).

71. See Jeanna Smialek, *Many Adults Would Struggle to Find \$400, the Fed Finds*, *N.Y. TIMES* (May 23, 2019), <https://www.nytimes.com/2019/05/23/business/economy/fed-400-dollar-survey.html> [<https://perma.cc/4N9B-HKQQ>] (“Four in 10 American adults wouldn’t be able to cover an unexpected \$400 expense with cash, savings or a credit-card charge that could be quickly paid off . . .”).

72. See Aaron Klein, Fellow in Economic Studies, *Comment Letter on Potential Federal Reserve Actions to Support Interbank Settlement of Faster Payments*, *BROOKINGS INST.* 5 (Dec. 14, 2018), https://www.federalreserve.gov/SECRS/2019/March/20190315/OP-1625/OP-1625_121418_133277_428769914666_1.pdf [<https://perma.cc/KHW6-8QDA>].

The options, during these delays, are simple: either default or find money elsewhere.⁷³ That “elsewhere” very often includes expensive alternatives such as payday lending and check-cashing services. The speed of the payment system in delivering Simon’s \$300 payday directly determines whether Simon must access expensive short-term credit.

Available evidence suggests that the slowness of major retail payment platforms does contribute to demand for expensive short-term credit. This can be seen in markets for two types of such credit services: check-cashing and overdraft protection. Check-cashing refers to the service, offered by many banks and nonbank lenders, of providing immediate good funds to a check’s payee in exchange for a fee.⁷⁴ Check-cashing enables payees to access spendable money in advance of when their checks would otherwise settle; payees pay the fee to compensate check-cashing providers for the risk they bear that a check will not be honored by the bank upon which it is drawn. The fees paid for this service can be quite steep;⁷⁵ they are often the target of consumer-protection criticisms⁷⁶ and calls for greater financial literacy so that consumers will know to avoid them.⁷⁷

One recent study presents striking evidence of the role of payment speed in driving demand for check-cashing. Economists Ryan McDevitt and Aaron Sojourner examined five and a half years of check-cashing transactions conducted by customers of Spring Bank, located in The Bronx, New York.⁷⁸ Over this period, Spring Bank’s accountholders brought 46,669 checks to Spring Bank.⁷⁹ Remarkably, though these customers could deposit their checks for free into their accounts, over twenty percent of these checks were not deposited; they were cashed, and cashed at great expense.⁸⁰

73. Some critics of payday lending urge those who are drawn to it to “save up . . . or borrow from friends and family.” LISA SERVON, *THE UNBANKING OF AMERICA: HOW THE MIDDLE CLASS SURVIVES* 82 (2017) (internal quotation marks omitted).

74. See RACHEL SCHNEIDER & BALAFAMA LONGJOHN, *CTR. FOR FIN. SERVS. INNOVATION, BEYOND CHECK-CASHING: AN EXAMINATION OF CONSUMER DEMAND AND BUSINESS INNOVATION FOR IMMEDIATE ACCESS TO CHECK FUNDS* 5 (2014).

75. See Jane Cover, Amy Fuhrman Spring & Rachel Garshick Kleit, *Minorities on the Margins? The Spatial Organization of Fringe Banking Services*, 33 *J. URBAN AFF.* 317, 319 (2011) (reporting fees that claim between one and fifteen percent of check values).

76. See, e.g., JEAN ANN FOX & PATRICK WOODALL, *CONSUMER FEDERATION OF AMERICA, CASHED OUT: CONSUMERS PAY STEEP PREMIUM TO “BANK” AT CHECK CASHING OUTLETS* (2006), https://www.consumerfed.org/pdfs/CFA_2006_Check_Cashing_Study111506.pdf [<https://perma.cc/5HZR-M73G>].

77. See Lisa J. Servon & Robert Kaestner, *Consumer Financial Literacy and the Impact of Online Banking on the Financial Behavior of Lower-Income Bank Customers*, 42 *J. CONSUMER AFF.* 271, 274 (2008) (discussing calls for financial literacy motivated by check-cashing usage).

78. See Ryan C. McDevitt & Aaron Sojourner, *Demand, Regulation, and Welfare on the Margin of Alternative Financial Services* (July 2016) (unpublished manuscript), https://faculty.fuqua.duke.edu/~rcm26/mcdevitt_sojourner_july2016.pdf [<https://perma.cc/6DAS-LEKW>].

79. *Id.* at 20.

80. *Id.* at 21.

It is worth emphasizing that the subjects of the McDevitt and Sojourner study were part of the mainstream financial system, but they *still* chose to pay dearly to cash their checks. Why would this be? The answer is to avoid the delay of the check-clearing system. Exploiting data on expected check-clearing times, McDevitt and Sojourner estimate that every day of wait time drove an approximately sixty-five percent increase in demand for check-cashing services.⁸¹ Given that the average Spring Bank check-cashing customer was willing to pay a 274% effective annual percentage rate, the costs imposed on Spring Bank customers by the slowness of the check-clearing system are quite significant.⁸² But, of course, the costs of missed bills or of fees charged by banks for account overdrafts are worse still and thus rationally avoided.⁸³

And though the consumers cashing checks in McDevitt & Sojourner’s sample may have paid to avoid overdrafts, a growing body of evidence suggests that overdraft usage sometimes also stems from the slow settlement of existing payment systems. In particular, the gap between a payment’s initiation and its settlement can open the door to confusion about account balances that can trigger overdraft charges—including those unfairly structured to penalize consumers with low balances.

Take a transaction known as an “authorization positive, settlement negative” overdraft.⁸⁴ This type of overdraft occurs when a payor authorizes a payment from an account that, at the time of authorization, had enough funds to cover the payment, but at the time of settlement does not. In some cases, the reduced balance is the result of a settlement lag on previous payments that had posted but were not yet reflected on the bank’s books. When that happens, the bank charges an overdraft fee. In a world without the initiation-settlement gap, these kinds of errors would never occur.

Banks have also used byzantine payment-posting rules to exploit the confusion created by the gap.⁸⁵ For instance, several recent class-action lawsuits have targeted the practice of ordering a day’s debit-card payments from greatest to smallest so that overdraft fees are maximized in the event of a day’s mistake.⁸⁶ Though this practice is on the wane, it illustrates how the complexity of today’s payment processes opens unnecessary traps for the

81. *Id.* at 22.

82. See Ryan C. McDevitt & Aaron Sojourner, Policy Brief on Demand, Regulation, and Welfare on the Margin of Alternative Financial Services 2, <https://sites.google.com/site/aaronsojourner/home/files/McDevitt%20Sojourner%202016%20Policy%20brief.pdf?attredirects=0&d=1> [<https://perma.cc/T5MX-HCR4>]. If one assumes that many customers subsequently purchased money orders to make bill payments, then the true cost only rises higher. See McDevitt & Sojourner, *supra* note 78, at 19 (suggesting this possibility).

83. See SERVON, *supra* note 73, at 19.

84. See CONSUMER FIN. PROT. BUREAU, DATA POINT: FREQUENT OVERDRAFTERS 29 (2017), https://files.consumerfinance.gov/f/documents/201708_cfpb_data-point_frequent-overdrafters.pdf [<https://perma.cc/J78A-4JCB>].

85. See Tanisha M. Edwards, *The Banking Shuffle: Barring the Reordering of Consumer Transactions and Other Recommendations*, 20 N.C. BANKING INST. 253, 253 (2016).

86. See *id.*

unwary. Such traps sometimes lead people to sensibly eschew the mainstream banking system altogether.⁸⁷

The examples of check-cashing and overdraft demand illustrate the difficulties that slow settlement causes the poor. But slow settlement causes trouble for every participant in the economy. Managing inflow and outflow of funds; holding money in transaction accounts, rather than placing it in productive investment accounts—these types of (rational) actions are drains on the efficiency of households and businesses no matter their fundamental financial condition. For this reason, both the private sector and the public sector have sought, for years, to bring faster payment platforms into existence and widespread use.⁸⁸ It is into this environment that FedNow, and the controversy surrounding it, arrives.

C. Faster Payments and Interbank Settlement

FedNow represents the Federal Reserve’s principal policy response to the problem of slow settlement. This Section presents an account of how the Fed has worked, and plans to work, “at the boundary” of prototypical administrative practice to bring it into existence.⁸⁹

FedNow has its roots in an effort to facilitate coordination among private-sector financial institutions toward the goal of developing innovative faster payment platforms.⁹⁰ The effort began in earnest in 2013, and it was motivated by the stark contrast between faster payment infrastructure gaining significant market share around the world and its near nonexistence in the United States.⁹¹ Principally, it aimed at shifting expectations among market participants and creating focal points to hasten their agreement on viable designs.⁹² By 2015, the Fed had developed a broad and active collection of over three hundred institutions—banks, technology services providers, social-sector organizations,

87. See SERVON, *supra* note 73.

88. See, e.g., FED. RESERVE STAFF FOR THE PAYMENTS SYS. DEV. COMM., FED. RESERVE SYS., STAFF STUDY 175: THE FUTURE OF RETAIL ELECTRONIC PAYMENTS SYSTEMS: INDUSTRY INTERVIEWS AND ANALYSIS 12-15 (2002).

89. Cf. Anne Joseph O’Connell, *Bureaucracy at the Boundary*, 162 U. PA. L. REV. 841, 853 nn.47, 50 (2014) (characterizing the Fed as a “boundary organization”).

90. See FED. RESERVE SYS., STRATEGIES FOR IMPROVING THE PAYMENT SYSTEM 1 (Jan. 25, 2015), <https://fedpaymentsimprovement.org/wp-content/uploads/strategies-improving-us-payment-system.pdf> [<https://perma.cc/BT6F-9WSK>] (“Through this *Strategies for Improving the U.S. Payment System* paper, the Federal Reserve is calling on all stakeholders to seize this opportunity and join together to improve the payment system.”).

91. See FED. RESERVE BANKS, PAYMENT SYSTEM IMPROVEMENT: CONSULTATION PAPER 3 (Sept. 10, 2013) (identifying the lack of faster payments as a “[g]ap[]” in the United States payment infrastructure and contrasting it with “a world where several other countries are moving to ubiquitous near-real-time retail payment systems”).

92. These types of coordination efforts are not unique to the Fed. See, e.g., Robert Ahdieh, *The Visible Hand: Coordination Functions of the Regulatory State*, 95 MINN. L. REV. 578 (2010) (describing regulatory efforts to coordinate industrial networks).

and more—into a body called the Faster Payments Task Force.⁹³ The dialogues hosted by the Task Force discussed varying private-sector ventures designed to support faster payments and also increasingly discussed specific changes and service offerings through which the Federal Reserve Banks might support the development of faster payments in the United States.⁹⁴

In the midst of this ferment, the private sector delivered. In 2017, a consortium of large banks inaugurated a new interbank platform called RTP (an acronym for real-time payments), which enables interbank settlement of small-dollar transfers between its member financial institutions.⁹⁵

RTP's method of settlement is its key distinguishing feature. Recall from Section II.A that deferred net settlement poses a challenge to the growth of Zelle and other retail faster payment platforms. Though deferred net settlement is the predominant method by which retail payment providers handle their interbank payment obligations, it is not a technological necessity. There exists an alternative settlement model—*real-time gross settlement*.⁹⁶ RTP operates a platform using this method.⁹⁷ As the name suggests, it enables banks to settle their debts to each other in lockstep with the posting of transactions to their accountholders. That is, when a payee's bank credits the payee's account, it simultaneously receives its own payment from the payor's bank. This eliminates the risk to the payee's bank that the payor's bank is not good for it.

Real-time gross-settlement platforms have been around for half a century.⁹⁸ Indeed, the Federal Reserve was the innovator, with the development of the first electronic real-time settlement system in the 1970s, called Fedwire.⁹⁹ But Fedwire is designed to support high-value payments with high levels of security.¹⁰⁰ It is not a cost-effective option for the settlement of payments made through a retail system like Zelle or its potential competitors. RTP aims to become exactly that.

The RTP platform is a private-sector utility. It is owned and operated by The Clearing House—the same organization that owns and operates EPN (the private-sector ACH platform) and CHIPS (a private, large-value wire transfer platform).¹⁰¹ Upon gaining access to RTP, participating banks are able to send

93. See FASTER PAYMENTS TASK FORCE, FED. RESERVE SYS., THE U.S. PATH TO FASTER PAYMENTS: FINAL REPORT PART ONE: THE FASTER PAYMENTS TASK FORCE APPROACH (2018).

94. See *id.*

95. See David Heun, *As New Real-Time Payments Go Live, Much Work Remains*, AM. BANKER (Nov. 14, 2017).

96. See Humphrey, *supra* note 45, at 421.

97. See Heun, *supra* note 95.

98. See Bech & Hobjin, *supra* note 46, at 151.

99. See *id.*

100. See *id.*

101. See Press Release, The Clearing House, First New Core Payments System in the U.S. in More Than 40 Years Initiates First Live Payments (Nov. 14, 2017), <https://www.theclearinghouse.org/payment-systems/articles/2017/11/20171114-rtp-first-new-core-payments-system> [https://perma.cc/72ZE-ZNSB].

small-value, real-time payments to other banks, with instructions that enable real-time posting to accountholders at those banks.¹⁰² This means that banks offering Zelle (or other retail or business-to-business faster payment services) to their accountholders will be able to make real-time interbank settlements over RTP. At present, however, the system is in the early stages of development. While over fifty percent of bank accounts in the United States are held at banks that nominally participate in RTP, public reports suggest that nearly all transactions on the system in 2018 were test and demo transactions, and that “[a]doption through most of 2019 was rather tepid.”¹⁰³ In other words, the network is still very much in its design phase.

Just as the RTP effort got rolling, the Fed moved more forcefully into the fray. In August 2019, the Fed announced that, for the first time in over forty years, it planned to design and operate FedNow, a new payment platform in the United States.¹⁰⁴ Assuming it becomes operational—a milestone tentatively scheduled for 2024—FedNow will function very similarly to RTP.¹⁰⁵ It will facilitate real-time interbank transfers for low-dollar-value transactions—a Fedwire-style real-time gross settlement platform for the retail market.

In doing so, the Fed explicitly set out to achieve goals associated with public options. Ganesh Sitaraman and Anne Alstott have recently identified five such goals: “promoting opportunity, assisting business, improving market competition, advancing racial and geographic equity, and supporting democracy.”¹⁰⁶ While FedNow does not aim to achieve all five in the way that say, a public library or a public healthcare option might, it nevertheless aims at three. First, in rolling out FedNow, the Fed emphasized its utility to businesses.¹⁰⁷ Because managing cash inflows and outflows represents an essential (and costly) aspect of financial operations, a turn toward easier-to-manage instantaneous payments holds the potential of reducing overhead across the productive economy. Second, the Fed pointed to FedNow’s potential contribution towards competition in the retail payments market. Because RTP is owned by a consortium of large retail banks, the Fed argued, it may fail to interoperate with competitive providers. FedNow might, the thinking went, facilitate broader participation by new market entrants.¹⁰⁸ Finally, FedNow was

102. *See id.*

103. Steve Murphy, *The Clearing House Is About to Triple the RTP Single Transaction Limit*, PAYMENTS JOURNAL (Jan. 24, 2020); *Real-Time Payment Volume Reaches Critical Point*, ITREASURER: INTELLIGENCE FOR TREASURERS (Apr. 30, 2019), <http://www.itreasurer.com/Real-Time-Payment-Volume-Reaches-Critical-Point.aspx> [<https://perma.cc/439G-YSC3>].

104. *See* Brainard, *supra* note 7 (announcing the plan); Federal Reserve Actions to Support Interbank Settlement of Faster Payments, Notice and Request for Comment, 84 Fed. Reg. 39297 (Aug. 9, 2019) (issuing notice and requesting comment).

105. *See id.*

106. Sitaraman & Alstott, *supra* note 9, at 66.

107. *See* Governor Lael Brainard, Bd. of Governors, Delivering Fast Payments for All, Address at the Federal Reserve Bank of Kansas City Town Hall (Aug. 5, 2019) (describing the potential utility of faster payments to merchants and small businesses).

108. *See id.*

justified on grounds of hastening the cost-effective availability of retail faster payments to customers of financial institutions regardless of geography.¹⁰⁹ Taken together, these motivations led the Fed to decide to compete with The Clearing House’s RTP offering.

D. A Public Option Under Scrutiny

FedNow was met with praise from many constituencies—particularly community banks, retailers, and consumer advocacy organizations.¹¹⁰ But it also encountered opposition from many foes. Some criticized relatively technical details of the FedNow plan—its timeline for rollout, the data formats the system will use, whether it will be interoperable with RTP, and similar questions. But others aimed at the heart of the enterprise.

Legally, antagonists ranging from a consortium of banks to the *Wall Street Journal* editorial page have argued that the plan potentially violates a landmark 1980 law, the Depository Institutions Deregulation and Monetary Control Act,¹¹¹ the payment-related provisions of which then-Fed Chair Paul Volcker stated would “undoubtedly take their place as the most important pieces of financial legislation enacted in this century.”¹¹² This law established rules regarding the Fed’s payment offerings that some have asserted prohibit competition in payment markets that are already being served by the private sector. In particular, its provisions govern the ways that the Fed prices the payment services offered by the Reserve Banks.

The main change to the payment system wrought by the MCA was the requirement that payment services previously available without cost to Federal

109. *See id.* (“Accessibility means serving more than 10,000 banks of varying sizes and missions that are in communities all around the country.”).

110. *See, e.g.,* Jesse Hamilton, *Fed’s Real-Time Payments System to Compete with Wall Street*, BLOOMBERG (Aug. 5, 2019), <https://www.bloomberg.com/news/articles/2019-08-05/fed-plans-real-time-payments-system-to-compete-with-wall-street> [<https://perma.cc/SZ7M-6YWQ>] (describing praise from Senator Elizabeth Warren); Pete Schroeder, *Fed to Develop Real-Time Payments System for Launch in 2023-2024*, REUTERS (Aug. 5, 2019), <https://www.reuters.com/article/us-usa-fed-payments/fed-to-develop-real-time-payments-system-for-launch-in-2023-or-2024-idUSKCN1UV1XP> [<https://perma.cc/ZG3U-A9ZL>] (describing praise from smaller banks); Jim Daly, *Big Retailers Anticipate FedNow Will Bring Competition to Payments*, DIGITAL TRANSACTIONS (Nov. 12, 2019), <https://www.digitaltransactions.net/big-retailers-anticipate-fednow-will-bring-competition-to-payments> [<https://perma.cc/Z7JV-DBMA>] (describing praise from retailers); Christina Tetrault, *Comments In Support of the Federal Reserve Board’s Proposal to Build the FedNow Faster Payment System*, CONSUMER REPORTS (Nov. 7, 2019), <https://advocacy.consumerreports.org/research/comments-in-support-of-the-federal-reserve-boards-proposal-to-build-the-fednow-faster-payment-system> [<https://perma.cc/RD8J-85DU>].

111. *See* The Editorial Board, *The Very Political Fed*, *supra* note 17 (arguing that FedNow “flouts the law”); *Correcting the Record on Real-Time Payments*, BANK POL’Y INST. (Apr. 9, 2019), <https://www.bpi.com/correcting-the-record-on-real-time-payments> [<https://perma.cc/4FQL-MTA>] (arguing that the Monetary Control Act significantly constrains Fed discretion regarding FedNow’s operations).

112. *To Modernize the Federal Reserve System: Hearing Before the Subcomm. on Domestic Monetary Policy of the H. Comm. on Banking, Fin. & Urban Affairs* (May 15, 1980) (statement of Paul A. Volcker, Chairman, Board of Governors of the Federal Reserve System).

Reserve member banks had to be provided for fees “over the long run” that were “established on the basis of all direct and indirect costs actually incurred in providing Federal Reserve services.”¹¹³ These services include, among others, “check clearing and collection services, wire transfer services, automated clearinghouse services, settlement services, securities safekeeping services, Federal Reserve float, and any new services which the Federal Reserve System offers, including but not limited to payment services to effectuate the electronic transfer of funds.”¹¹⁴

The most categorical argument put forth by FedNow’s opponents is that the MCA outright prohibits the Fed from providing a service that would compete directly with an already-existing private service.¹¹⁵ As former Congressman Ron Paul has put it, in trenching on the private sector’s established turf, the Fed would be “decid[ing] to disobey the will of its creator—Congress.”¹¹⁶ The argument that Congress has forbidden the Fed from competing against private-sector payments systems has also been raised explicitly by the Competitive Enterprise Institute and the American Action Forum.¹¹⁷

A subtler—but perhaps more consequential—argument is that the MCA and longstanding interpretations of the MCA impose substantial constraints on the operational characteristics of new Fed payment services. These are constraints that, critics suggest, might be tight enough to effectively render the FedNow plan in its currently-debated form inconsistent with longstanding Fed policy.¹¹⁸ This criticism has been aired by moderate voices, such as George Selgin of the Mercatus Center and Steven Kenneally of the American Bankers Association, who ground their allegations of illegality in arguments from the Fed’s own post-MCA payment-system criteria.¹¹⁹

113. 12 U.S.C. § 248a (2018).

114. *Id.* § 248a(b)(8).

115. See Paul, *supra* note 16 (arguing that, “per congressional mandate, the Fed must step back” because private operators already offer real-time payments); John Berlau, *Defiance of Congress Melts Federal Reserve Credibility*, COMPETITIVE ENT. INST. (July 11, 2019), <https://www.cei.org/blog/defiance-congress-melts-federal-reserve-credibility> [<https://perma.cc/BB3E-DBGQ>] (stating that the MCA’s “legislative ban would seem to apply” to the RTP controversy “because . . . the Fed’s proposal will directly compete with the private sector’s established Real-Time Payments system and additional emerging technologies”); cf. Douglas Holtz-Eakin, *A Stealth Topic for the Chairman*, AM. ACTION FORUM (July 11, 2019), <https://www.americanactionforum.org/daily-dish/a-stealth-topic-for-the-chairman> [<https://perma.cc/E4W9-GF4T>] (“The [MCA] requires the Fed first show a market failure in the provision of real-time payments; no such evidence exists.”).

116. See Paul, *supra* note 16.

117. See Berlau, *supra* note 115 (arguing that the MCA’s restrictions prohibit the construction of a Fed system “to process real-time electronic payments”); Thomas Wade, *The Fed and Real-Time Payments*, THE DAILY DISH (Aug. 5, 2019), <https://www.americanactionforum.org/daily-dish/the-fed-and-real-time-payments> [<https://perma.cc/Q7N5-4Q2C>] (arguing that “a real-time payments platform appears to be outside of the Fed’s legal mandate”).

118. See *id.*

119. See Stephen Kenneally, Senior Vice President, Am. Bankers Ass’n, Comment Letter on Potential Federal Reserve Action to Support Interbank Settlement of Faster Payments 6-7 (Dec. 10, 2018) (analyzing the MCA and “the Federal Reserve’s longstanding policy regarding the provision of

Judging by recent activity on Capitol Hill, the fusillade of public advocacy is having its desired effect. As congressional testimony from Chairman Powell revealed in 2019, FedNow’s legality under the MCA was a key point of deliberation in the run-up to its announcement.¹²⁰ As a matter of prudence, the Fed is right to be concerned. Two courts have suggested that the MCA creates a private right of action for depository institutions and private payment-system operators who are aggrieved by Fed-payment-system developments.¹²¹ And the Fed, as always, is sensitive to perceptions of engaging in political conduct, inviting scrutiny of its independence.¹²²

Beyond interpretations of the MCA and subsequent Fed administrative precedent, some critics have also argued that strong limits on new Fed competition in the payments market should be made explicit via legislation. This position is summed up by the slogan, “[t]he government should be the umpire, not the opposing team.”¹²³ Motivated by this view, some Senators have indeed raised the possibility of explicitly prohibiting the construction of FedNow.¹²⁴

These critiques sound against the idea of a public option—even one that operates interbank, rather than in direct connection with end-users—and they also sound against the hybrid reality of the Fed as an agency that spans the public-private divide. The next Part addresses them.

payment services”); George Selgin, *Round One: What Role Should the Federal Reserve Play In Developing a Faster Payment System?*, THE BRIDGE (Apr. 25, 2019), <https://www.mercatus.org/bridge/commentary/round-one-what-role-should-federal-reserve-play-developing-faster-payments-system> [<https://perma.cc/RQ3E-GTHC>] (“In so far as the proposed [Real-Time Gross Settlement] system provides no essential public benefit ‘that other providers alone cannot be expected to provide with reasonable effectiveness, scope, and equity,’ its establishment would be contrary to the criteria set forth by the 1980 Monetary Control Act.” (quoting BD. OF GOVERNORS OF THE FED. RESERVE SYS., POLICIES: THE FEDERAL RESERVE IN THE PAYMENTS SYSTEM (1990))); *see also* Kelly S. King, Chairman and CEO, BB&T Corp., Comment Letter on Potential Federal Reserve Action to Support Interbank Settlement of Faster Payments 1 (Dec. 12, 2018) (citing “statutory requirements and long-standing principles” that would prohibit the provision of “a new real-time gross settlement (‘RTGS’) service” by the Fed); *cf.* R.J. Lehmann, *Jerome Powell Should Tread Cautiously with Real-Time Payments Proposal*, WASH. EXAMINER (July 15, 2019), <https://www.washingtonexaminer.com/opinion/federal-reserve-chair-jerome-powell-should-tread-cautiously-with-real-time-payments-proposal> [<https://perma.cc/5HRZ-QNCT>] (arguing that FedNow would run afoul of the MCA and mistakenly quoting the Fed Payment System Policy as the MCA); Nat’l Taxpayers Union et al., An Open Letter to Members of Congress: Stop the Fed’s Real-Time Payment Takeover (May 1, 2019) (same); Wade, *supra* note 117 (same).

120. *See* Lehman, *supra* note 119 (describing Chairman Powell’s testimony).

121. *See* Jet Courier Servs., Inc. v. Fed. Reserve Bank, 713 F.2d 1221, 1224 (6th Cir. 1983) (implying that private payment-system operators and financial institutions fall within the zone of interests established by the MCA); Bank Stationers Ass’n v. Bd. of Governors of the Fed. Reserve Sys., 704 F.2d 1233, 1236-37 (11th Cir. 1983) (same).

122. *See, e.g.*, CONTI-BROWN, *supra* note 6, at 179-217.

123. Business Coalition for Fair Competition, Comment Letter on Federal Reserve Actions to Support Interbank Settlement of Faster Payments, at 2 (Nov. 7, 2019).

124. *See* Neil Haggerty, *GOP Senators Skeptical of Fed’s Faster Payments Network*, AM. BANKER (Sept. 25, 2019), <https://www.americanbanker.com/news/gop-senators-skeptical-of-feds-faster-payments-network> [<https://perma.cc/7H7W-ZRCF>] (“Sen. Pat Toomey . . . said he thinks Congress should potentially step in to try to block the launch of FedNow.”).

III. The Fed's Public Options: Law, History, and Theory

In taking aim at FedNow, its critics target a longstanding aspect of the Fed's hybrid structure. This structure may have arisen through contingencies of politics, personality, and history, but it has not evolved into a mistake. To the contrary, the Fed's hybrid role in the payment system serves a range of policy functions, each of which would be served by a well-designed version of FedNow. In this Section, we argue that service of these policy functions justifies the Fed's continuing involvement in the payment system, as a provider of public options.

In advancing these justifications, we elaborate a set of contextual reasons to support public options that builds on, and differs from, the theory recently put forth by Ganesh Sitaraman and Anne Alstott.¹²⁵ In their work, Sitaraman and Alstott articulate five rationales for public options: “promoting opportunity, assisting businesses, improving market competition, advancing racial and geographic equity, and supporting democracy.”¹²⁶ We show that, in the case of payments, public options are justified even on narrower grounds. Specifically, we identify promoting innovation, promoting access, and providing resilient interbank platforms as contextual justifications for public payment options. Taken together, these goods redound to advance equity, assist businesses, and promote opportunity at one level of remove.

A. The Origins of the Public-Private Hybrid

History reveals that the Federal Reserve System was created in part to remedy perceived flaws in payment resolution. Further, the Fed's framers serendipitously succeeded: Over the decades of the twentieth century, the United States rose to become a leader in payment system design.¹²⁷ Through the 1970s, the United States boasted one of the most technologically sophisticated payments systems in the world, developed largely as a collaboration between the Federal Reserve and the private sector. Simultaneously, Congress consistently emphasized payment-system development as a central mission of the Federal Reserve, and consistently allocated responsibility to the Fed in tandem with the private sector. The Fed has *always* been both participant in and supervisor of the system. Advocating

125. See Sitaraman & Alstott, *supra* note 9, at 24-43.

126. *Id.* at 66.

127. See, e.g., Morten L. Bech & Bart Hobijn, *Technology Diffusion within Central Banking: The Case of Real-Time Gross Settlement*, 3 INT'L J. CENTRAL BANKING 147, 151 (2007) (describing how the United States—and especially the Federal Reserve's Fedwire system—provided global templates for interbank payment system design). As tempting as it is to credit the vision of these legislative designers, the reality is that the Fed and United States triumphed in this regard due in no small part to the obliteration of the European powers during the First and Second World Wars (hence the serendipity).

for the Fed to continue on this dual path, as we do below, is thus consistent with historical precedent.

The passage of the Federal Reserve Act has been much studied and discussed,¹²⁸ often focusing on how its leading proponents created a system that would honor the anti-central-bank legacy of Jacksonian politics while also rendering a creaky banking system more coherent.¹²⁹ The Federal Reserve Act, however, is much more than this. For purposes of studying the payment system, two realities are important: First, the legislative framers were focused intently on the failures of payment clearing in the years prior to the Fed's formation. Second, the Fed is a compromise between public and private interests, such that it was designed, from the beginning, to be both participant in and supervisor of the payment system.

Before the Fed existed, payments in the United States were a complicated affair. Banks were largely restricted to in-state business because of state and federal prohibitions on interstate banking.¹³⁰ Banks were also often restricted to a single office in a state. Of the 25,000 banks that existed in 1913,¹³¹ only roughly 397 had branches.¹³² A banking system built on these decentralized foundations meant that the networks that facilitated the clearing and settlement of checks—by far the leading payment method at the time—were a mess.¹³³ With 25,000 independently chartered banks, the sheer number of endpoints to the checking network made things bad enough.¹³⁴ But the difficulties of transmitting check payments were made worse by the fact that nearly 10,000 of

128. Reflections began nearly immediately after its passage. *See, e.g.*, CARTER GLASS, AN ADVENTURE IN CONSTRUCTIVE FINANCE (1927); PAUL M. WARBURG, THE FEDERAL RESERVE SYSTEM: ITS ORIGINS AND GROWTH (1930); HENRY PARKER WILLIS, THE FEDERAL RESERVE: A STUDY OF THE BANKING SYSTEM OF THE UNITED STATES (1915). They continue in recent histories exploring the implications of the founding for the present. *See, e.g.*, ROGER LOWENSTEIN, AMERICA'S BANK: THE EPIC STRUGGLE TO CREATE THE FEDERAL RESERVE (2015); Nadav Orian Peer, *Negotiating the Lender of Last Resort: The 1913 Federal Reserve Act as a Debate Over Credit Distribution*, 15 N.Y.U. J.L. & BUS. 367 (2019).

129. For the impact of Jacksonian skepticism of central banks on the founding of the Federal Reserve, see LOWENSTEIN, *supra* note 128, at 98, 140; and Peter Conti-Brown, *Central Banking and Institutional Change in the United States: Punctuated Equilibrium in the Development of Money, Finance, and Banking*, in RESEARCH HANDBOOK ON CENTRAL BANKING (Peter Conti-Brown & Rosa Lastra eds., 2018).

130. *See* COMM. ON BRANCH, GROUP & CHAIN BANKING, FED. RESERVE SYS., BRANCH BANKING IN THE UNITED STATES 52-68 (July 1937) https://fraser.stlouisfed.org/files/docs/historical/federal%20reserve%20history/frcom_br_gp_ch_banking/branch_banking_us.pdf [<https://perma.cc/Q94Z-JXUU>].

131. Paul M. Connolly & Robert W. Eisenmenger, *The Role of the Federal Reserve in the Payments System*, in THE EVOLUTION OF MONETARY POLICY AND THE FEDERAL RESERVE SYSTEM OVER THE PAST THIRTY YEARS: A CONFERENCE IN HONOR OF FRANK E. MORRIS 131, 132 (Richard W. Kopcke & Lynn E. Browne eds., 2000).

132. *See* COMM. ON BRANCH, GROUP & CHAIN BANKING, *supra* note 130, at 3.

133. *See, e.g.*, WALTER E. SPAHR, THE CLEARING AND COLLECTION OF CHECKS 105-06 (1926).

134. *See* Stephen Haber, *Political Institutions and Financial Development: Evidence from the Political Economy of Bank Regulation in Mexico and the United States*, in POLITICAL INSTITUTIONS AND FINANCIAL DEVELOPMENT 18 (Stephen H. Haber, Douglass C. North, & Barry R. Weingast eds., 2008).

these banks also imposed extra “exchange charges” on checks presented from some of their peers.¹³⁵

In response to this morass, Congress aimed at facilitating national—and even international—payment coordination through the Federal Reserve System. Providing an “elastic currency,” as Congress wrote in the Federal Reserve Act’s chapeau paragraph, was meant to ensure the availability of credit in part, but also the technical capabilities of delivering that credit. Indeed, by the 1920s, the Fed had become a dominant player in the clearing of checks, clearing fifty percent of checks in the United States, despite only twenty-nine percent of banks being members in the Federal Reserve System.¹³⁶ Its banks became hubs of payment activity.

Further, Congress vested the Federal Reserve Banks with the authority to address the “exchange charges”—essentially fees for check-clearing for out-of-state banks—that placed hindrances on the flow of payments.¹³⁷ Early in its life, the Fed overplayed its hand by using that authority to refuse to honor exchange charges imposed by state law. The banks sued, and the Fed lost at the Supreme Court.¹³⁸ But while it wasn’t until 1980 that the Fed saw this power fully restored,¹³⁹ the fact of the Fed’s dual participant-supervisor role in the payment system is what gave rise to the controversy in the first place. That duality has been with the Fed since its founding.

Nor is this duality an aberration limited to the Fed’s founding period. Throughout its existence, the Federal Reserve has embodied a balance between the exceptionally public Federal Reserve Board—with its monetary policy responsibilities—and the quasi-private Federal Reserve Banks—anchored in the private sector, implementing the System’s policy through market operations subject to supervision by the Board.¹⁴⁰ The balance of power has, of course, ebbed and flowed. For instance, after the 1932 election ushered in the FDR Administration, the New Deal, and the Hundred Days, the Fed’s powers were reorganized in 1933,¹⁴¹ followed by its restructuring in 1935 to promote the status of the public Board of Governors and demote the status of the Federal

135. See Howard H. Preston, *The Federal Reserve Banks’ System of Par Collections*, 28 J. POL. ECON. 565, 571 (1920) (stating that 19,021 banks out of approximately 29,000 commercial banks in the country paid checks at par by 1918).

136. R. Alton Gilbert, *Effects of Federal Reserve Services on the Efficiency of the System for Collecting Checks in the United States, 1915 to 1930*, at 14 (Fed. Reserve Bank of St. Louis, Working Paper 99-014A, 1999), <http://research.stlouisfed.org/wp/1999/99-014.pdf> [<https://perma.cc/VR2M-NCH4>].

137. See Pub. L. No. 63-43, § 16, 38 Stat. 251, 258 (1913).

138. See Walter Wyatt, *The Par Clearance Controversy*, 30 VA. L. REV. 361, 383-90 (1944) (discussing *Farmers & Merchants’ Bank v. Fed. Reserve Bank of Richmond*, 262 U.S. 649 (1923) (Brandeis, J.)).

139. See discussion *infra* Section III.B.

140. For more on the role of the Reserve Banks, see SARAH BINDER & MARK SPINDEL, *THE MYTH OF INDEPENDENCE: HOW CONGRESS GOVERNS THE FEDERAL RESERVE* 61-80 (2016).

141. Pub. L. No. 73-66, 48 Stat. 162 (1933).

Reserve Banks.¹⁴² Even so, Congress made a strategic choice *not* to end the public-private partnership at the core of the Federal Reserve System. That remained, albeit in altered form. The Reserve Banks continued to work through the markets as a both regulators and participants.

B. Public-Private Entrenchment Through the MCA

Throughout the years running from the New Deal to the deregulatory efforts of the 1970s and 1980s, the Fed’s powers altered in myriad ways, but the fundamental payments hybridity remained. This carried forth even into the era of deregulation and privatization begun the late 1970s. The piece of legislation reframing the Fed’s role in the payment system in light of these secular currents concerning economic regulation, the MCA, arrived in 1980.¹⁴³ Its provisions govern the ways that the Fed may—and must—price the payment services the Reserve Banks provide to the private sector, and the ways it must supervise the payment system.

Despite the deregulatory environment in which it was passed, the MCA reinforced the public-private hybrid model animating the Fed’s payment system involvement rather than dismantling it. The main change to the payment system wrought by the MCA was the requirement that payment services previously available without cost to Federal Reserve member banks had to be provided for fees “over the long run” that were “established on the basis of all direct and indirect costs actually incurred in providing Federal Reserve services.”¹⁴⁴ These services include, among others, “check clearing and collection services, wire transfer services, automated clearinghouse services, settlement services, securities safekeeping services, Federal Reserve float, and any new services which the Federal Reserve System offers, including but not limited to payment services to effectuate the electronic transfer of funds.”¹⁴⁵ The Act also includes the authority to expand the Fed’s oversight of financial institutions’ reporting requirements,¹⁴⁶ reserve requirements,¹⁴⁷ and a variety of other rulemaking authority.¹⁴⁸

Payments, then, are not only at the core of the MCA—they also constitute the lion’s share of covered services under the MCA. The preservation of the

142. Pub. L. No. 74-305, 49 Stat. 684 (1935).

143. Pub. L. No. 96-221, 94 Stat. 132 (1980). For an excellent overview of the MCA priced services debate in the context of cannabis banking, see Julie Hill, *Banks, Marijuana, and Federalism*, 65 CASE W. RES. L. REV. 597 (2015).

144. 12 U.S.C. § 248a (2018).

145. *Id.* § 248a(b)(8).

146. Pub. L. No. 96-221, § 102, 94 Stat. 132, 132 (1980) (codified as amended in 12 U.S.C. § 461) (amending Section 11(a) of the Federal Reserve Act).

147. *Id.* § 103, 94 Stat. at 133 (codified as amended in 12 U.S.C. § 1813) (amending Section 19(b) of the Federal Reserve Act).

148. *See, e.g., id.* § 103, 94 Stat. at 135 (authorizing regulations governing Earnings Participation Accounts).

public-private partnership in payments is the motivating ethos of the statute. This is not an accident. The reason Congress acted was that the patchwork of payment services offered by the Fed was only available to member banks, and sometimes for free, which put other kinds of institutions at a competitive disadvantage and strained the financial viability of these services.¹⁴⁹ The MCA left the Fed in its role as an active participant in the payment system, but set forth a goal of creating an equal playing field for member and nonmember depository institutions.

The decades since the MCA have not been without congressional and regulatory development on payments. But at no point since the MCA has Congress relaxed the public-private partnership at the payment system's core.

As mentioned in Section II.B above, FedNow's critics have cast some of their arguments in terms of the MCA's cost-recovery requirements, and in terms of the Fed's own articulation of those standards in administrative policy. Despite the seriousness of these critic's arguments, they have been raised in a relative vacuum. To date, no courts have applied the substantive provisions of the MCA's constraints on Fed payment system operations, and legal scholars have given the provisions scant treatment.¹⁵⁰ One task of our analysis, then, is to provide an explanation of the MCA's role in structuring the relationship between the Fed and the private sector.

At the outset, before turning to our affirmative justifications for the Fed's hybrid role, we must dispatch with the categorical argument that the MCA forbids the Fed from providing a service that would compete directly with an already-existing private service.¹⁵¹ This argument fails as a matter of law and rests on a misreading of the text and purpose of the MCA. The MCA requires the Fed to charge principle-based prices for its payment services, including "any new services which the Federal Reserve System offers, including but not limited to payment services to effectuate the electronic transfer of funds."¹⁵² The analysis proceeds in three steps. First, the MCA delineates a set of services that must be covered by explicit prices.¹⁵³ Second, the MCA tasks the Fed with

149. Anatoli Kuprianov, *The Monetary Control Act and the Role of the Federal Reserve in the Interbank Clearing Market*, ECON. REV., July-Aug. 1985, at 23-24.

150. While *Jet Courier Services, Inc. v. Federal Reserve Bank*, 713 F.2d 1221, 1222-27 (6th Cir. 1983), and *Bank Stationers Ass'n v. Board of Governors of the Federal Reserve System*, 704 F.2d 1233, 1234-37 (11th Cir. 1983), do discuss the MCA's cost-recovery provision, each discussion informs a threshold analysis of whether plaintiffs possess prudential standing under the MCA. Regarding scholarly attention, notable exceptions, whose brief but valuable discussions our analysis builds on, include: Robert D. Cooter & Edward L. Rubin, *Orders and Incentives as Regulatory Methods: The Expedited Funds Availability Act of 1987*, 35 UCLA L. REV. 1115 (1987); Fred H. Miller, Robert G. Ballen & Hal S. Scott, *Commercial Paper, Bank Deposits and Collections, and Commercial Electronic Fund Transfers*, 39 BUS. LAW. 1333 (1984); and David G. Oedel, *Private Interbank Discipline*, 16 HARV. J.L. & PUB. POL'Y 327 (1993) (implying that private payment-system operators and financial institutions fall within the zone of interests established by the MCA).

151. See *supra* text accompanying notes 115-117.

152. 12 U.S.C. § 248a(e)(3) (2018).

153. See *id.* § 248a(b).

developing a set of prices for each service that is based on a set enumerated principles.¹⁵⁴ Finally, the statute sets forth a notice-and-comment procedure for the promulgation of the prices developed according to these principles.¹⁵⁵ Taken together, the three components of MCA’s payment provision govern the manner in which new services are offered to depository institutions. Importantly, these principles not only say nothing about barring the Fed from offering new services: they specifically envision that the Fed *will* make new services.¹⁵⁶ The categorical argument thus has no place in statutory text.

Nor, contra FedNow’s critics, does it have a place in the Fed’s own administrative policy developed to interpret and apply the MCA’s provisions. If this were the case, FedNow might be susceptible to Administrative Procedure Act (APA) challenge.¹⁵⁷ But these arguments from longstanding policy also are not compelling. The Fed’s criteria are (i) the ability to recover the platform’s costs “over the long run,” (ii) the expectation that the platform will provide a “clear public benefit,” and (iii) that the service is “one that other providers alone cannot be expected to provide with reasonable effectiveness, scope, and equity.”¹⁵⁸ We assume for the purposes of argument that the Fed is capable of pricing to achieve cost-recovery reasonably well, as it has done for Fedwire and ACH for decades.¹⁵⁹ The latter two criteria, we address in the subsequent sections. Throughout the subsequent sections, we explain why a world with FedNow would likely contain greater payment-system innovation, access, and stability than would be expected in an RTP-only world. These are clear public benefits, and they would result in the achievement of greater effectiveness, scope, and equity for faster payments than would likely be obtained in an RTP-only environment.

C. The Fed as Promoter of Innovation

The first reason that Federal Reserve public options are capable of delivering public benefits above and beyond a sole private provider alone has

154. See *id.* § 248a(c).

155. See *id.* § 248a(a).

156. As discussed *supra* Section II.A, the ambit of the statutory authority enabling entry is quite broad. See *id.* §§ 248-1, 248a, 342, 464.

157. See, e.g., *Am. Wild Horse Pres. Campaign v. Perdue*, 873 F.3d 914, 923 (D.C. Cir. 2017) (“A central principle of administrative law is that, when an agency decides to depart from decades-long past practices and official policies, the agency must at a minimum acknowledge the change and offer a reasoned explanation for it.”); *Greater Bos. Television Corp. v. FCC*, 444 F.2d 841, 852 (D.C. Cir. 1970) (“[A]n agency changing its course must supply a reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored.”).

158. *BD. OF GOVERNORS OF THE FED. RESERVE SYS., POLICIES: THE FEDERAL RESERVE IN THE PAYMENTS SYSTEM* (1990).

159. See *GOV’T ACCOUNTABILITY OFFICE, GAO-16-614, PAYMENT SERVICES: FEDERAL RESERVE’S COMPETITION WITH OTHER PROVIDERS BENEFITS CUSTOMERS BUT ADDITIONAL REVIEWS COULD INCREASE ASSURANCE OF COST ACCURACY* (2016), <https://www.gao.gov/assets/680/679388.pdf> [<https://perma.cc/LG6E-WRYF>] (finding that the Fed has adhered reasonably well to its statutory responsibility to compete fairly with the private sector).

to do with innovation. As Fed Governor Lael Brainard stated when announcing the FedNow notice, “The FedNow Service will provide a neutral foundation for innovation . . . in end-user faster payment services. . . . [T]he addition of the FedNow Service could provide a springboard for broader private-sector participation in the development of innovative end-user services.”¹⁶⁰ This emphasis on innovation does not represent a departure from prior Fed roles in the payment system; to the contrary, it represents an extension of a longstanding and beneficial role into the digital age.

The Fed has long offered tactical, in-kind subsidies to support the development of payment innovations. In doing so, the Fed helps solve the free-rider problem associated with innovation—that it creates positive knowledge spillovers that are not internalized by the innovator, thus leading profit-seeking actors to underinvest in research and development.¹⁶¹ This situation is especially acute in the context of the payment system because intellectual property protections are essentially absent from the core network technologies around which new payment systems are likely to coalesce.¹⁶² As a result, investment in research and development by the Fed—a public actor operating on a range of administrative, not profit-oriented motives—can fill the gap produced by a dearth of private-market innovation incentives.

At the same time, the Fed has also acted as a standards coordinator for the network of payment-facilitating financial institutions. In the payments context, standards-coordination encompasses situations where “a central authority coordinates the operational and technical standards of payments intermediaries to ensure their mutual compatibility.”¹⁶³ Because the successful diffusion of payment innovations typically requires mutual adoption among payors and payees across the financial network, coordination in deciding which among multiple competing options is valuable in stewarding the network to a new standard choice.¹⁶⁴

160. Brainard, *supra* note 107.

161. As a recent review of conventional economic theory explains that “knowledge spillovers are the central market failure on which economists have focused when justifying government intervention in innovation. If one firm creates something truly innovative, this knowledge may spill over to other firms that either copy or learn from the original research—without having to pay the full research and development costs.” Nicholas Bloom, John Van Reenen & Heidi Williams, *A Toolkit of Policies to Promote Innovation*, 33 J. ECON. PERSPECTIVES 163, 166 (2019). Market failures from knowledge spillover arises from the transit of information through commercial society. “Ideas are promiscuous; even with a well-designed intellectual property system, the benefits of new ideas are difficult to monetize in full.” *Id.*

162. Computer-based systems designed to facilitate payments are ineligible for patents under U.S. Supreme Court doctrine. *See Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208 (2014).

163. John A. James & David F. Weiman, *Financial Clearing Systems*, in THE LIMITS OF MARKET ORGANIZATION 128 (Richard Nelson ed. 2005).

164. John James and David Weiman state:

Like all major innovations, the early adoption of network technologies is limited by relatively high costs and low uncertain returns. The latter, however, are magnified by the availability of multiple, incompatible formats. Consequently, the user base may be too small and narrow—that is, below a critical mass—to generate demand externalities that would enhance its value to potential adopters and so spur more rapid diffusion. While the resulting delays in diffusion

In multiple instances, the Fed has both provided in-kind subsidies to innovation and served as standards coordinator to adopt promising innovations. This one-two punch demonstrates the value of public-private hybridity.

First, consider the role played by the Fed in the development of magnetic-ink character recognition technology for checks. In 1954, at the encouragement of the Fed, the American Bankers Association (ABA) created a committee of bankers “charged with creating a nationwide check processing system to sort checks electronically.”¹⁶⁵ To support its work, the committee visited the leading technology companies of the day, including IBM, Pitney-Bowes, National Cash Register, and Stanford Research International, to survey possibilities for a standardized system of machine-reading.¹⁶⁶ After two years of information-gathering sojourns and deliberations, the committee chose Stanford Research International’s Magnetic Ink Character Recognition (MICR) system for encoding routing numbers, account numbers, and dollar amounts into a machine-readable language printed on the face of standards checks.¹⁶⁷ Nontrivial technical hurdles stood in the way of bringing this standard into widespread use. The committee needed technology that would permit machine reading through “over-stamping, pencil and ink markings, oils, greases, carbon smudges and Scotch and opaque tape as well as most other foreign substances.”¹⁶⁸ Magnetic ink carried the day despite, in one commentator’s view, the “many mundane yet formidable obstacles to establishment of a standard that would advance the overall payments system.”¹⁶⁹

To press for development and diffusion of MICR, the Fed did more than just consult on this committee’s findings, although it was an active participant in those discussions.¹⁷⁰ It also subsidized the development of check-reading equipment through experimental collaboration with five Federal Reserve Banks—New York, Chicago, Philadelphia, Boston, and San Francisco.¹⁷¹ It did so by paying above-market lease rates for the machines, devoting staff time to collaboration on improving them, and by running a subset of daily check volumes through the machines to test them.¹⁷² Further, by the mid-1960s, the Federal Reserve Banks were giving clearing-speed guarantees on checks

may represent a rational response to high adoption (and switching) costs, it may also be in the interest of a sufficient number of users if they act collectively but not if they act individually.

Id. at 130.

165. James L. McKenney, *Developing a Common Machine Language for Banking: The ABA Technical Subcommittee Story*, 17 IEEE ANN. HIST. COMPUT. 61, 62 (1995).

166. *See id.* at 66-67 (noting that the Federal Reserve Board “encouraged the formation” of the committee).

167. *See id.* at 67-68.

168. Connolly & Eisenmenger, *supra* note 131, at 136 (internal quotation marks omitted).

169. *Id.*

170. *See* McKenney, *supra* note 165, at 66-67.

171. Connolly & Eisenmenger, *supra* note 131, at 136-37.

172. *Id.*

encoded with MICR while refraining from guaranteeing delivery times for manually-sorted checks—an effective prod to promote widespread adoption.¹⁷³

The result of the public-private MICR-development effort was a stunning success. By 1967, it was in near-universal use across the U.S. banking industry.¹⁷⁴ As the scholar of information systems James McKenney put it, “[r]arely has a standard been adopted so quickly.”¹⁷⁵ He chalked the success up to an “industry tradition of cooperation.”¹⁷⁶ We would add that subsidies from the Fed helped support the innovation process. Remarkably (if ironically, as it exposes the failures of innovation in the interim), the system remains in use today, over sixty years after its test runs in the back offices of the Federal Reserve Banks.

A few years later in 1968, the Fed began participating, alongside private industry, in the development and promotion of a second landmark payment innovation, the ACH payment platform introduced in Part I.¹⁷⁷ The design of ACH was not meant to replace retail payments via checks and credit cards.¹⁷⁸ Instead, ACH was “designed for small, repetitious payments such as payrolls, mortgage installments, insurance premiums, and utility bills.”¹⁷⁹ ACH, too, was supported by Fed subsidy, with the Fed playing a “catalytic role” in developing the system and driving its widespread adoption.¹⁸⁰

The subsidy came in two forms. First, the Fed took on the task of operating many local ACHs and invested in the infrastructure to do so without charging prices aimed at recoupment. In 1972, the Federal Reserve Bank of San Francisco sponsored and began operating the first ACH system. Over the next few years, it began operating similar clearinghouses across the country, aiming to support the development of a national network in collaboration with the private sector.¹⁸¹ Second, the Fed also worked with multiple federal agencies that had large payrolls, including the Social Security Administration and the Defense Department, to “automate their widely disbursed but recurrent payments.”¹⁸² In doing so, “the Fed developed low-cost microelectronic

173. See McKenney, *supra* note 165, at 70.

174. See *id.* at 71.

175. *Id.*

176. *Id.*

177. For an overview of the ACH and its history, see Terri Bradford, *The Evolution of ACH*, FED. RESERVE BANK KANSAS CITY (Dec. 2007), <http://www.kc.frb.org/Publicat/PSR/Briefings/PSR-BriefingDec07.pdf> [<https://perma.cc/69RB-WRJC>].

178. For more on the rise of credit cards as a payment rail, see Huseyin Lelebici, *The Evolution of Alternative Business Models and the Legitimization of Universal Credit Card Industry: Exploring the Contested Terrain Where History and Strategy Meet*, 29 *ADVANCES IN STRATEGIC MGMT.* 117 (2012).

179. James McAndrews, *The Automated Clearinghouse System: Moving Toward Electronic Payment*, *BUS. REV.*, July-Aug. 1994, at 16.

180. James & Weiman, *supra* note 163, at 131.

181. See *id.*

182. *Id.*

technology” that supported one-way payments to smaller banks.¹⁸³ These initial development subsidies, and the support for adoption of the ACH standard provided by heavy federal payor usage led to the swift growth of a fully-electronic competitor to the paper check. Today two ACH providers remain dominant: the Electronic Payments Network, run by the industry group The Clearing House, and the Federal Reserve’s own ACH system.¹⁸⁴

Though it is still early in the faster-payment-development process, one can imagine the Fed playing a similar role in its growth trajectory. While the Clearing House only operates with innovation and standards-coordination incentives that align with its owner-operators’ advantage, the Fed can import policy goals into its decision-making. In other words, the question of system design itself will impact the possibilities for innovation.¹⁸⁵ Already, through the Faster Payments Task Force process, and through its emphasis on involvement as the provider of “a neutral platform for innovation,” the Fed has signaled its willingness to act as a check on any self-protective design decisions made by the RTP consortium.¹⁸⁶ The Fed has made clear that it aims to open the door to innovators whose plans involve “use cases that undermine [the RTP] owners’ existing interests and profits from traditional payment methods.”¹⁸⁷ Further, the Fed is likely to be more willing to experiment with payment-system designs that leverage the growing interest of prominent startups and tech companies in facilitating payments processes for the digital age. At the very least, it is reasonable for the Fed to base its foray into faster payments on the judgment that its participation will provide a broader set of innovation opportunities than the Clearing House would on its own.

D. The Fed as Promoter of Access

When announcing FedNow, Fed Governor Lael Brainard stated, “Everyone deserves the same ability to make and receive payments immediately and securely, and every bank deserves the same opportunity to offer that service to its community.”¹⁸⁸ This goal is closest to the core of Sitaraman and Alstott’s account of the role of public options in the policy toolkit. They suggest that where access to a particular good or service functions as a key entry point to fundamental social infrastructure, policymakers are

183. *Id.*

184. *Id.*

185. Cf. Mike Konczal, *No Discount: Comparing the Public Option to the Coupon Welfare State*, NEW AM. FOUNDATION (Dec. 2012), https://static.newamerica.org/attachments/4165-no-discount-comparing-the-public-option-to-the-coupon-welfare-state/Konczal_Mike_PublicOption_NAF_Dec_2012.73ec1576c8a14f248cf792a954387e36.pdf [<https://perma.cc/W5AY-Z78F>] (analyzing how public options can shift standards to achieve various qualities).

186. See Brainard, *supra* note 107.

187. Federal Reserve Actions to Support Interbank Settlement of Faster Payments, Notice and Request for Comment, 84 Fed. Reg. 39297, 39308 (Aug. 9, 2019).

188. Brainard, *supra* note 107.

justified in considering public provision of the good or service.¹⁸⁹ That is likely to be the case with regard to FedNow, which can be expected to exceed RTP on the metric of access.

The Fed's market-entry policy criteria reflect the MCA's core commitment to widespread access to payment services across the country. In particular, the MCA mandates that the Fed's interventions in the payment system "shall give due regard to competitive factors and the provision of an adequate level of such services nationwide."¹⁹⁰ The policy rationale behind this mandate is, in the words of Fred Miller, Robert Ballen, and Hal Scott, to "promote competitive equality among depository institutions"—whether urban or rural, whether serving corporate depositors or small households, and whether member of the Fed or not.¹⁹¹ In this regard, the MCA carries forth the ideal of nationwide service that motivated the Fed's initial entry into check-clearing upon its creation and the Fed's early efforts to put an end to the practice of nonpar check-clearing.¹⁹² Under the MCA and the Fed's policies adopted pursuant to it, a public option is legitimate if it reasonably can be expected to better promote widespread access to payment services than market options alone.

To that end, the Fed is likely to promote adoption of faster payments among a set of banks (and, through them, their customers) that the Clearing House is less likely to serve well with its RTP service. This is due to the differing motivations of the two institutions. The Clearing House is mutually owned by twenty-four of the largest banks in the country—Bank of America, JPMorgan Chase & Co., CapitalOne, and more.¹⁹³ These institutions are motivated to provide services that benefit themselves and entrench their market position.¹⁹⁴ Their interest in serving smaller competitors—the long tail of the over ten thousand depository institutions that hold transaction accounts in the United States—is purely instrumental. While they have opened up access to RTP to smaller institutions, their incentives are to design and price access to the RTP system to shore up their competitive positions, not to maximize its adoption and usage among the long tail.

By contrast, the Fed has both the ability and the incentive to affirmatively promote FedNow among the long tail of depository institutions. At present, the Fed has preexisting service connections with over ten thousand depository institutions spanning a wide range of small- and mid-sized banks, credit unions,

189. See Sitaraman & Alstott, *supra* note 9, at 41, 45.

190. 12 U.S.C. § 248a(c)(3) (2018) (articulating constraints on the Fed's pricing decisions for payment services).

191. Fred H. Miller, Robert G. Ballen & Hal S. Scott, *Commercial Paper, Bank Deposits and Collections, and Commercial Electronic Fund Transfers*, 39 BUS. LAW. 1333, 1373 n.214 (1984).

192. See *supra* Section III.A.

193. See *Owner Banks, THE CLEARING HOUSE*, <https://www.theclearinghouse.org/about/owner-banks> [<https://perma.cc/PEM3-VBBT>].

194. Cf. Kathryn Judge, *Intermediary Influence*, 82 U. CHI. L. REV. 573 (2015) (theorizing how intermediaries use informational and positional advantages to entrench themselves).

and large commercial institutions. These institutions form the core of its constituency, both directly and indirectly. Directly, member banks elect the supermajority of Federal Reserve Bank directors; these directors, in turn, determine who will serve as Federal Reserve Bank president in each of twelve districts. Member banks count in the thousands. Indirectly, member and nonmember financial institutions alike exert strong political influence at all levels of government. By serving them, the Fed shores up its political support. Further, it does so by serving them in ways that have nothing to do with favoring the competitive position of the largest commercial banks.

Rather, the Fed is well-positioned to serve as a promoter of widespread adoption of faster payments among depository institutions (thereby providing greater access to their customers) via two means. First, the Fed has a longstanding track record of providing technical assistance to depository institutions through its Federal Reserve Bank Services operations to support policy goals. To the extent that the Fed prioritizes the adoption of faster payments through FedNow, it will be able to call on its services support resources to achieve the goal.

Second, the Fed is also able to engage in short-term below-cost pricing to spur network adoption. As discussed in Section I.A, the adoption path for payment platforms presents classic chicken-and-egg challenges. One time-tested strategy for bringing early adopters on board is to subsidize their early use of a new system. Just as transportation-network companies like Uber and Lyft subsidize the early participation of riders and drivers to promote network “ignition,” the Fed could do the same to garner early participation of payors and payees.¹⁹⁵ Despite contrary assertions from critics,¹⁹⁶ the Fed is able to do so under the MCA. While FedNow’s critics interpret the MCA as “prohibit[ing] the Federal Reserve from offering its payment services at a loss”¹⁹⁷—that is, as a substantive “break-even” requirement on the Fed’s operations—the statutory rule is quite different. In reality, the MCA only requires the Board of Governors to establish a “schedule of fees” for most of the services the Federal Reserve Banks offer.¹⁹⁸ While this schedule must reflect a motive of cost recovery, it need only do so “[o]ver the long run,” and the pursuit of that motive affirmatively must be tempered by “due regard to competitive factors and the provision of an adequate level of such services

195. See Geoffrey Parker & Marshall Van Alstyne, *Platform Strategy*, in THE PALGRAVE ENCYCLOPEDIA OF STRATEGIC MANAGEMENT (Mie Augier & David J. Teece eds., 2016) (“Platforms with substantial resources can entice users via subsidy to join the platform. Subsidies can be temporary penetration prices or permanent discounts and can take several forms.”).

196. See, e.g., *Correcting the Record on Real-Time Payments*, *supra* note 111.

197. See *id.*

198. 12 U.S.C. § 248a(a) (2018). This fee schedule must cover all of the Banks’ major payment services: currency, coin, check-clearing and -collection, wire transfer, ACH, settlement services, “Federal Reserve float,” and “any new services which the Federal Reserve System offers, including but not limited to payment services to effectuate the electronic transfer of funds.” *Id.* § 248a(b)(8).

nationwide.”¹⁹⁹ This rule, then, accepts the possibility of short-run below-cost pricing to support the widespread adoption of a nascent payment network.

FedNow’s critics rightly observe that this reading of the MCA gives the Fed the ability to engage in price-cutting competition with a private rival. But this is not a bug of Fed provision; rather, it is a central feature, approved by Congress precisely in line with these expectations. It furthers the crucial goal of curbing incentives that private monopolists like TCH might otherwise have to charge supracompetitive prices.²⁰⁰ And while FedNow’s critics view this power as ripe for abuse by an aggrandizing government agency, both the design of the MCA and the Fed’s self-imposed price-setting structure safeguard against egregious abuses.²⁰¹

Further, a startup-subsidy strategy for FedNow would be entirely consistent with the history of Fed’s early support for the ACH system, which was crucial to its early network formation. Regarding ACH, the Fed initially priced services in relation to expectations of mature system volume, not early-stage volume. Over a multiyear period after the passage of the MCA, the Fed raised prices for ACH—but only gradually and in a manner consistent with the goal of promoting system adoption. Though the Fed has not engaged in similar tactical subsidies since, it also has not had a new system to subsidize since. And at a higher level of generality, the goal of widespread diffusion of advanced payment systems has a long history in Fed practice.²⁰² Its role in the Fed’s own justification of FedNow thus places it in that lineage.²⁰³

E. The Fed as Guarantor of Financial Stability

The final virtue of a public option for interbank faster payments is its potential contribution to financial stability—the resilience of the financial system to stress, whether from economic events or operational breakdowns.²⁰⁴

199. *Id.* § 248a(c).

200. See Alan S. Frankel, *Monopoly and Competition in the Supply and Exchange of Money*, 66 ANTITRUST L.J. 313 (1998) (evaluating the disciplining effect of competition on payment service-providers).

²⁰¹ See GOV’T ACCOUNTABILITY OFFICE, *supra* note 159.

202. See also James & Weiman, *supra* note 163, at 131 (discussing the role of the Fed in “supply[ing] its critical clearing services to all depository institutions at competitive prices,” reflecting a policy of “guarantee[ing] all banks universal access to essential payments systems”).

203. As Fed Governor Lael Brainard put it when unveiling FedNow, the system, if implemented well, can serve the goal of making faster payments “available to everyone.” Brainard, *supra* note 107.

204. See *Financial Stability*, WORLD BANK, <https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/financial-stability> [<https://perma.cc/4Z4U-YMD9>] (“There are numerous definitions of financial stability. Most of them have in common that financial stability is about the absence of system-wide episodes in which the financial system fails to function (crises). It is also about resilience of financial systems to stress.”); see also Hilary J. Allen, *Putting the “Stability” in Financial Stability Oversight Council*, 76 OHIO ST. L.J. 1087 (2015) (providing a deep dive on the importance of financial stability regulation in the wake of the 2007-2009 financial crisis).

Because the smooth functioning of the payment system is essential to commerce, its disruption can represent a critical blow to the economy and society.²⁰⁵ The presence of public options at the heart of the payment system helps reduce the risk and cost of those disruptions.

First, the availability of a public option can help create an effective backstop to remedy the consequences of an outage or disruption. Straightforwardly, this backstop comes from the presence of a second set of network pathways between payors and payees—a valuable redundancy in a world where no advanced technological system operates with 100 percent reliability.²⁰⁶ Though not all banks are likely to be connected to one another via both RTP and FedNow, some will be. For those banks, the operational breakdown of one system would not halt the flow of funds between them. This backstop is widely perceived as useful in the ACH context, where some banks have determined that “the resiliency benefits [of having two connections] outweigh the cost of connecting to multiple services.”²⁰⁷ So, too, may it add a measure of stability to a world where faster payments have become ubiquitous. But the more important form of Fed backstop also comes in the form of a longstanding commitment to operational and financial support for the smooth functioning of the payment system. In a time of potential crisis, the Fed is uniquely poised to provide such support. For instance, the September 11, 2001, terrorist attacks disrupted the checking system by requiring the grounding of planes that transmitted checks from city to city.²⁰⁸ In response to this massive disruption, the Fed extended credit to payee institutions on normal check-availability schedules and also worked to get the system back into normal operation.²⁰⁹

Second, the involvement of the Fed as a payment-system operator helps support its work as a broad, systemic supervisor. Under the Dodd-Frank Act, the Fed has responsibility for supervising “systemically important” payment systems.²¹⁰ The fundamental question in determining whether a payment platform is systemically important is whether its failure would impose intolerable negative externalities on noncreditors and nonshareholders—that is,

205. See Rosa María Lastra, *Systemic Risk, SIFIs, and Financial Stability*, 6 CAPITAL MARKETS L.J. 197, 202 (2011) (“The risk of payment-system disruption is a core form of systemic risk—the risk to spillover effects that undermine smooth economic functioning.”).

206. Cf. Jeffrey M. Lacker, *Payment System Disruptions and the Federal Reserve Following September 11, 2001*, at 2 (Fed. Reserve Bank of Richmond, Working Paper 03-16, Dec. 23, 2003) (“[T]he probability of future interbank payment disturbances is not negligible. Despite substantial investments in reliability and security and impressive record of performance and innovation, the heavy dependence of interbank payment arrangements on automated payment processing and telecommunications links makes occasional technological malfunctions reasonably likely.”).

207. Federal Reserve Actions to Support Interbank Settlement of Faster Payments, Notice and Request for Comment, 84 Fed. Reg. 39297, 39308 (Aug. 9, 2019).

208. *Id.*

209. *Id.*

210. See 12 U.S.C. § 5464 (2018).

those who could not prepare themselves by contract for the event of failure.²¹¹ At scale, both RTP and FedNow may pose just such systemic importance; they would transmit high volumes of payments, and the dependencies that financial institutions and accountholders would have on the system could become enormous. The virtue of public ownership of FedNow is that such systemic risk concerns pertaining to it, while not eliminated, will be monitored much more successfully than any designated entity (such as a future RTP) could be.

The reason for this is in the nature of supervision. If RTP were to become systemically important, it would be subject to “enhanced prudential supervision,”²¹² where information about the risks of failure are intermediated through a supervisory relationship. Supervision is necessarily a game of informational asymmetries where the supervisor—in the case of RTP, the Fed—seeks information from the supervised entities that the supervised institutions have incentives to distort.²¹³

The ownership of FedNow by the Fed simply means that the supervisory connection that would obtain with regard to RTP already exists to a much greater extent. Rather than seeking to resolve the informational asymmetries through an at-times confrontational relationship, the Fed’s supervisory responsibilities are managerial and operational. This does not mean that FedNow cannot fail; it means that the Fed’s ability to manage systemic risks imposed by a giant actor in the payment system is much higher when the Fed owns the entity, rather than when it merely supervises it as a matter of public law.

Further, the Fed’s ability to supervise RTP itself would be enhanced by owning and operating a competitor system. This is because the Fed would gain firsthand expertise on the types of risks that such systems encounter; through operational experience, the Fed would become more capable of canny supervision. For instance, what types of cyber risks will systems like RTP need to defend against? This is not hypothetical. Hackers have stolen hundreds of millions of dollars through fraud on interbank payment platforms in the recent past and continue to make similar efforts.²¹⁴ If the Fed were only a supervisor of RTP, it would have some sense of the magnitude, type, and complexity of these cyberthreats. But if it operates FedNow, it will gain much more granular, useful information. With this information, it can inform its supervisory approach with regard to RTP and with regard to a wide range of similar cyberthreats across the financial system. In this way, public ownership serves

211. Cf. Peter Conti-Brown, *Elective Shareholder Liability*, 64 STAN. L. REV. 409 (2012).

212. 12 U.S.C. § 5365 (2018).

213. See Peter Conti-Brown & Sean Vanatta, *Supervision, Discretion, and the Rule of Law* (2020) (unpublished manuscript) (on file with author).

214. Joshua Hammer, *The Billion Dollar Bank Job*, N.Y. TIMES MAG. (May 3, 2018), <https://www.nytimes.com/interactive/2018/05/03/magazine/money-issue-bangladesh-billion-dollar-bank-heist.html> [<https://perma.cc/PEM3-VBBT>].

as the ultimate “regulatory sandbox”—enabling regulators to understand the risks they are meant to control from the ground up.

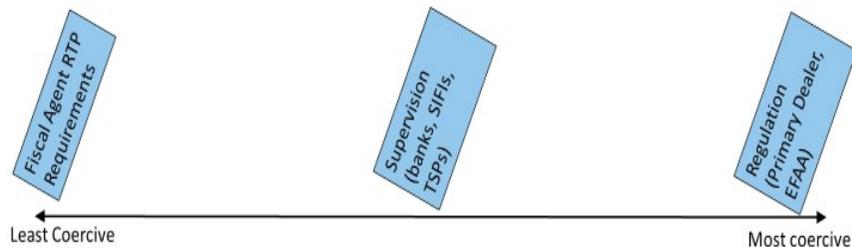
* * *

The law, history, and theory of the Fed’s operational role in the payment system all have hybrid, public-private interaction at their core. The Fed’s work as a supporter of innovation, a proponent of widespread access to innovative payment networks, and a guarantor of financial stability has played out in the context of past public options; in turn, these public options have supported and served private actors in myriad ways. Of course, the Fed’s enthusiasm and efficacy in these roles has ebbed and flowed across the decades; we would not be lamenting the state of the U.S. payment system today otherwise. Our argument here should not be taken as a defense of the Fed’s actions at every stage of payment system development—far from it—but rather as a defense of the possibilities of public-private hybridity. The MCA recognized the virtues of this arrangement, and taken together, the prospects of promoting innovation, access, and financial stability through operation of FedNow not only place it squarely within the authority granted by the MCA but also make it an urgent project for the Fed.

IV. Hybridity Beyond the Public Option: Regulatory and Market Strategies for Fed Support of Faster Payments

To date, the Fed’s faster payment policy work has focused on FedNow. But the Fed ought not limit its efforts to FedNow, alone. In this Part, we argue that the Fed should consider using a range of complementary tactics to speed up the payment system. Specifically, we show how the Fed can use a collection of existing powers and authorities at varying levels of regulatory coercion to ensure that private-sector faster payments take root. These alternatives—fiscal agency, supervision, and regulation—are summarized in Figure 3.²¹⁵

²¹⁵ We mean the concept of coercion formally and legally, as in the authority that the government has to enforce its will using the legal system. Fiscal agency is least coercive because it is about the highly discretionary methods the Fed uses on behalf of the public fisc to support the clearance and settlement of public payments. Supervision is more coercive, since supervisory activity can lead to enforcement actions, though it is less formally coercive than regulation.

Figure 3: Fed Strategies for Facilitating Private-Sector Faster Payments

We argue that, by assigning each of these roles to the Fed, Congress has given the Fed significant tools to encourage—and even enforce—the speeding up of the the payment system. Remarkably, this conclusion cuts against the Fed’s own understanding of its authority. In its FedNow Notice and Request for Comment, the Fed wrote that it “does not have plenary regulatory or supervisory authority over the U.S. payment system and instead has traditionally influenced retail payment markets through its role as an operator.”²¹⁶ It concludes—incorrectly, as we will argue—that “as has been the case with other retail payment systems, the Federal Reserve’s operational role as a provider of interbank settlement is the most effective approach to improve the prospects of ubiquitous, safe, and efficient faster payments in the United States.”²¹⁷ In this Part, we show how incorrect the Fed is in this conclusion. We demonstrate the many ways that the Fed can promote the adoption of faster payments in the private sector by using tools well beyond direct payment-platform operation.

A. The Power of the Purse: Fiscal Agency

The first tactic that the Fed can use to promote faster payments beyond the public option is to shift the payment activity of the federal government itself to new, faster platforms. By statute, under the direction of the Secretary of the Treasury, the Federal Reserve Banks “act as fiscal agents of the United States.”²¹⁸ Although this provision was included in the original enactment of the Federal Reserve Act,²¹⁹ the Fed’s status as fiscal agent has evolved over time. According to the Fed’s most recent annual report, Reserve Banks act in their capacity as fiscal agents when they “auction Treasury securities, process

216. Federal Reserve Actions to Support Interbank Settlement of Faster Payments, Notice and Request for Comment, 84 Fed. Reg. 39297, 39300 (Aug. 9, 2019).

217. *Id.*

218. 12 U.S.C. § 391 (2018).

219. Pub. L. No. 63-43, § 15, 38 Stat. 251, 265 (1913).

electronic and check payments for the Treasury, collect funds owed to the federal government, maintain the Treasury’s operating cash account, and develop, operate, and maintain a number of automated systems to support the Treasury’s mission.”²²⁰ Through its role as fiscal agent, the Fed is essentially the U.S. government’s payment-making clerk.

The Fed’s authority over the mechanisms it uses to facilitate government payments are untrammelled, except by any constitutional limitations. As a result, the Fed could decide immediately to push all of its government payments to faster systems. The potential dollar value that could be shifted is significant: in 2017, Social Security disbursements totaled \$997 billion²²¹ and military benefits totaled \$146 billion.²²² Allocation of these payments to a faster payment network would put the new payment network on the map.

The connection between the Fed’s status as the government’s fiscal agent and innovations in the payment system has been tightly drawn in history. As the Fed itself has explained, it “became an ACH operator in large part because of the Reserve Banks’ role as fiscal agents of the U.S. Treasury.”²²³ The government’s appetite for technological innovation to facilitate the payments services that it provided—“particularly payrolls for military and civilian workers and benefit payments such as Social Security”—pushed the development of ACH forward. As the Fed’s retrospective assessment of the endeavor concludes, “[t]he combination of commercial and government ACH payments created economies of scale earlier than might otherwise have been the case, allowing the ACH to become a broadly used national service.”²²⁴ In other words, in the process of building the ACH network, the government itself served as one of the most important early adopters. And more recently, the Fed and the BFS have worked together to promote a complete transition to ACH Direct Deposit in lieu of paper checks.²²⁵

Over forty years later, the Fed still largely uses ACH to provide fiscal services. As both the Fed *and* its private-sector critics have concluded, and as the pandemic welfare-disbursement debacle recently showed, the time has come to fully adapt the payment system to the Internet Age. Nascent faster payment platforms hold great promise, but they need volume to get off the

220. BD. OF GOVERNORS OF THE FED. RESERVE SYS., 105TH ANNUAL REPORT 91 (2018), <https://www.federalreserve.gov/publications/files/2018-annual-report.pdf> [<https://perma.cc/Y6ZX-G65X>].

221. *Fast Facts & Figures about Social Security, 2018*, SOC. SECURITY ADMIN., https://www.ssa.gov/policy/docs/chartbooks/fast_facts/2018/fast_facts18.html [<https://perma.cc/T4RW-JYZJ>].

222. *Defense Budget Materials - FY2018*, OFFICE UNDER SECRETARY DEF., <https://comptroller.defense.gov/Budget-Materials/Budget2018> [<https://perma.cc/NQ38-V4UQ>].

223. BD. OF GOVERNORS OF THE FED. RESERVE SYS., THE FEDERAL RESERVE: PURPOSES AND FUNCTIONS 121 (10th ed. 2016) [hereinafter PURPOSES AND FUNCTIONS].

224. *Id.*

225. See Anna Escobedo Cabral, Treasurer, Dep’t of Treasury, Remarks Before the West Virginia Teachers Finance Academy (June 15, 2006).

ground.²²⁶ Through its fiscal agency, the Fed can prod the federal government to provide the volume.²²⁷

B. The Power of Oversight: Supervision

In addition to fiscal agency, the Fed might spur adoption of faster payments by employing supervisory prods. Supervision—distinct from regulation²²⁸—“involves monitoring, inspecting, and examining financial institutions” to ensure compliance with applicable laws and guarantee that financial institutions “operate[] in a safe and sound manner.”²²⁹ Distinct from regulatory processes governed by the Administrative Procedure Act,²³⁰ supervision is a much more discretionary activity.²³¹ Three forms of supervision could be leveraged to promote faster payment adoption: traditional bank supervision, enhanced supervision of “systemically important” financial institutions and market utilities, and supervision of private payment-platform operators under the little-studied Bank Services Company Act.

226. The volume needed to build a successful platform or network is often thought of as achieving “critical mass.” See, e.g., David S. Evans & Richard Schmalensee, *Failure to Launch: Critical Mass in Platform Businesses*, 9 REV. NETWORK ECON. 1 (2010).

227. There are, of course, costs to switching from the ACH standard to the new, faster payment platforms. We make no claim as to the details of costs and benefits today, but rather propose that the Fed and BFS actively consider becoming early adopters of faster payments.

228. Regulation “entails establishing the rules within which financial institutions must operate,” including “specific regulations and guidelines governing the formation, operations, activities and acquisitions of financial institutions.” PURPOSES AND FUNCTIONS, *supra* note 223, at 74.

229. *Id.*

230. See Administrative Procedure Act (APA), 5 U.S.C. §§ 551-559, 701-706. Regulation “entails establishing the rules within which financial institutions must operate,” including “specific regulations and guidelines governing the formation, operations, activities and acquisitions of financial institutions.” PURPOSES AND FUNCTIONS, *supra* note 223, at 74.

231. For more on the distinction between regulation and supervision, see Rosa M. Lastra, *The Governance Structure for Financial Regulation and Supervision in Europe*, 10 COLUM. J. EURO. L. 49 (2015) (distinguishing among governance, regulation, and supervision strategies in Europe). Although the terms “regulation” and “supervision” are often used interchangeably, a growing chorus of scholars have focused on the distinctions between these approaches. See, e.g., Jeremy Kress, *Solving Banking’s ‘Too Big To Manage’ Problem*, 104 MINN. L. REV. 171 (2019); Lev Menand, *Too Big to Supervise: The Rise of Financial Conglomerates and the Decline of Discretionary Oversight in Banking*, 103 CORNELL L. REV. 1527 (2019); Rory Van Loo, *Regulatory Monitors: Policing Firms in the Compliance Era*, 119 COLUM. L. REV. 369 (2019); Robert Weber, *A Theory for Deliberation-Oriented Stress Testing Regulation*, 99 MINN. L. REV. 329 (2014). For a discussion of the differences between supervision and regulation after Dodd-Frank, see Peter Conti-Brown, *Stress Tests and the End of Bank Supervision*, REGULATORY REV. (Apr. 21, 2016), <https://www.theregreview.org/2016/04/21/stress-tests-and-the-end-of-bank-supervision> [<https://perma.cc/7GAK-5Z2V>].

231. For a discussion of the competing epistemologies of bank supervision, see Conti-Brown & Vanatta, *supra* note 213. The discretionary elements of supervision are controversial. *Guidance, Supervisory Expectations, and the Rule of Law: How do the Banking Agencies Regulate and Supervise Institutions: Hearing Before the S. Comm. on Banking, Housing & Urban Affairs* (Apr. 30, 2019) (statement of Margaret Tahyar).

The Fed’s supervisory authority to promote faster payments is substantial and left primarily to its discretion. This authority exists on three levels.²³² First, it stems from the Fed’s role as primary supervisor of Fed member banks (under the Federal Reserve Act) and bank and financial holding companies (under the Bank Holding Company Act and Gramm-Leach-Bliley), among other institutions. Second, the Fed enjoys enhanced supervisory authority over institutions and utilities deemed “systemically important” under the Dodd-Frank Act. The third and most important authority the Fed has is over technology service providers under the little-studied Bank Services Company Act. The operation of the payment system involves all three areas of supervision.

1. Supervision of Member Banks, Bank Holding Companies, and Foreign Bank Organizations

The Fed’s traditional bank supervisory authority could be leveraged to promote faster payments without any alteration to its central institutional structures.

The Fed’s bailiwick encompasses large bank holding companies, member banks in the Federal Reserve System, foreign banking organizations, and other U.S. subsidiaries of foreign banks. Although it shares responsibility with others on the state and federal level,²³³ the Fed’s portfolio makes it arguably the most important bank supervisor in the United States.²³⁴ Indeed, bank holding companies now control over ninety-five percent of all banking assets in the United States.²³⁵

To promote faster payment adoption among supervised institutions, the Fed could make use of its already-existing supervisory framework. For the relevant institutions within its supervisory bailiwick, the Fed conducts an annual “full-scope, on-site examination.”²³⁶ The examination focuses on what has been called “CAMELS+,” or a set of factors that include capital, assets

232. The discussion in Section III.A about the Fed’s ability to influence real-time payment-platform development through the Reserve Banks’ fiscal agency is in fact an argument about supervision, albeit via bank-shot. The Board of Governors has statutory supervisory authority over the Reserve Banks, including with respect to their performance as fiscal agents and, relatedly, as operators of payment systems. 12 U.S.C. § 248(j) (2018).

233. See PURPOSES AND FUNCTIONS, *supra* note 223, at 76-77.

234. See Dafna Avraham, Patricia Selvaggi & James Vickery, *A Structural View of U.S. Bank Holding Companies*, FRBNY ECON. POL’Y REV. July 2012, at 65, 66.

235. *Id.*

236. 12 U.S.C. § 1820(d)(1) (2018). There are several exceptions to the annual review. For the largest financial institutions, the examination is “continuous.” See *Supervision*, FED. RESERVE BANK OF N.Y., https://www.newyorkfed.org/aboutthefed/org_banksup.html [https://perma.cc/GBU4-NY24]. For state banks, federal examinations can occur every other year. 12 U.S.C. § 1820(d)(3). Some well-managed banks are examined on an eighteen-month cycle. *Id.* § 1820(d)(4).

quality, management, earnings, liquidity, susceptibility to market risk, and other factors.²³⁷

Pushing supervised entities toward faster payments could fit well within several of these supervisory categories, including management, liquidity, susceptibility to market risk, and especially whether each firm's management is staying current with advances in information technology. Although supervisors within the Fed must follow the Uniform Financial Institutions Rating System promulgated by the Federal Financial Institutions Examination Council, the supervisors still maintain significant discretion to interpret it. A supervisor, then, could use examination to push individual banks toward greater adoption of faster payments with supervisory carrots and sticks traditionally at her disposal.

Of course, the use of discretion has led some critics to urge the Fed to pull back and restore more of a sense of the "rule of law" in how supervisory relationships are structured.²³⁸ Relatedly, in 2018, President Trump signed into law the Economic Growth, Regulatory Relief, and Consumer Protection Act (EGRRCPA),²³⁹ which the Fed has interpreted as a "directive . . . to tailor oversight of institutions to ensure that [its] regulations match the character of the firms [it] regulate[s]."²⁴⁰

These tailoring efforts include pulling back on some of the supervisory discretion that bank examiners have previously enjoyed. However, it is also clear, including from the language of EGRRCPA itself, that Congress has done nothing to curtail the use of discretion in supervision. A rule of construction adopted by Congress for that Act includes the instruction that nothing in the statute "shall be construed to limit . . . the supervisory, regulatory, or enforcement authority of an appropriate Federal banking agency to further the safe and sound operation of an institution under the supervision of the appropriate Federal banking agency."²⁴¹ Even as the predominant supervisory ethos drifts away from the exercise of discretion, the legal authority permitting discretion remains.

237. See Julie Andersen Hill, *When Bank Examiners Get It Wrong: Financial Institution Appeals of Material Supervisory Determinations*, 92 WASH. U. L. REV. 1101, 1107 (2015).

238. Margaret Tahyar, a banking lawyer and expert at Davis Polk & Wardwell, has testified recently before Congress to that effect. Tahyar's argument is that, first, "one of the after effects of the Financial Crisis has been a vast expansion in the nature of supervision and its zone of secrecy and discretion" and second, that such discretion should be substantially curtailed." Tahyar, *supra* note 231, at 5.

239. Pub. L. No. 115-174, 132 Stat. 1296 (2018) (codified at scattered sections of 12, 15, 20, 38, 42, 50 U.S.C.).

240. Randal Quarles, Vice Chair for Supervision, *Supervision and Regulation Report, Testimony Before Committee on Banking, Housing, and Urban Affairs*, FED. RESERVE (May 15, 2019), <https://www.federalreserve.gov/newsevents/testimony/files/quarles20190515a.pdf> [<https://perma.cc/DJZ4-NQ9E>]

241. 12 U.S.C. § 1831bb(e) (2018). For more on the supervision-enhancing aspects of federal banking law, including EGRRCPA, see Conti-Brown & Vanatta, *supra* note 213.

2. Supervisory Authority of Systemically Important Financial Institutions (SIFIs) and Systematically Important Financial Market Utilities (SIFMUs)

Beyond designating the Fed as supervisor of bank holding companies, Congress has also given the Fed a great deal of authority over the regulation and supervision of systemic risk. This authority includes “enhanced supervision and prudential standards” for financial institutions and financial market utilities (such as payment, clearing, and settlement systems) deemed to be systemically important.²⁴² This authority over the so-called SIFIs and SIFMUs allows for further emphasis on faster payments as part of the Fed’s supervisory strategy.

By statute, the Fed must consider a variety of factors when implementing enhanced prudential standards, but the motivating framework comes from Congress’s desire to “prevent or mitigate risks to the financial stability of the United States that could arise from the material financial distress or failure, *or ongoing activities*, of large, interconnected financial institutions.”²⁴³ The emphasized section of the statute—the risks to the financial stability of the United States through “ongoing activities”—is the crucial hook for promoting faster payments. Because the current practice of using deferred net settlement on transactions necessarily entails risk-taking in a way that real-time gross settlement does not, a transition to systems like RTP and FedNow would reduce institutional risk-taking. It would therefore be reasonable for the Fed to prod systemically important institutions to move away from deferred net settlement. Indeed, if the CAMELS+ factors militate in favor of faster payments for the mine run of supervised institutions, the case is only stronger for systemically important institutions. That is because Congress required enhanced prudential standards to be “more stringent than the standards and requirements applicable to nonbank financial companies and bank holding companies that do not present similar risks to the financial stability of the United States.”²⁴⁴

3. Supervision of Technology Service Providers

A third possibility for leveraging supervision to promote faster payments would involve the supervision of private payment-platform operators—namely, The Clearing House. As noted in Part I, The Clearing House is the primary private interbank operator in the United States.²⁴⁵ This company is in turn owned by the “largest commercial banks” in the United States. If the Fed

242. *Id.* § 5365.

243. *Id.* (emphasis added).

244. *Id.*

245. *About Us, Our History, CLEARING HOUSE*, <https://www.theclearinghouse.org/about/history> [<https://perma.cc/S3W2-AQHC>].

wanted to turbo-charge adoption of faster payments, it could impose requirements on TCH or its members to make the transition.

The potential hooks for doing so are twofold. First, although The Clearing House considers itself to be a “highly regulated” entity, the statutory hook for this regulation is not in the Federal Reserve Act or the Bank Holding Company Act, but the Bank Services Company Act of 1962, as amended: the statute “subject[s] to examination and regulation by the appropriate Federal banking agency” any “bank service company,” which includes the operators of payment systems.²⁴⁶ The Federal Financial Institutions Examination Council has provided since 2004 for the examination of wholesale payment systems²⁴⁷ and since 2010 for retail systems.²⁴⁸ In each case, the supervisor maintains significant supervisory authority to direct these systems as appropriate for their individual risk profile. There is no legal restriction against the Fed using these FFIEC processes to promote more extensive and more efficient use of real-time settlement.

Second, the Fed possesses supervisory authority over the consortium of banks who operate RTP by virtue of RTP’s institutional set-up. Specifically, RTP operates through a so-called “joint account” held at the Federal Reserve Bank of New York. Joint accounts—“those where the rights and liabilities are shared among multiple depository institution account-holders”²⁴⁹—were not a formalized part of the Fed’s services until 2017. In that year, the Fed issued guidelines implicitly to enable RTP to set up shop.²⁵⁰ This convenience for RTP was not costless for the Fed. Rather, the Fed noted that the arrangement “may pose increasing risks to the overall payment system in light of the potential to operate on a 24/7/365 basis.”²⁵¹ As a result of these potential risks, the Fed determined that all joint-account-based payment systems must be “subject to the jurisdiction of a federal banking agency with the authority to examine or inspect [them] and take supervisory actions” against them or their participants.²⁵² Pursuant to this authority, the Fed could require the RTP joint account-holders to migrate more of their transactions to real-time payments. This would occur as a combination of rulemaking and supervision. Rulemaking would first clarify the scope of the Fed’s authority. Supervision would then

246. 12 U.S.C. § 1867 (2018).

247. FED. FIN. INSTS. EXAMINATION COUNCIL, *WHOLESALE PAYMENT SYSTEMS, IT EXAMINATION HANDBOOK* (July 2004), https://ithandbook.ffiec.gov/media/274899/ffiec_itbooklet_wholesalepaymentsystems.pdf [<https://perma.cc/U38H-VL55>].

248. FED. FIN. INSTS. EXAMINATION COUNCIL, *RETAIL PAYMENT SYSTEMS, IT EXAMINATION HANDBOOK* (Apr. 2016), https://ithandbook.ffiec.gov/media/274860/ffiec_itbooklet_retailpaymentsystems.pdf [<https://perma.cc/62VU-YTE4>].

249. Bd. of Governors of the Fed. Reserve Sys., *Final Guidelines for Evaluating Joint Account Requests*, FED. BANKING L. REP. 36-879 (Sept. 5, 2017).

250. *Id.*

251. *Id.*

252. *Id.*

proceed under the Bank Services Company Act, under which the Fed may treat payment operators as “technology service providers.”²⁵³

* * *

The supervisory approach complements the fiscal agency approach, but it has advantages and disadvantages. On the one hand, the supervisory approach enables greater effectiveness and precision in forcing private-sector actors to innovate. After all, the Fed would be coercing the adoption of faster payments. By contrast, the fiscal agency approach only provides incentives. These are nontrivial: to clear the \$2 trillion of government payments and to earn the fees associated with those transactions. But if banks are content to stay wedded to non-real-time systems, those incentives will not carry the day. Supervisory strategies would do so more effectively.

On the other hand, the cost of those strategies are the same coercive concerns that have motivated much recent discussion about how to “tailor” the Fed’s supervisory power—both within the Fed and in Congress. The use of the supervisory approach we lay out here would thus be much more audacious than the use of the fiscal agency power.

C. The Power of Rewriting the Rules: Regulation

There are two purely regulatory strategies that the Fed might also consider employing to facilitate and compel the private-sector adoption of real-time payments: making changes to the regulations governing who can become a “primary dealer” and changes under the Expedited Funds Availability Act. In the first case, congressional authorization is more remote, but the statutory discretion is larger; in the second case, congressional concern with payment speed is higher, but the statutory leeway is not available.

1. The Regulation of Primary Dealers

The Federal Reserve has, since its founding, acted through banks in financial markets to accomplish federal goals.²⁵⁴ Beginning in 1960, the Fed—through the Federal Reserve Bank of New York’s Markets Desk—started to use a select group of dealers to effect their open market operations.²⁵⁵ These are the so-called “primary dealers,” a group that today consists of twenty-four banks that perform a variety of roles for the Fed in exchange for exclusive

253. *Id.*

254. See 1 ALLAN MELTZER, HISTORY OF THE FEDERAL RESERVE SYSTEM: 1913-1951, at 120-36 (2003).

255. Louise Freeman, *The Financing of Government Securities Dealers*, 46 ECON. POL’Y REV., June 1964, at 115.

control over the Fed’s billions of dollars of open-market transactions.²⁵⁶ These include the obligation to, first, “participate consistently as counterparty to the New York Fed in its execution of open market operations” and, second, to “provide the New York Fed’s trading desk with market information and analysis helpful in the formulation of monetary policy.”²⁵⁷ This is a common feature of central banking throughout the world wherein primary dealers act as a “channel between the debt manager, the central bank, and investor in the primary market.”²⁵⁸

The primary dealers are strictly regulated by the Fed.²⁵⁹ These regulations include the requirement to be a broker-dealer supervised by the SEC or a chartered bank subject to bank supervision, and to be adequately capitalized and subject to idiosyncratic capital supervision above and beyond what may be required by bank or securities regulators.²⁶⁰ Primary dealers must also conform to unspecified reputational requirements. No financial institution will receive the primary dealer designation if it “has been (within the last year) subject to litigation or regulatory action or investigation that the New York Fed determines material or otherwise relevant to the potential primary dealer relationship.”²⁶¹

During the financial crisis, one of the principal emergency-lending mechanisms throughout the entire financial system was the Primary Dealer Credit Facility, a program initiated under the Fed’s emergency lending authority under Section 13(3).²⁶² The purpose of this lending facility was to provide a lender of last resort to primary dealers, including—and especially—those without access to the Fed’s traditional discount window. This was the engine of lending throughout the financial crisis, with loans totaling almost \$9 trillion in total volume.²⁶³

The statutory basis for the Fed’s control over primary dealers arises from two sources. First, section 14 of the Federal Reserve Act permits any Federal Reserve Bank “under rules and regulations prescribed by the Board of

256. *Administration of Relationships with Primary Dealers*, FED. RESERVE BANK N.Y., http://www.newyorkfed.org/markets/pridealers_policies.html [https://perma.cc/68C6-PVGD].

257. *Id.*

258. Marco Arnone & George Iden, *Primary Dealers in Government Securities: Policy Issues and Selected Countries’ Experience 7* (IMF, Working Paper No. 03/45, 2003), <http://www.imf.org/external/pubs/ft/wp/2003/wp0345.pdf> [https://perma.cc/GBD5-RCN7] (providing a skeptical overview of the Fed’s primary dealer regulations).

259. *Id.*

260. *Administration of Relationships with Primary Dealers*, *supra* note 256 (“The New York Fed may impose a higher capital requirement as circumstances, in its judgment, warrant.”).

261. *Id.*

262. For an overview of the Primary Dealer Credit Facility, see Tobias Adrian, Christopher R. Burke & James J. McAndrews, *The Federal Reserve’s Primary Dealer Credit Facility*, FED. RESERVE BANK OF N.Y., CURRENT ISSUES IN ECON. & FIN., Aug. 2009.

263. For data on the total transactions under the Primary Dealer Credit Facility, see *Primary Dealer Credit Facility, Transaction Data*, BD. OF GOVERNORS OF THE FED. RESERVE SYS., <https://www.federalreserve.gov/regreform/reform-pdcf.htm> [https://perma.cc/JW8K-LNUL].

Governors,” to “purchase and sell in the open market, at home or abroad,” certain assets from virtually any counterparty.²⁶⁴ Second, the Primary Dealers Act of 1988 imposes some limitations on foreign financial institutions that participate as broker dealers if their home countries do not “accord to United States companies the same competitive opportunities” they accord home dealers in their primary government debt markets.²⁶⁵ In other words, besides restrictions on foreign financial institutions engaged in a trade war with the United States, the Fed has plenary control over the regulations it imposes over primary dealers.

The Fed could immediately use this plenary authority to require that primary dealers clear transactions on a real-time payment system on any time frame they choose. The primary dealers might protest that the clearing of transactions in real time has little to do with their status in making markets in government securities, but the Fed’s own regulations and recent history make clear that these regulations are far-reaching. Regardless, section 14 (as limited by the Primary Dealers Act) does not require that the Fed’s regulations be limited in any way except for concerns about foreign competition. More than perhaps any other mechanism currently at its disposal, forcing primary dealers to adopt real-time payments would revolutionize their adoption in the private sector.

2. Expedited Funds Availability Act of 1987

The Expedited Funds Availability Act of 1987 was passed to respond to the problem of banks placing holds on deposited checks for days and even weeks before funds were available for withdrawal.²⁶⁶ The principal issue was not bankers’ desire to make money on the float, but to ensure that they would not be on the hook for checks that were returned, or “dishonored.”²⁶⁷ Initially, the Fed attempted a regulatory fix to these problems by accelerating the return process,²⁶⁸ but Congress passed the Expedited Funds Availability Act in 1987 to put more teeth behind a mandatory availability schedule that went beyond the Fed’s own regulatory efforts.

264. 12 U.S.C. § 353 (2018).

265. 22 U.S.C. § 5342 (2018). This requirement arose in 1988 during trade conflicts with Japan. For an excellent overview of the Primary Dealers Act of 1988, see Alexandra Scraggs, *What Is a Primary Dealer? Updated*, FIN. TIMES (Nov. 22, 2016), <https://ftalphaville.ft.com/2016/11/22/2179756/what-is-a-primary-dealer> [https://perma.cc/TY38-PWWV].

266. For an elegant discussion of how the Expedited Funds Availability Act pushed forward the federalization of finance, see Edward L. Rubin, *Uniformity, Regulation, and the Federalization of State Law: Some Lessons from the Payment System*, 49 OHIO ST. L.J. 1251 (1989).

267. *Expedited Funds Availability Act: Hearings on H.R. 5301 Before the Subcomm. on Fin. Insts. Supervision, Regulation and Insurance of the H. Comm. on Banking, Fin. & Urban Affairs*, 98th Cong. 193 (1984) (statement of Preston Martin).

268. See 12 C.F.R. § 210.12(c) (1988).

A mandatory upper limit for the availability of funds is the centerpiece of the Act.²⁶⁹ Section 4002 introduces the different kinds of payments that are subject to its authority. Subsection 4002(a) requires a settlement upper limit on delays of availability for both “cash deposits” and “wire transfers” such that they be “available for withdrawal not later than the business day after the business day on which such cash is deposited or such funds are received.”²⁷⁰ Subsections 4002(b) and (c) deal with the clearing of checks on a mandated schedule. Subsection 4002(e) deals with the clearing of funds through ATMs.

Aaron Klein, one of the primary advocates for the Fed’s adoption of real-time payments, sees the legal authority granted to the Fed under the Act as the key to its implementation.²⁷¹ Klein cites § 4002(d), which instructs the Fed (and the other relevant banking regulators) to use regulation to:

reduce the time periods established under subsections (b), (c), and (e) to as short a time as possible and equal to the period of time achievable under the improved check clearing system for a receiving depository institution to reasonably expect to learn of the nonpayment of most items for each category of checks.²⁷²

Klein cites the congressional charge to “reduce the time periods . . . to as short a time as possible” as the legal basis for facilitating real-time payments.²⁷³

To assess the claim that § 4002(d) specifically provides or that the Expedited Funds Availability Act generally provides this authority, we must first answer two legal questions: First, what *are* the funds that would be most likely cleared in real time? And second, does the “as short a time as possible” provision apply to those funds?

Congress defined several of the key terms to which § 4002 applies. Cash refers to U.S. coins and currency, which are not applicable to a real-time payment system.²⁷⁴ Checks are “any negotiable demand draft drawn on or payable through an office of a depository institution located in the U.S.,” excluding “noncash items.”²⁷⁵ Both “wire funds” and “noncash items” are, as relevant here, left to the Fed to define.²⁷⁶

This tedious exercise in legal definition is important because the key instruction to “reduce . . . to as short a time as possible” refers only to those transactions that involve checks and ATMs—they exclude “wire transfers” and “noncash items.” As a result, the statute cannot be read to require the Fed to adopt real-time payments beyond what is necessary for banks to ensure that

269. 12 U.S.C. § 4002 (2018).

270. *Id.*

271. Klein, *supra* note 72.

272. 12 U.S.C. § 4002(d).

273. *Id.*

274. 12 U.S.C. § 4001(4) (2018).

275. *Id.* § 4001(7).

276. *Id.* § 4001(14), (25).

checks are not to be returned for nonpayment, a proviso that appears to prevent instantaneous settlement.

Even if § 4002(d) cannot be used to force the adoption of real-time payments, the Act still instructs depository institutions to clear “wire transfers”—however the Fed will choose to define them—no later than a business day after the business day that such funds are received.²⁷⁷ That pace is precisely the time frame that exposes those at the economic margin to the greatest insecurity, as discussed in Part I. The question, then, is whether there is a statutory hook the Fed could use to push banks to move more quickly than this.

Unlike other grants of statutory authority where the discretion is essentially untrammelled, as in the statutes cited above in Section III.B, the Expedited Funds Availability Act is much more circumscribed. The Act is directed, by and large, at the banks, not the Fed. Any legislative maneuver whereby the Fed instructed the depository institutions to move more quickly than the Act allowed would permit the banks to argue that their slower clearing speed was permissible under the Act.

For these reasons, we think the Expedited Funds Availability Act does not provide a strong statutory basis for the Fed’s real-time payments mandate. This is ironic: the Act is the most explicit congressional attempt in history to force banks to facilitate faster payments. Even so, the structure of the mandate and the explicit ambit of its text prevents the muscular reading that would support a blanket Fed mandate for real-time payments.

* * *

FedNow will likely represent the future of real-time payments at the Fed, but the Fed’s explicit hope is to foster private innovation in payments, not to displace it.²⁷⁸ Whether or not that interest is sincere, this Part has discussed the steps the Fed can—and cannot—take to begin using its extraordinary powers as an operator, supervisor, and regulator to incentivize and compel the adoption of real-time payments in the private sector immediately. And unlike the five-year plan for adopting its own payment rail, these steps could be taken immediately, to great effect for those who are disadvantaged by the ongoing slow structure of settlements in the United States.

Conclusion

The time to facilitate faster payments in the United States has come, and this Article has argued that the Fed possesses an array of tools at its disposal to do so. One—the ability to operate public options in the interbank payment market—has been employed to great effect in the past but has not been a site of

277. *Id.* § 4001(25).

278. Federal Reserve Actions to Support Interbank Settlement of Faster Payments, Notice and Request for Comment, 84 Fed. Reg. 39297, 39299 (Aug. 9, 2019).

transformative innovation in decades. Others—the market-participant, supervisory, and regulatory tools we canvassed in Part IV—largely have been overlooked by the Fed in its efforts to promote payment-system development. In examining these tools, we have aimed to correct two misperceptions. First, contrary to critics, the FedNow public option is entirely consistent with the statutory scheme that governs Fed payment-system efforts. Second, contrary to the Fed itself, the public option hardly represents the be-all-end-all of Fed leadership. Rather, the Fed possesses an array of complementary tools owing to its hybrid, public-private institutional structure.

Our account of the Fed's authority opens up a range of questions regarding how best to use make use of it. These questions are not primarily legal in nature: whether or not the Fed makes energetic, effective use of its available tools depends on a host of factors that operate at the levels of politics, interest groups, institutions, and even technology. No legal change has dictated that the United States become a payment-system laggard; no legal change is needed to catch back up. But a deeper perspective on the legal details of the Fed's payment-system involvement nevertheless may enable Fed personnel to see themselves and their work in a new light. Far from being merely a source of controversy and complexity, the Fed's hybrid structure provides it with the authority to work with the private sector in realizing the possibilities of faster payments. Those possibilities do not depend on Congress to pass new law or on the hope for technological breakthroughs, but rather on bureaucratic will.