A Green New Deal Financial Architecture

The Green New Deal’s financial flows and financial architecture should be as responsive as possible to the considerations elaborated immediately above. The institutions and institutional reforms proposed below are developed with all of them firmly in view. The summary version is this: With (a) the establishment of one new federal instrumentality of a kind that the U.S. has had before, and (b) two complementary reforms to an institution we already have, a full Green New Deal financing architecture can be put into place with only minimal ‘tweaking’ of existing institutional arrangements.

The new institution is a National Investment Council, which amounts to a contemporary rendition of Alexander Hamilton’s Bank of the United States, Woodrow Wilson’s War Finance Corporation, and Herbert Hoover and Franklin Roosevelt’s Reconstruction Finance Corporation.1 The existing institution is our Federal Reserve System, which continues to bear much of the structure and mandate it has borne since its founding.

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1 See sources cited supra, note 35. It also bears some similarity to the Board of National Investments (BNI) proposed by J.M. Keynes and, to a lesser degree, the free-standing National Investment authority proposed by this author and Professor Omarova in 2015 and 2017. See id.; see also J.M. Keynes et al., Britain’s Industrial Future (1928), and infra, note 81.
in 1913—a structure and mandate now due for an upgrade. These reforms are sequentially elaborated below. Also elaborated is a means of ‘building up’ to full federal reform from local, state, and regional reforms that can complement or even catalyze the national renewal envisaged here.

3.1 National Investment Council

In order to ensure optimal coordination among (a) the 14 Green New Deal Project Fields, (b) the multiple levels and units of government involved in realizing the Green New Deal, and (c) the public and private sector entities also involved in realizing the Green New Deal, it will be necessary to establish a coordinative council charged with the task of overseeing and facilitating the project’s many activities. In view of its structural similarities to the Financial Stability Oversight Council (FSOC), which aggregates information for and coordinates efforts among the nation’s multiple finance-regulatory agencies, we can call this new institution a ‘National Investment Council’ (NIC, or Council).²

The NIC will effectively constitute a partial contemporary analogue to both (a) the War Finance Corporation (WFC) that oversaw and coordinated our national mobilization effort during the First World War, and (b) the Reconstruction Finance Corporation (RFC) that oversaw and coordinated first the New Deal, then the Second World War mobilization efforts. It will also bear similarities to the First Bank of the United States, designed by the nation’s first Treasury Secretary, Alexander Hamilton, to coordinate and facilitate our then-new nation’s financial and economic development.³

² For more on the FSOC, its animating considerations and ongoing functions, see Hockett, Macroprudential Turn, supra note 11. See also Robert Hockett, Oversight of the Financial Stability Oversight Council: Due Process and Transparency in Non-Bank SIFI Designations, Testimony Before the U.S. House Committee on Financial Services, November 19, 2015, available at https://financialservices.house.gov/uploadedfiles/11.19.2015_robert_hockett_testimony.pdf

³ These histories are fully elaborated in McDonald, Alexander Hamilton, supra note 35; Hockett, Post-Liberal Finance, supra note 35; Jesse H. Jones, Fifty Billion Dollars: My Thirteen Years with the RFC (1951); Robert Hockett & Saule Omarova, Private Wealth and Public Goods: A Case for a National Investment Authority, 43 Journal of Corporate Law 101 (2018); and Robert Hockett & Saule Omarova, Public Actors in Private Markets: Toward a Development Finance State, 93 Washington University Law Review 103 (2015). See also Keynes...
Indeed, one way to explain our nation’s present travails is by reference to our having forgotten that ‘development’ and ‘reconstruction’ are never finished or ‘done deals.’ They are never ‘completed’ or ‘accomplished’ tasks, any more than are knowledge, science, technology, or history. Like technology itself, national economies are forever developing, forever self-renewing, forever ‘upgrading.’ The NIC proposed here is designed as much with that truth in view as it is with the desiderata elaborated above in Chap. 2 in view. It is aimed both at optimizing the unavoidable process of national renewal and revitalization which the Green New Deal ultimately is, and at ensuring perpetual upgrading and renewal going forward.

3.1.1 Role and Functions, ‘Level’ of Government

The NIC will bear primary responsibility for developing and pursuing the Green New Deal at the federal level. This will involve planning and coordinating in collaboration with other federal agencies, other levels of government, and the private sector—just as was done by Hamilton’s First Bank of the United States, the WFC, and the RFC during earlier periods of our history. The Council will also coordinate and in many cases secure or provide funding for the many projects that will make up the Green New Deal. This it can do partly with congressionally appropriated funds and partly with bond issuances as well as, going forward, returns on its own investments—again as was done by its predecessors.4

Where securing or providing funding is concerned, the Council will have multiple options. It can lend directly to, or purchase equity stakes in or bonds issued by, targeted entities or enterprises. It can also do so for syndicates of financiers, including private sector ones, that it itself forms. Or it can recommend Fed purchases of such issuances. As for its own funding, at the front end this can come through either or both Congressional appropriations and bond sales of its own. The latter in turn can include general purpose instruments, sector-specific

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4 See again sources cited supra, note 80.
instruments, and even project-specific instruments. Going the latter route can enable the Council in effect to employ markets’ ‘price discovery’ mechanisms to acquire preliminary information as to the likely success or otherwise of particular contemplated projects.\(^5\) Going forward, as NIC investments begin yielding returns as did Bank of the United States and RFC investments in their eras, the NIC can plow those return into further investments, generating a longer-term positive ‘snowball’ effect.

The Council will work closely with the private sector in the grand project of greenifying the national economy, and this in turn will involve bringing together the operations of many now-diffuse federal instrumentalities—many of which used to operate within one structure in the past when they were RFC subsidiaries. It is easy to imagine the potential for thereby establishing a more seamlessly integrated network of public-private venture capital and small business financing operations. Various federal venture capital funds and other federal agencies and programs targeting innovative start-ups—such as, for example, the Telecommunications Development Fund (TDF)\(^6\) and the Small Business Administration (SBA)\(^7\)—can be organizationally incorporated into the NIC structure just as they previously were in the RFC structure.

As suggested above, the Council will also work in particularly close collaboration with the Fed, the Department of the Treasury, and the specific cabinet level departments of the federal government whose mandates embrace specific Green New Deal Project Fields. The reason for close collaboration with Fed and Treasury is that the NIC’s financial and fiscal operations will be adjacent to—and indeed operationally situated between and thus unavoidably interactive with—those of these two entities, respectively, and hence must be conducted in harmony with them. The reason for close collaboration with other cabinet level units of federal

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\(^5\) See again supra, note 78, and associated text.

\(^6\) TDF is a federal venture capital fund created in 1996 for the general purpose of financing small businesses developing telecommunications technologies. See 47 U.S.C. 614 (2015). TDF’s strategy focuses on equity investments in telecommunications start-ups. See, S. Jenell Trigg, Telecommunications Development Fund: Making a Difference? (2002), available at http://www.civil-rights.org/publications/1996_telecommunications/section-714.html

\(^7\) SBA was established in 1953 to facilitate small business formation and growth via the so-called three Cs of capital, contracting, and counseling. See About the SBA, U.S. Small Bus. Admin., https://www.sba.gov/category/navigation-structure/about-sba
governance, in turn, is that the Green New Deal Project Fields in many cases fall within the functional mandates of the corresponding departments—much as particular pieces of the New Deal and Second World War mobilizations before them did.

The Green New Deal’s efforts in the realm of transport infrastructure, for example, implicate the work of the Department of Transportation (DOT). Its efforts in the realm of energy infrastructures similarly implicate the work of the Department of Energy (DOE). Its efforts in the realm of pollution abatement and environmental cleanup, in turn, implicate the work of the Environmental Protection Agency (EPA) and the Department of the Interior (DOI), while its administering of any Green New Deal employment programs will implicate the work of the Department of Labor (DOL), the National Labor Relations Board (NLRB), and the Equal Employment Opportunity Commission (EEOC). Insofar as the NIC works to facilitate the establishment of ‘green startup’ companies in the private sector, meanwhile, it will implicate the work of the aforementioned TDF and SBA.

In all of these and in other Project Fields, it will be critical that the NIC on the one hand and other cabinet level departments on the other not operate at crossed-purposes. It will also be important not to waste or overlook the considerable expertise, and the many collaborative relations with other levels and units of government as well as private sector industries, that these departments have developed over the decades. Much as the FSOC acts as a coordinating body among Treasury, Fed, the Securities and Exchange Commission (SEC), the Commodity Futures Trading Commission (CFTC), the Federal Deposit Insurance Corporation (FDIC), and other financial regulators, so should the NIC do in collaboration with its mandate participants.

### 3.1.2 Structure, Governance, Relations with Private Sector and Other Levels and Units of Government

There are many ways in which the NIC might be composed, structured, and both internally and externally governed. One attractive prospect is to
think of the NIC as a ‘system,’ by analogy with the Federal Reserve System, and to adopt either a three- or a four-tiered structure along the following lines.

3.1.2.1 Tier One: The Council

The first option for the top tier would be the heads of the various departments and other agencies mentioned above, whose fields of expertise and mandates overlap with or are adjacent to those of the NIC itself. This can be thought of as a sort of oversight and strategic planning board, comparable to the FSOC as noted above and to the Board of Governors of the Federal Reserve System. It can accordingly be called ‘the Council,’ as the FSOC is called, and as the Fed Board of Governors is called ‘the Board.’

Ideally, the Council will make decisions in a consensual manner, with voting conducted pursuant to the majority-rule principle only when consensus proves impossible to reach. This, too, would largely replicate FSOC and Fed practice. It probably makes sense for the Council to be chaired by a distinct person, appointed by the President for, say, seven-year terms with the advice and consent of the Senate. This would follow Fed practice, though the seven-year terms would of course exceed the four-year terms of Fed Chairs.

An alternative possibility is to make the Treasury Secretary herself the chair, as is done in the case of FSOC. The advantage offered by this mode of operation is its subjecting the Council to more direct presidential control. But this can also operate as a disadvantage, inasmuch as the investment horizons of the NIC must be long, and accordingly not overly vulnerable to sudden changes in politically sensitive presidential administration.

In the final analysis, because the NIC will in effect be functionally and operationally situated midway between the quite independent Fed and the less independent Treasury, it probably makes sense to confer upon it a degree of independence intermediate between those of the Fed and the

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8 See again Hockett, sources cited supra, note 80.
9 Id.
10 Id.
Treasury. Appointing a separate chair for seven-year terms—longer than those of Treasury secretaries and Fed chairs, while shorter than the 14-year terms of other Fed Board Governors—seems sensible against that backdrop. Changes can be legislated in future should seven-year terms come to seem too brief or too lengthy.

Similar considerations to those recommending seven-year terms might also militate in favor of appointing additional independent members to the Council, as a means of lessening the degree of dependence on the White House that the present FSOC model entails.11 In the alternative, the Council might be made to comprise only independent members appointed by the President for staggered seven- or ten-year terms with the advice and consent of the Senate, after the manner of the Federal Reserve Board (FRB). Under this scenario, which we can call the second option for the top tier, the other agency and department heads mentioned above—those of the DOT, DOE, DOL, and so on—would be empaneled on an Advisory or Coordination Board, with authority only to make recommendations to, not actually control, the Council.

In the event that this more independent, FRB-reminiscent governance model is adopted, it would make sense to choose Council Governors on the basis of criteria analogous to those used in choosing Fed Board Governors. A 7- or 14-member Council might then be assembled, its members possessed both of expertise in the 14 Green New Deal Project Fields and past experience in government, industry, the academy, or some combination of these. In essence, the idea would be for the Council’s membership to be diversified in a manner mirroring the diversity of the Green New Deal itself, which as noted implicates 14 Project fields, multiple levels of government, and private as well as public sector entities.

3.1.2.2 Tier Two: The Investment Committee

Whichever option for the NIC’s top tier we adopt, it probably makes sense to impanel just below it a more operationally focused tier. It would be at this level that more detailed planning and execution of

11 Id.
project-specific NIC financing is done. We might call this the NIC Investment Committee, and think of its role in rough analogy to the Open Market Committee of the Fed (FOMC), the finance committee of any large business concern possessed of a chief financial officer (CFO), or the investment or fund manager of any investment bank or investment fund.

The Investment Committee under this scenario would assess and develop various financing options for various Green New Deal projects or portfolios of such projects, with appropriations, retained earnings, or bond sales on the income side and running from grants through loans to bond purchases and equity investments on the output side, all in conformity with the goals and desiderata elaborated above in Chap. 2. It would then present these options to the Council for approval or selection, then execute on whatever options the Council ultimately opts for.

The Investment Committee might comprise a simple subcommittee of the Council itself, again partly reminiscent of the Fed FOMC model, or might comprise mainly or only persons with significant financial management experience, with the chair of the Commission itself also serving as chair, ex officio or otherwise, of the Committee. Either way, in view of the mainly technical nature of its functions, the Committee members should have, jointly and severally, top level financial expertise and experience. For the Committee will, in effect, be conducting the NIC’s principal funding and investment operations like any finance committee or investment or fund manager.

One additional layer of possible nuance is worth noting: It might be well to subdivide the Investment Committee into two subcommittees, one concerned primarily with direct ‘primary’ market investment, the other concerned with indirect, secondary and tertiary market operations. In such case the Primary Market Subcommittee would act much like a contemporary infrastructure bank does in underwriting and capital-raising more generally. The Secondary Market Subcommittee, analogously, would function more like a fund manager in purchasing various kinds of securities issued by private and public sector entities whose investment operations complement the Council’s mandate.

Needless to say, both subcommittees would coordinate, as the departments of any complex institution do, under the auspices of the Investment
Committee of which they are part. And the latter Committee, as noted above, would operate under the continuous oversight of the Council.

3.1.2.3 Tier Three: The Regional NIC Banks

The third tier of the NIC System would be a cluster of regional banks, perhaps roughly patterned after the Fed system of regional Federal Reserve Banks. The idea behind this arrangement would be to afford the federal instrumentality in question ‘eyes,’ ‘ears,’ and operational capacity in regions of the country whose primary industries and economic conditions differ from one another in nontrivial ways. The Federal Reserve Bank of New York (FRBNY), for example, has expertise in and jurisdiction over much of the nation’s financial services industry, which is of course largely headquartered in New York. The Federal Reserve Bank of Dallas, by contrast, has more expertise in energy and agriculture, in keeping with its region’s primary industries. It makes sense for the NIC to operate out of regional locations that are similarly sensitive to regionally varying economies and infrastructure needs.

The Fed regional structure was developed over a century ago, when the nation’s economy was less fully integrated than it is now and its regional economic profiles were in some ways quite different from what they have developed into since. This presents something of a dilemma where regionally structuring the NIC’s third tier is concerned. On the one hand, in view of the close coordinating that the NIC will have to do with the Fed, it makes some sense for the NIC’s regional structure to mirror that of the Fed itself. On the other hand, because the latter structure has grown somewhat anachronistic in light of regional conditions’ many changes since 1913, to mirror the Fed would be to ‘lock in’ the same now-anachronistic division of regional labor at the NIC.

The optimal solution here would probably be to reapportion the Fed’s regional Reserve Banks in keeping with contemporary regional conditions (not by ‘reshuffling’ from east to west, but by adding new regional Federal Reserve Banks out west), and then to apportion the NIC’s regional banks isomorphically. Short of that, the best option would likely be to arrange the NIC’s regional divisions as we would wish to do with the Fed under contemporary conditions. Then, where these do not
coincide with established regional Federal Reserve Banks, the NIC Banks can coordinate with local offices of regional Fed Reserve Banks. These latter exist in some abundance, as they represent the Fed’s own response to the regional changes that have unfolded over the last century.

However we decide to structure the NIC’s regional layer of distinct NIC Banks, it probably makes sense for their roles and internal governance structures to follow a pattern that slightly varies on those of their Fed analogues. The ideal arrangement would probably be classified boards with one class of directors chosen by the NIC, another by affected state and local governments, and a third by regionally important industries and labor organizations—all subject to NIC veto as in the case of the Fed. The function of the regional banks would then be to ‘interface’ with subnational units of government, industry, and labor in their regions for purposes of both communication and finance allocation. In this connection, a particularly important role of the regional NIC Banks will be to work in collaboration with the system of ‘public banks’ elaborated below. And now that the Fed has opened a new Municipal Liquidity Facility to assist with state and local financing needs in the face of the spring 2020 Coronavirus pandemic, another such role might be to liaise between regional Federal Reserve Banks on the one hand, and states and municipalities aiming to build infrastructural capacity quickly while using the new facility on the other hand.12

3.1.3 Pictorial Representation

Figure 3.1 depicts the components, organizational structure, and financial flows associated with the NIC. Line segments represent administrative linkage, while arrows indicate financial flows. ‘Appropriations’ means

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12 For more on the new MLF, see, for example, Robert Hockett, Community QE: Key Provisions and a ‘Game Plan’ for Immediate State Action, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3574157. Also Robert Hockett, ‘Community QE: An April Game Plan for States and Cities,’ Forbes, April 12, 2020, available at https://www.forbes.com/sites/rhockett/2020/04/12/community-qa-en-april-game-plan-for-states-and-cities/#138495c03624; and Robert Hockett, ‘Welcome to Community QE: Now Let Us Put It to Use,’ Forbes, April 9, 2020, available at https://www.forbes.com/sites/rhockett/2020/04/09/welcome-to-community-qa-en/#1e84d9f4c415. For more establishing additional regional Federal Reserve Banks, see Robert Hockett, Spread the Fed: Distributed Central Banking in Pandemic and Beyond, 14 Virginia Law and Business Review __ (2020) (forthcoming).
congressionally appropriated funds, ‘remittances’ means possible remittances to Treasury, ‘Liabs’ means financial liabilities (i.e., payment obligations),’ and ‘$’ means money payment.

It should be noted that if the division of the Investment Committee into distinct Primary Market and Secondary Market Subcommittees suggested above is adopted, the NIC Investment Fund depicted in Fig. 3.1 will be correspondingly bifurcated. There might, indeed, be multiple funds, according as the Committee judges prudent in pursuing multiple public investment avenues or strategies. This too would be a structure familiar to contemporary finance, in effect constituting a public sector analogue to the ‘family of funds’ model found in the investment company (especially ‘open end’ mutual fund) industry.

Fig. 3.1 NIC administrative and financial flow structure. (Source: Author’s creation)
3.2 Federal Reserve Reforms

As discussed in Chap. 2 above, a key component of the Green New Deal is its focus on broad financial and economic inclusion on the part of our entire population. This is partly a matter of democratic justice and redress for past wrongs to distinct segments of our population.13 It is likewise partly a matter of optimizing, in respect of both equitable benefit-distribution and macroeconomic stability-maintenance, the way in which the Green New Deal is executed over the coming decade. The Green New Deal succeeds only if the full population is ‘on board’ with it, actively involved in the planning, the executing, and the benefitting. This militates strongly in favor of certain Fed reforms that will make of the Fed a full partner of and complement to the National Investment Council in advancing the Green New Deal and its transformative objectives.

3.2.1 A ‘Peoples’ Fed’ and ‘Democratic Digital Dollar’

A key role in providing for broad participation in the name of both justice and stability as the Green New Deal unfolds will be played by the system of digitized Fed (or Treasury) Taxpayer Wallets mentioned in Chap. 2 and is elaborated below. We can think of these reforms as means of converting the Fed from an old-fashioned ‘bank to the banks,’ as it is now, to a modern and state-of-the-art ‘bank of the people,’ which is more consonant both with our nation’s founding ideals and with the goals of the Green New Deal.14

It is also a means of minimizing the degree to which Green New Deal needs to ‘reinvent the wheel.’ For it adapts an already existing federal instrumentality—the Fed—to circumstances that have changed quite dramatically since the Fed’s founding in 1913, and does so in a way, as will now be described, that simply carries forth a developmental

13 See again sources cited supra, note 38, and associated text.
14 See again sources cited supra, note 66, and associated text.
trajectory that the Fed’s current operations, as these have evolved over the past century, already display.\textsuperscript{15}

\textbf{3.2.1.1 Fundamental Idea and Prompting Considerations}

The People’s Fed and Democratic Digital Dollar idea, as suggested in Chap. 2, is a means of furthering the Green New Deal’s inclusion objectives while also affording the citizenry a direct financial ‘stake’ in the massive degree of wealth-generation that the Green New Deal will occasion. It is also a means of rationalizing and speeding up the nation’s payments system and supplying an ideal mechanism for the maintenance of price stability as the Green New Deal unfolds, again in keeping with the goals discussed above in Chap. 2.

Mechanically speaking, the core idea here is very simple. It is for the Fed, perhaps following the Treasury in the way to be described below, to issue a digital dollar and to afford every citizen, firm, unit of government, and any approved non-citizen resident, a digitized and device-accessible deposit-cum-transaction ‘wallet’ denominated in that dollar. These will function essentially as demand deposit accounts privately held at commercial banks, and Fed ‘Reserve Accounts’ maintained on behalf of banks and other privileged financial institutions at the Fed, do now. But they will be digital wallets accessible and usable anywhere through smartphones and similar devices.

This new system will facilitate telephonic banking and immediate clearing of transactions on the liability side of the Fed’s balance sheet.\textsuperscript{16} It will also immediately offer both the Green New Deal and the nation more broadly a plethora of additional benefits that are long overdue. We can reprise these briefly, then sketch out a bit more operational detail.

\textsuperscript{15}This trajectory is more fully elaborated in Hockett, \textit{Rousseauvian Money}, supra note 66; and Hockett, \textit{The Capital Commons}, supra note 66.

\textsuperscript{16}Id.
3.2.1.1.1 Inclusion

The first benefit will be an immediate end to the pervasive degree of financial exclusion and, with it, economic marginalization that presently characterizes the nation’s commercial payments system, financial system, and broader economy.\(^ {17} \) Gone in one stroke will be the chronic American problem of the ‘unbanked’ and ‘underbanked,’ which not only deprives the nation of the productive talents and creativity of literally scores of millions among us, but also unjustly subjects the marginalized to the depredations of ‘payday lenders,’ ‘check-cashers,’ and other species of ‘rent-seeker’ and ‘loan shark.’\(^ {18} \)

3.2.1.1.2 ‘Direct’ Monetary Policy: a.k.a. ‘QE for the People’

The second benefit of a People’s Fed and Democratic Digital Dollar will be a far more effective channel for the conduct of counter-inflationary and counter-deflationary Fed monetary policy as described above in Chap. 2. The present monetary policy ‘transmission belt,’ as it is called, is subject to profoundly wasteful leakages. For it relies indispensably on ‘middleman’ institutions that mediate between the taxpayers on the one hand and their central bank on the other hand.\(^ {19} \)

Expansionary policy during a recession, for example, relies on privately owned banks to lend cheap federal funds to individuals and businesses; yet these banks frequently use the funds simply to speculate on commodity and other markets, thereby routing funds away from their intended recipients and toward endeavors that actually raise the prices of

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\(^ {17} \) See again sources cited supra, notes 42 and 66, and accompanying text. Also Robert Hockett, Chaka’s Windows: Works and Days in the Life of a ‘Homeless Entrepreneur’ (2019) (book manuscript, on file with the author). Also Robert Hockett, A Democratic Digital Dollar: A Peer-to-Peer Savings and Payments Platform for Fully Inclusive State, Local, and National Money and Banking Systems, 11 Harvard Business Law Journal __ (2019) (forthcoming), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3470931

\(^ {18} \) See generally Robert Hockett, ‘Sanders and Occasio-Cortez Offer Real “Financial Choice” with Their Loanshark Prevention Act,’ Forbes, May 13, 2019, available at https://www.forbes.com/sites/rhockett/2019/05/13/sanders-and-ocasio-cortez-offer-real-financial-choice/#74e793d33c84. Also Hockett, Democratic Digital Dollar, id.

\(^ {19} \) See again sources cited supra, note 66, and associated text.
necessities that ordinary citizens must purchase—foodstuffs and fuel, for example.20

‘Direct’ taxpayer/central-bank banking will sidestep these leakages. Counter-deflationary monetary policy, for example, can be effected through direct crediting of Fed Taxpayer Wallets—in effect, a sort of ‘QE for the People’ or digital ‘citizen helicopter money’ far more effective, and just, than the forms of QE and helicopter drop employed during the Great Recession only a few years ago.21 Counter-inflationary policy, for its part, can be effected simply by raising interest on Taxpayer Wallets—the analogue to IOR currently enjoyed by privileged banking institutions with Fed Reserve Accounts—thereby boosting the attractiveness of saving over spending to individuals when this is macro-economically desirable.22

3.2.1.1.3 Credit Modulation and Allocation

Similarly, the system of digital Fed Taxpayer Wallets will allow for far more effective credit modulation and allocation than is presently possible.23 Modulation will be effected through the newly leak-proof monetary policy transmission belt as just described. Allocation, in turn, can be conducted via the same mechanism. A particular firm, industry, state, municipality, or other entity that the NIC approves for funding in pursuit of one or another Green New Deal project, for example, can receive those funds directly in its Fed Taxpayer Wallet. That can take the form of a transfer from a Treasury Account, an NIC Account, or some other account also maintained by the Fed.24

20 See again sources cited supra, notes 63 and 66, and associated text.
21 Id.
22 Id.
23 See again sources cited supra, note 66, and associated text.
24 Id.
3.2.1.1.4 Modernize Payments and Steer ‘Fintech’ in Green New Deal-Friendly Directions

A final benefit offered by a new system of Fed Taxpayer Wallets and associated Democratic Digital Dollar will be the opportunity it affords both to modernize the national payments system and to steer the many new financial technologies now discussed under the heading of ‘fintech’ in salutary, socially beneficial directions. New blockchain and distributed ledger technologies, along with the digital currencies associated with them, are of course now undergoing a ‘revolution’ of sorts in their development and proliferation. This development, affecting as it does those public utilities which are the nation’s payments and financial systems, should not be left to chance or to rent-seeking behavior. It should be guided by the populace in keeping with our national needs.

Many of the claims made for the new financial technologies by their enthusiasts are breathless and, in some cases, even ridiculous. Some of these technologies definitely have the potential to change the financial landscape for good or for ill, however, and many of the world’s central banks are accordingly now actively experimenting with some of the relevant technologies as they look to upgrade their national payments systems and facilitate digital banking and transacting. Furthest along thus far is Sweden, whose ‘e-Krona’ project went online, on a trial basis, in February of 2020.

Against this backdrop, a Fed-administered digital dollar looks all but inevitable. And this actually can aid in the project of affording greater financial inclusion. For a system of Fed-administered Citizen, Resident, and Government Wallets then could be accessed by their users not only

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25 See again Hockett, Fintech’s Future, supra note 66; Hockett, Capital Commons, supra note 66; Hockett, Democratic Digital Dollar, supra note 89. Also Robert Hockett, ‘Facebook’s Proposed Crypto-Currency—More Pisces than Libra for Now,’ Forbes, June 20, 2019, available at https://www.forbes.com/sites/rhockett/2019/06/20/facebooks-proposed-crypto-currency-more-pisces-than-libra-for-now/#5dbe692d2be2; and Robert Hockett, Digital Greenbacks, 72 Administrative Law Review __ (2020) (forthcoming).
26 Id.
27 Id.
28 Id.
29 Id.
online or at ATMs and teller windows, but also via smartphones and similar devices.\textsuperscript{30}

Many underdeveloped countries with past histories of undeveloped banking sectors already are ‘leapfrogging’ into the twenty-first century, skipping over the twentieth, with phone-banking technologies.\textsuperscript{31} There is no reason the U.S. can’t do likewise on behalf of the banked and unbanked. And the Fed’s expansion of its system of Reserve Accounts to embrace Taxpayer Wallets would afford an opportune moment to do so.\textsuperscript{32}

The proposal below will accordingly take the form of a system of digitized, telephonically usable Fed Taxpayer Wallets, the currency of which will be what we might call a Democratic Digital Dollar.

\subsection*{3.2.1.2 Accounting and Operational Dynamics}

Operationally speaking, the transition to a full ‘People’s Fed’ will occur in two stages. Each stage will visit its own effects upon the Fed balance sheet—that is, its book of liabilities and its asset portfolio. The second stage, moreover, will also make of the Fed a seamlessly integrated complement to the NIC as described above.\textsuperscript{33}

During the first stage, private bank deposit liabilities to depositors will simply convert into discount window liabilities owed to the Fed. Banks’ asset portfolios will be unchanged. In effect, the Fed will simply be interposed between depositors and commercial banks, with the Fed owing those whom the banks previously owed, and the banks owing the Fed instead of the depositors.\textsuperscript{34}

During the second stage, as people begin themselves making deposits into their digital Fed Taxpayer Wallets—even deposits, such as paychecks and benefit checks, that are not loan proceeds—the Fed will begin to hold more and more assets that are not simply discount window loans

\textsuperscript{30} Id.

\textsuperscript{31} Id.

\textsuperscript{32} Id.

\textsuperscript{33} Fuller elaboration is available in Hockett, \textit{Capital Commons}, supra note 66; Hockett, \textit{Democratic Digital Dollar}, supra note 89; and Hockett & Omarova, \textit{The Citizens’ Ledger}, supra note 66.

\textsuperscript{34} Id.
made to commercial banks. Now there will also be NIC and NIC-recommended securities as described above, and securities held in the Price Stabilization Fund (or People’s Portfolio) described below.35

One long-term change that this switch will make to ‘the business of banking’ is worth noting here too, as it represents a salutary ‘side benefit.’36 Insofar as privately owned banks continue to lend in ways that find expression in the form of newly opened deposits, the latter will have to be deposited into Fed Taxpayer Wallets, meaning in turn that the banks will have to borrow through the Fed discount window.37 This presents a welcome opportunity to the public for purposes of money modulation and credit allocation as described above in Chap. 2. For the Fed already conditions discount window lending upon financed assets’ possessing certain socially desirable characteristics. It can now add conditions that further its evolving modulatory and allocative mission—rather as Government Sponsored Enterprises (GSEs) such as Fannie Mae have historically limited their secondary market making activities to so-called ‘conforming loans.’38

In effect, the Fed discount window will become the ‘choke point,’ and thus the ‘focal point,’ at which our limiting bank lending solely to healthy forms of credit-extension takes place.39 It will be, in other words, a twenty-first-century rendition of Glass-Steagall separation between productive primary, and merely speculative secondary, market investment.40

Before diagramming the new People’s Fed pictorially, it should be noted that it is possible to ‘work up’ to the full arrangement via a number of routes. One is to start with what I call ‘inclusive value ledgers’ (IVLs) at local, state, or regional levels of fiscal and monetary governance, along the lines of this author’s ‘Empire State Inclusive Value Ledger’ proposal now before the New York State Legislature. Another is to lever the existing system of ‘Treasury Direct’ accounts, through which anyone may

35 Id.
36 ‘The business of banking’ is a term of art in finance-regulatory parlance, connoting those features of a firm’s business model that subject it to bank-regulatory jurisdiction.
37 Again, fuller elaboration is available in Hockett, *Capital Commons*, supra note 66.
38 Again, fuller elaboration is available in Hockett, *Capital Commons*, supra note 66.
39 Id.
40 Id. For more on contemporary and past Glass-Steagall-style forms of market segmentation, see, for example, Hockett, *Macroprudential Turn*, supra note 53.
transact in U.S. Treasury securities with the U.S. Treasury, into a full digital banking platform simply by instructing Treasury to issue a new Treasury Bill—a ‘Treasury Dollar Bill,’ or ‘Treasury Dollar’—valued at one Fed dollar and made legal tender by Congress. These prospects, made urgent by the April 2020 Coronavirus pandemic and the need for quick federal relief payment disbursement that it has occasioned, are elaborated briefly below in Sect. 3.4.

3.2.1.3  Pictorial Representation

Figures 3.2 and 3.3 depict Fed and private banking operations as they now normally operate, and how they will operate under the proposed reforms, respectively. Once again arrows depict flows and ‘Liabs’ means financial liabilities generically considered. ‘Dep’ means deposit liability, and ‘Debt’ means debt liability—two specific species of the genus ‘liability.’ The ‘$’ sign in Fig. 3.2 of course signals present-day money flows, while in Fig. 3.3 it also includes Democratic Digital Dollars. Both diagrams ignore for present purposes the flows that run between the Fed and sundry non-bank issuers of liabilities both public and private—for example, Treasury and sellers of mortgage-backed securities (MBS) pursuant to QE3.

3.2.2  A Fed Price Stabilization Fund: a.k.a. A ‘Peoples’ Portfolio’

As noted in Chap. 2 above, another helpful tool in maintaining price stability over the course of the Green New Deal’s unfolding will be a ‘People’s Portfolio’ or Price Stabilization Fund. This fund can readily be made part of the Fed’s asset portfolio, thereby further integrating the Fed’s mission with the Council’s mission in a manner that fits squarely within the mandate of each institution.41 In the alternative, it can be run by the NIC in collaboration with both Fed and Treasury.

41 See again Hockett, People’s Portfolio, supra note 61, and accompanying text.
Fig. 3.2 Regular Fed/Bank arrangements and financial flows. (Source: Author’s creation)

Fig. 3.3 Reformed bank/Fed/NIC relations and financial flows. (Source: Author’s creation)
The idea behind the People’s Portfolio is for the Fed to generalize its already well-established regime of open market operations with a view to limiting volatility in respect of more systemically significant prices than just interest rates.\textsuperscript{42} Labor costs, commodity prices, fuel prices, and others all can be added according as seems necessary or proper in future. Indeed, any sector or subsector in which inflationary or deflationary pressures build can enjoy price modulation through Fed or NIC shorting and purchasing activity, respectively.\textsuperscript{43}

Since the regime of Fed Taxpayer Wallets just described will bring additions to the Fed’s book of liabilities, moreover, the Fed in particular will be seeking new assets in any event—to offset them. The People’s

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\textsuperscript{42} Id.

\textsuperscript{43} See again sources cited supra, notes 61, 64, 66, and 80, and accompanying text.
Portfolio can be that book of assets, either directly or indirectly via Fed holdings of NIA issuances. It will be a book that can also include, if the Fed holds it and as noted above, NIC issuances and other issuances that the Council recommends to the Fed in pursuit of its national investment mandate. What we will have, then, is fully public finance that works on behalf of all Americans, on both sides—asset and liability—of the public ledger, and in primary and secondary markets alike.

Figure 3.4 supplements Fig. 3.3 by adding the Price Stabilization Fund or ‘People’s Portfolio.’ All previously employed terms mean what they’ve meant in preceding diagrams. DW, added here, refers to the Fed’s discount window facility—one of its principal means of lending to other institutions. Again the diagram ignores for present purposes the flows that run between the Fed and sundry non-bank issuers of liabilities both public and private—for example, Treasury, sellers of mortgage-backed securities (MBS) pursuant to QE3, or sellers of other issuances pursuant to new facilities opened by the Fed in response to the spring 2020 pandemic.

### 3.3 State and Regional Public Banks

The new NIC and reformed Fed as just sketched operate primarily, though not solely, at the federal level. But as noted above in Chap. 2, a Green New Deal Finance Plan should aim to honor principles of federalism—or subsidiarity—as much as possible. This is necessary both as a matter of democratic justice and as a matter of effectiveness: Residents of specific localities know better than most what their needs are, including what their financial needs are. And both public and private sector entities—including financial institutions—that operate at the local level will in general tend to be both more accountable, and hence responsive, to expressions of such need. This recommends systems of state and locally

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44 See again sources cited supra, notes 61 and 66, and accompanying text.
45 Id.
46 Id.
operating public banking institutions that can work in collaboration with the NIC and reformed Fed as just sketched.

### 3.3.1 Regional Public Banks

At the regional level, the NIC structure as elaborated above includes Regional NIC Banks analogous to Regional Federal Reserve Banks. The idea here is to afford the Council, like the Fed, ‘eyes and ears,’ as well as physical facilities, ‘on the ground’ that are attentive and responsive to regional variations in economic condition and infrastructural need. In effect, they are meant to mediate between local institutions and enterprises on the one hand, and the two federal institutions that they operate under on the other hand. The NIC Regionals will operate as described above. The regional Fed Banks will operate as they have since 1913, with the one change being that their mandates also will reflect the changes to the Fed’s mandate itself just described.

### 3.3.2 State Public Banks

One implication of the Fed reforms laid out above is that privately owned banking institutions will still be able to play a role in extending and allocating credit, but will only be able to do so in ways that conform to Fed discount window lending conditionality.\(^{47}\) In effect, speculative bank lending for secondary and tertiary market purposes will end, with the latter form of conditionality functioning as a form of de facto restored Glass-Steagall-style categorical separation between banking functions and secondary market trading.\(^{48}\) Private sector banks also will not be

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\(^{47}\) The Fed lays out exacting criteria in stipulating what kinds of commercial paper and other financial instruments it stands ready to accept and thereby ‘monetize’ at the discount window. The discount window function can thus be analogized to the ‘conforming loan’ requirements that have historically been imposed by the Federal Housing Administration (FHA) and the GSEs associated with it. It will accordingly also play, under the regime proposed here, the role that Glass-Steagall used to play in the realm of financial regulation, prior to the ill-fated reforms of the Gramm-Leach-Bliley Act signed into law in late 1999. See generally Hockett, sources cited supra, notes 53, 57, 61, 66, and accompanying text.

\(^{48}\) See again sources cited id.
general deposit-takers any longer, hence will not be receiving ‘other people’s money’ to gamble with. They will accordingly be pure investment institutions, with most if not all investments having effectively to be pre-cleared with the Fed’s discount window administrators.\(^49\)

This new arrangement also will open the door to a broader proliferation of public banks of the BND variety described above. There are two reasons. The first is that those drawn to the banking industry for whom profit motives are secondary will no longer have secondary profit-related reasons to make their careers at privately owned rather than public banks any longer.\(^50\) Banking will indeed be ‘boring again,’ in a manner that renders public banking at least as interesting as private banking to aspiring bankers.\(^51\) The second reason is that states will have heightened reason to establish public banks in order to ‘capitalize on’ the new investment opportunities opened both by the new NIC and by the reformed Fed as described above—not to mention the just-announced new Fed Municipal Liquidity Facility described below.

State public banks will be very well situated to liaise both between state governments and the regional Fed and NIC Banks, and between sub-state municipalities and those same regional institutions. Many states are apt to find them desirable on that account. Adding in the fact that private sector banks will be ‘boring again’ for the reasons just noted, and state residents drawn to banking will be much more apt to push for the establishment of such institutions than before as well.\(^52\) The new NIC and the Fed reforms just elaborated, in short, are likely to trigger a broader ‘renaissance’ of public banking, and this will fill all remaining ‘gaps’ between federal and local finance in the name of developing a truly participatory Green New Deal across every town, village, and hamlet in the nation.\(^53\)

\(^{49}\) Id.

\(^{50}\) See generally Robert Hockett, *Finance without Financiers*, in *Real Utopias: Democratizing Finance* (Erik Olin Wright ed., 2020), forthcoming. For more detail, see Hockett, *Capital Commons*, supra note 66.

\(^{51}\) Id.

\(^{52}\) Id.

\(^{53}\) Id.
3.4 Building Up from Local or from Treasury: Inclusive Value Ledgers and Complementary Currencies

It is possible that federal establishment of a National Investment Council and a reconfigured Fed along the lines just recommended will take more time than some states or localities wishing to make counterpart reforms wish to wait. It is also possible, as the Coronavirus pandemic of spring 2020 necessitates rapid Congressional appropriation and Treasury disbursement of relief payments throughout the country, that an already-existing network of universal Treasury accounts—‘Treasury Direct’—will have to be made into a national payments platform immediately while development of counterpart Fed functionality takes place. Here, then, I will lay out some possible ‘way-stations’ en route to the Democratic Digital Dollar and People’s Fed arrangements prescribed just above.

Where subnational units of government are concerned, there are of course constitutional and feasibility constraints on how much can be done along the lines here envisaged. But much nonetheless can be done. It can be done by exploiting both (a) the centrality of payments systems and associated platforms to all monetary systems, and (b) new technologies that render public provision—including subnational public provision—of such platforms a straightforward proposition.

States or cities that adopt some version of the script laid out below can accordingly speed up effectuation both of pandemic response efforts in the short term and of a Green New Deal in the medium term with their own residents even before the nation as a whole is doing so, and can catalyze the nation’s doing so by proving such things feasible. We can think of such measures as subnational trial programs or ‘proofs of concept’ (POCs).54 Similarly, the U.S. Treasury can develop and issue a protoversion of the Democratic Digital Dollar—a Democratic Digital ‘Greenback,’ as it were—even before the Fed develops a full system of individual Taxpayer Wallets.55 The need of rapid relief payments in

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54 The author is working with states and cities on several such POCs now, as will shortly be noted.
55 The familiar Federal Reserve Note of today grew out of the Treasury-issued ‘Greenbacks’ developed 50 years earlier. See Hockett, Fintech’s Future, supra note 66.
response to the spring 2020 pandemic renders that prospect more compelling even than it was when the author first floated it years back. In hopes of encouraging or at least facilitating such action wherever it might be seriously considered, this section maps out a plan of action that states or cities, ‘compacts’ of such, and/or the U.S. Treasury can commence as proto-renditions of the Democratic Digital Dollar plan sketched above, with a view to both (a) providing a banking and payments infrastructure to all and (b) catalyzing full national development along the same lines. It starts with general observations, then sketches state, local, and U.S. Treasury-administered renditions of the plan to put in place until a full-fledged People’s Fed is established.

3.4.1 Moneys, Payment Platforms, and Inclusive Value Ledgers

Many people worldwide see needs for more widely accessible payment platforms and associated currencies for the accumulation, storage, and transfer of value. These are prerequisites to maximal commercial and financial inclusion and optimally efficient trade and payments alike. At subnational levels of government, this need is sometimes couched as the need for ‘complementary’ currencies or payment systems, or as the need for some form of ‘community banking.’ At the national level, it is often couched as the need to ‘tap untapped markets,’ ‘democratize finance,’ or ‘bank the poor.’

The linkage of currency complementarity and payment system completion is not accidental, whether advocates realize this or not. A currency is simply what ‘counts’ for purposes of accounting—that is, for measuring and transferring stored value—within a payments architecture. It is a ‘token’ that betokens quantifiable value as accumulated, stored, and transferred within any such system. Hence it is ‘that which accumulates’ and ‘that which pays’ as productive participants in any market exchange economy earn, save, and spend ‘purchasing power’—that is, spendable wealth. To supply such an architecture to any community of any size is accordingly to supply that community both with a currency and, in consequence, with a means to produce, earn, accumulate, store, measure,
and transfer wealth. It is to supply that community with a monetary medium, a payments platform, a commercial infrastructure, and a rudimentary banking and financial system all in one go.\(^{56}\)

New P2P digital payments technologies that have developed over the past decade now make the construction of such platforms a simple and straightforward proposition.\(^{57}\) All that is needed is a digital infrastructure of ‘wallets,’ like the Taxpayer Wallets discussed above, that can be credited and debited through a pooled ‘master account.’ The latter for its part can take the form either of the public fisc of the governmental unit in question or of a legal trust settled and administered by that unit—including a special purpose vehicle (SVP) of the kind through which the Fed administers many of its lending facilities even today.\(^{58}\)

Value accumulation and storage then can be done through these individual wallets or accounts, simply by enabling payment into and storage within them. Value transfer—that is, ‘payment’—from any payer to any payee can for its part be effected through simultaneous crediting and debiting of payee and payer wallets.\(^{59}\) ‘Real-time clearing and settlement,’ long a holy grail to commercial and financial market participants, thereby can be made readily available to all—literally all, without ‘middlemen’—even now, if but publicly supplied as the critical market infrastructure that it in effect is in any exchange economy or commercial society such as our own.\(^{60}\)

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\(^{56}\) See again Hockett, *Rousseauvian Money*, supra note 66; Hockett, *Democratic Digital Dollar*, supra note 89; and Hockett, *Payment Polyphony and Monetary Hierarchy*, working paper (2019) on the linkages noted in this paragraph; Hockett, *Digital Greenbacks*, supra note 89.

\(^{57}\) See Robert Hockett, *The Capital Commons*, supra note 66, for more on the matters described in this paragraph. Also Hockett, *Democratic Digital Dollar*, supra note 89.

\(^{58}\) See, for example, Hockett, sources cited supra note 90.

\(^{59}\) This sequencing, whereby ‘vertical’ public/private monetary relations enable and optimize ‘horizontal private/private monetary relations, is fully elaborated in Hockett, *Rousseauvian Money*, supra note 66, and Hockett, *The Capital Commons*, supra note 66. It also is fully exploited in all renditions of the Digital Dollar Platform Plan developed below.

\(^{60}\) It bears noting that the Federal Reserve shares this goal with sufficient urgency as to broach making it available to all. Unfortunately, it continues to envisage making it ‘available to all’ only by making it available to banks, which do not include all. See, for example, Federal Reserve Board of Governors ‘Federal Reserve announces plan to develop a new round-the-clock real-time payment and settlement service to support faster payments.’ August 5, 2019, available at https://www.federalreserve.gov/newsevents/pressreleases/other20190805a.htm
Any such system, if made available to all constituents of the governmental unit or consortium of units that furnishes it, will then amount to a universally inclusive commercial and financial architecture within that unit’s jurisdiction. It will afford easy, fast, frictionless means of producing, earning, accumulating, storing, and measuring wealth, as well as means of real time transfer of such wealth with cash-reminiscent ‘finality of payment’ in any transaction, within the relevant jurisdiction.61

An added benefit of any such system comes with its enabling users to sidestep the present-day confusion of multiple private sector, for-profit middle-man payment companies, all operating with their own incommensurable protocols. Under this chaotic ‘system’ of private payment service providers, a multitude of platforms (a) ‘interface’ with one another in varyingly effective and friction-prone ways, (b) interpose barriers, complications, transaction-costs, delays and associated risks between parties and counterparties in the payments process, and (c) afford a large and still-growing number of for-profit entities with multiple socially unnecessary and costly rent-taking opportunities.62

Any unit of government can now easily and inexpensively supply a uniform and universally accessible such saving and spending infrastructure, thereby cutting out all of the inefficiencies and rent-taking opportunities occasioned by today’s Byzantine set of arrangements. Compacts of state or local governments can do likewise. All each need do is afford every constituent with a digitally accessible wallet that ‘interfaces’ with its own fisc or some other universal account organized as a publicly administered entity or legal trust.

The unit of government in question then can make P2P payments (e.g., tax rebates, procurement expenditures, entitled benefits, and the like) and receive P2P payments (e.g., taxes, fees, fines, and the like) ‘vertically’ in real time through the medium of such accounts, simply by

61 How such a system facilitates measurement, storage, and voluntary transfer of value is presumably obvious to all. How it facilitates value production is more fully laid out below. The short answer is that value—in the form of access and resources—is used in the production of value itself, while money and credit are the means of access to resources in any exchange economy such as ours. Insufficient money and credit accordingly mean insufficient access, which in turn means insufficient value-productive activity.

62 See Hockett, Democratic Digital Dollar, supra note 89.
crediting or debiting them. Similarly, it can facilitate real time ‘horizon-
tal’ P2P payments among participating constituents themselves simply
by affording means of simultaneously crediting payee and debiting payer
accounts in accordance with payer instructions conveyed via chip card,
strip card, or smart device app.63 And, by assuring interoperability with
networks of ATMs and the like, it can ensure ready availability of older
payment forms—cash—too.

Here are brief sketches of how this can be done by states, localities,
compacts, and even by Treasury en route to a full People’s Fed.

3.4.2 A State Inclusive Value Ledger Plan

A state payments platform and associated system of digital wallets, made
interoperable with other payment forms including ATM cash, is easily
constructed and administered. Practically speaking, it is probably best to
proceed through two stages.

In the first stage, the state provides a digitally accessible wallet—we
can call it a ‘Digital Dollar Account’—to all legal residents within its
jurisdiction.64 Each such account will be P2P-linked to a pooled ‘Master
Account’ that can be either the state fisc itself or a separate account and

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63 Id. These two modalities of P2P transaction—between public and private and between private
and private—are the mutually complementary and indispensable ‘vertical’ and ‘horizontal’ dimen-
sions of all monetary relations as elaborated in Hockett, Rousseauvian Money, supra note 66 and
Hockett, The Capital Commons, supra note 66. They correspond to Stages 1 and 2 of the plans
elaborated below.

64 This stage corresponds to money’s ineluctable ‘vertical’ dimension as elaborated in Hockett,
Rousseauvian Money, supra note 66 and Hockett, The Capital Commons, supra note 66. The author
has designed such a plan for the state of New York and drafted accompanying legislation, which has
now been proposed in the state legislature by Assemblyman Ron Kim and Senator Julia Salazar. See
Robert Hockett, The New York Inclusive Value Ledger: A Peer-to-Peer Savings and Payments Platform
for an All-Embracing and Dynamic State Economy, 79 ADMINISTRATIVE LAW REVIEW __ (2019)
(forthcoming), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3470923. Also
Robert Hockett & Ron Kim, ‘New Currency for New York’s Poor,’ New York Daily News, October
28, 2019, available at https://www.nydailynews.com/opinion/ny-oped-new-currency-for-new-
yorks-poor-20191029-uevs4nbx7fdwtbrlzgerd064-story.html; and Robert Hockett & Ron Kim,
‘Dynamic Inclusive Money for a Dynamic Inclusive Economy,’ The American Prospect, October 17,
2019, available at https://prospect.org/economy/dynamic-inclusive-money-economy/. The white
paper on the Plan is available here: http://ronkimnewyork.com/downloads/The-New-York-
Inclusive-Value-Ledger-Sept-2019.pdf

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associated SPV established as a state enterprise or legal trust. The account might be called something like the state ‘Revenue Collection and Benefit Disbursement Fund,’ in keeping with the fact that residents of most U.S. states pay taxes, licensing fees, fines, and the like under multiple headings, and receive rebates and benefits under literally scores of state pension, social service, and other programs. The account also might be given some more attractive name—the ‘Empire Fund’ in New York, for example, or the ‘Bear Flag Fund’ in California or ‘Ad Astra Fund’ in Kansas.

The state then will make remittances owed to its residents—for example, tax rebates, procurement payments, entitled pension or other benefit payments, and the like—by crediting their individual accounts. It will correspondingly receive payments—for example, taxes, franchise fees, fines, or the like—by debiting these same accounts. In theory these credits and debits could be denominated in any measurement unit the state and its residents found convenient. Because all U.S. state transactions occur for good reason in the national currency—the dollar—however, states that institute a platform of the kind here designed will effectively be paying and being paid digital dollars—a fact that will prove helpful in connection with ‘building the Plan out’ in stages below.

This first stage of state implementation of the Plan can thus be viewed as a simple digitization of contemporary state fiscal operations. This will not only render state/resident payments more reliably tractable than they are under present arrangements, but also will render the conduct of state/resident payment flows amenable to the use of new payment media such as smart phones and other devices. Indeed, to optimize the functionality of the new digitized arrangement, the state should even develop the ‘app’ through which state/resident payment flows are effected, or contract out

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65 New Yorkers, for example, pay taxes, fees, and fines, and receive benefits under, some 100 state social service and other programs (SNAP, utilities payment assistance, pension benefits, etc.). Id.

66 New York bills itself as ‘the Empire State,’ while California once was ‘the Bear Flag Republic.’ Kansas’s state motto is ‘Ad Astra Per Aspera.’ It is a surprisingly pleasant exercise to think up fund names for multiple states—a ‘Lone Star Fund’ for Texas, a ‘Quaker State Fund’ for Pennsylvania, a ‘Lincoln Fund’ for Illinois, and so on. As a native New Orleanian, the author cannot but hope that Louisiana’s fund will be named the ‘Bontemps Fund.’
for design proposals. In time, as multiple states implement versions of the Plan, we might even act to encourage interstate harmonization of Plans and associated apps across the U.S.

The second stage of state implementation of the Plan will be to enable payment flows not only between the state and its residents, but also among residents themselves. All who hold digital P2P wallets for purposes of receiving payments from and making payments to the state will be enabled to transact with one another in ‘real time’ just as they transact with the state. Instead, for example, of directing that her wallet be debited as the state account is correspondingly credited, as in a tax or licensing fee remittance to the state fisc, a payer will direct that her account be debited as some other, private sector payee’s account is correspondingly credited—just as in any private sector commercial or financial transaction.

In principle, the transition from Stage 1 to Stage 2 of Plan implementation involves no fundamental change in technical requirements or associated challenges. It is simply a matter of adding an additional layer of payment ‘wiring’—an exercise that has long since become ‘old hat’ to fintech and crypto-currency designers. The only new task implicated by the added connectivity is the tracking of simultaneous P2P creditings and debitings of Private/Private transaction wallets in addition to the P2P creditings and debitings of Private/Public transaction wallets. That means more ‘workload’ in an aggregative sense, but because digital payments are overwhelmingly automated, the practical workload effect is de minimis.

It is easy to visualize the Democratic Digital Dollar Plan in operation at the state level of government as just described. That is thanks to the Plan’s simplicity—a simplicity enabled by contemporary P2P payments technologies that effectively render actual payment dynamics structurally isomorphic to double-entry book-keeping, which is in turn no more

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67 The author has developed such an app with a colleague in the tech sector, which will be freely available. He and a number of state legislators have also been meeting with tech consultants in connection with a number of state versions of this plan now under consideration.

68 This stage corresponds to money’s ‘horizontal’ dimension as elaborated in Hockett, Rousseauvian Money, supra note 66 and Hockett, The Capital Commons, supra note 66. Also Hockett, sources cited supra, notes 89 and 133.
complex than the Algebra from which it derives. Figure 3.5 exhibits the structure of payment flows under the Plan.

In the diagram, non-arrowed lines represent institutional linkages and arrowed lines represent payment instructions and associated flows. The payer agrees to pay the payee for some contractual consideration. Payment occurs when the payer instructs the Master Account Administrator, via a chip card, strip card, or smart device app (step 1), to debit her own wallet in the Master Account and correspondingly credit the payee’s wallet in the Master Account (step 2). At Stage 1 of Plan implementation, counterparts in any such transaction will comprise one public and one private sector ‘peer.’ At Stage 2 of Plan implementation, all wallet holders in

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See again Hockett, sources cited id.; and Hockett Payment Polyphony and Monetary Hierarchy, supra note 126, on these linkages.
the system, public or private, will be able to make and receive payments to and from one another in the same manner.

It will be necessary at Stage 1, and desirable at Stage 2, to provide for commercial bank interoperability with the Plan Master Account, in order that state residents be enabled to spend out of their Digital Dollar Wallets into the broader economy, and to withdraw traditional cash if desired, when they’re in surplus. This can be done either by (a) requiring that commercial banks provide connectivity, including ATM connectivity, between individual Digital Dollar Wallets and bank transaction accounts, (b) holding Master Account funds themselves in the form of Plan commercial bank transaction wallets, (c) establishing a state bank, roughly

![Diagram](image-url)
along the lines of the BND model, to assist in administering the Plan, or (d) any combination of these three modalities.

### 3.4.3 The Community (‘Complementary’) Value Ledger Plan

The community rendition of the Digital Dollar Plan can be thought of as a structurally identical or near-identical, but jurisdictionally and practically more limited, case of the state rendition. It is structurally identical or near-identical in that the simple P2P structure manifest in Fig. 3.5 above can be retained with no more than a few labeling changes or other additions to represent it, as Fig. 3.6 below does. It is jurisdictionally and practically more limited in that localities are creatures of state law in the American constitutional order, state-charted as municipal corporations and endowed only with such functions and authority as states affirmatively confer upon them.

Though the decision whether to permit local renditions of the Plan rests ultimately with states, there is good reason for states to permit, encourage, and facilitate their adoption and spread among localities. The principal reason is, non-accidentally, identical to that for ‘community,’ or ‘complementary,’ currencies as advocated by many proponents of greater commercial and financial inclusion—non-accidentally because, as noted above, a currency simply is ‘that which counts’ for purposes of accounting in any value-storage and -payments system.

One entailment of the ‘money as “that which counts”’ truism is that if a given quantum of potential value exceeds a given currency stock’s capacity fully to express and convey that value, potential value can fail to be fully ‘realized.’ Potential wealth will in such case be ‘left’ on the proverbial ‘table.’ People will not produce as much as they can potentially produce in this circumstance, for the means of securing command over productive resources (‘purchasing power’), and of being remunerated for productive

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70 See Bank of North Dakota Homepage, supra note 75.
services (‘earning power’), will be lacking in precisely the same measure as the money supply is lacking.\textsuperscript{71}

This correlation between potential value-creation and monetary value-expression is precisely why the U.S.’s first Treasury Secretary, Alexander Hamilton, made establishment of a national bank and issuance of a new monetary medium his first priority upon taking office with a view to setting the new nation on a path to productive and inclusive prosperity.\textsuperscript{72} It is also why all modern nations maintain central banks or monetary authorities charged with issuing and administering what now are referred to in monetary parlance as ‘elastic currencies.’\textsuperscript{73}

Supplies of elastic currencies can be extended when there remains productive potential yet to be realized (i.e., when there is ‘capacity-underutilization,’ or ‘slack’). They can, symmetrically, be modulated or contracted when they exceed what is necessary for productive use as distinguished from inflationary expenditure (i.e., expenditure upon no longer expanding supplies of goods and services sold in an economy already operating at full capacity). Modern central banking just is the art and science of modulating extensible and contractible elastic currency supplies, with a view to maintaining sustainable balance between ‘money supplies’ and ‘productive potential.’\textsuperscript{74}

States and localities, unfortunately, do not have authority to institute central banks or monetary authorities able to issue and manage their own elastic currencies. When there are frictions or barriers between varying ‘isolated’ communities and the broader national economy over which the nation’s central bank operates, productive potential can in consequence lie fallow, with value in consequence left unproduced and untapped. This ‘scarce currency’ problem is familiar, of course, to many American states and especially cities and rural outposts. It is also familiar, alas, to many

\textsuperscript{71}See again Hockett, \textit{Rousseauvian Money}, supra note 66; Hockett, \textit{The Capital Commons}, supra note 66; and Hockett, \textit{Democratic Digital Dollar}, supra note 89; for further elaboration of these linkages.

\textsuperscript{72}Id. Also Hockett, \textit{Post-Liberal Finance}, supra note 35; and Robert Hockett, \textit{A Jeffersonian Republic by Hamiltonian Means}, 79 SOUTHERN CALIFORNIA LAW REVIEW 865 (2006).

\textsuperscript{73}Id.

\textsuperscript{74}Id. Also Robert Hockett, \textit{A Fixer-Upper for Finance}, supra note 57.
countries and regions in the Euro Area, which also lack domestically managed elastic currencies of their own.75

The idea behind ‘complementary currencies’ is simply to afford additional (‘complementary’) means—means additional to the scarce dominant currency—of expressing, capturing, and trading the value forgone in a cash-poor locality. The currency ‘complemented’ just is the dominant currency in which the community is ‘cash-poor.’ We can thus think of supplemental currencies as ‘value gap fillers,’ trickling into currently inaccessible ‘dry crevices’ where, owing to imperfect integration with the national economy, there is presently not enough regular currency to reach. The complementary currencies in effect nourish currently undernourished ‘green shoots’ or ‘value sprouts.’ If a municipal authority can supply such a currency, it can accordingly fuel more productive activity of the kind that will ultimately not only improve life in the community, but also draw in more of the complemented currency from outside of the community as well, thereby mitigating, if not solving, the problem that necessitates complementary currencies in the first place.76

The institutional challenge posed by the need of a complementary currency is that municipalities lack legal authority to issue any currency that might appear to compete with the national currency. But it is easy with ordinary levying or assessing—for example, license fee-collecting, taxing, fining, and so on—authority and new P2P payments technologies, on the other hand, for a municipality to issue a rough functional equivalent of a traditional currency, usable within its territorial jurisdiction, that truly does complement and supplement rather than compete with the national currency. All that the locality needs to do is relinquish or transfer rights to the payments it is owed in a locally spendable form, while providing a local payments platform on which that local spending then can be done.

The relinquishments can be thought of as—indeed in the first instance they are likely primarily to be—assessment credits, just as many...

75 See Hockett, Open the Marriage to Save It: A Complementary Digital Euro Plan (2019), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3470934; and Hockett, Money for the World: A Digital Clearing Union (2019).

76 See again Hockett, Rousseauvian Money, supra note 66; Hockett, The Capital Commons, supra note 66; and Hockett, Democratic Digital Dollar, supra note 89.
now-familiar sovereign-issued currencies appear originally to have been or betokened.77 Various forms of locally value-adding activity then can be remunerated in these credits, which at Stage 1 of implementation can be locally permitted to be conveyed to the municipal authority in lieu of national currency in fulfillment of the payment obligations that it levies. Then at Stage 2 the locality can facilitate transfers among constituents themselves of these same instruments, such that a local resident might pay a local retailer, for example, in assessment credits ultimately payable to the municipality in discharging assessment obligations.

These latter credits can, once again, in theory be measured in any unit the local authority that establishes the payment platform, along with its electoral constituents, sees fit to establish. But as in the state case above, so here it makes sense to denominate in the national currency to facilitate both (a) ready interoperability with that currency, especially as it comes to be digitized on a national payments platform as envisaged below, and (b) associated fuller integration with the national economy. For the same reasons it will be desirable to ensure interoperability between individual Digital Dollar Wallets and more traditional banking facilities including ATMs.

Stages 1 and 2 as just described of course replicate counterpart stages in implementation of the state version of the Plan sketched above. That is no accident. Through the simple device of a master account and a system of (now local) Digital Dollar Wallets as sketched above, the locality can first P2P-transact with its own constituents much as do states in the State Digital Dollar Plan (Stage 1), then enable P2P transactions among constituents inter se, also as in the State Digital Dollar Plan (Stage 2). All that will differ in most cases will be the size of the plan in both dollar value and participant population terms, though of course large city plans will be larger than small state plans. Pictorially, then, things will look much as in Fig. 3.6.

77 See again Hockett, Rousseauvian Money, supra note 66.
3.4.4 Inter-City, Inter-State, or Regional ‘Compact’ Ledgers

The smaller size of many community plans as just schematized might recommend use of a larger financial institution for purposes of administering the Plan’s Master Account. This could be done, for example, by making use of a commercial bank trust department or other private sector fiduciary, with multiple municipalities banding together to bargain for optimal terms. Better still would be for municipal plans to participate in state plans, ‘plugging in’ to State Master Accounts, be these directly state-managed or state-delegated to commercial or public banks patterned after the Bank of North Dakota.78

By the same token—pun ratified if not originally intended—we can imagine states forming multi-state regional compacts as well with a view to facilitating broader participation in a gradually growing interstate public payments platform and associated deepening economic integration. (Ditto state members of the Eurozone, whose economic isolation within the Euro Area partly reflects the latter’s not being what is known in the discipline as an ‘optimal currency area.’79) In payments parlance, smaller ‘closed loop’ payment systems would steadily integrate into larger such systems, gradually edging-out and replacing the nation’s existing polyglot ‘open loop’ system—if ‘system’ is even the right word for the present welter of multiple rent-extractive arrangements.80

‘Compacting’ of this sort will require no separate ‘Stage 1’ of its own. That Stage will already have been passed through by the participating units of government that have established P2P payment platforms for

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78 See again Bank of North Dakota Homepage, supra note 75.
79 See again Hockett, Open the Marriage to Save It: A Complementary Digital Euro Plan, supra note 144; and Hockett, Money for the World: A Digital Clearing Union, supra note 144.
80 Broadly speaking, an ‘open loop’ payments system is one in which intermediaries—typically but not always financial institutions—stand between transacting parties and whatever party manages the relevant payments platform or infrastructure. In a ‘closed loop’—alternatively, ‘peer-to-peer,’ or ‘P2P’—system, by contrast, only a single payment platform and system administrator stand between payers and payees. See again Hockett, Payment Polyphony and Monetary Hierarchy, supra note 126. See also, for example, Investopedia, Open Loop Card, available at https://www.investopedia.com/terms/o/open-loop-card.asp; and Investopedia, Closed Loop Card, available at https://www.investopedia.com/closed-loop-card-definition-4683996
their constituents. All that will remain to be done is to join separate local or state master accounts into one intercommunity or interstate master account, then install the ‘wiring’ needed to enable mutual P2P crediting and debiting, including for purposes of ATM cash withdrawal, by all legal persons whose state or local governments join to form the relevant compact and associated payments platform. Thereupon state, local, or both kinds of governmental unit will continue to remit and receive P2P payments vis-à-vis one another and vis-à-vis constituents through Digital Dollar Wallets of their own in the Master Account, while their constituents will also be able to transact across state or local boundaries inter se.

3.4.5 A U.S. Treasury-Administered Inclusive Value Ledger and ‘Treasury Dollar’ or ‘Digital Greenback’ Plan

The intergovernmental ‘compacting’ just envisaged suggests the prospect of state and local payments platforms and associated digital currencies’ being ‘built out’ to embrace an ever-widening circle of citizens, businesses, and other residents of the U.S., all of whom will be progressively liberated both from the depredations of rent-extracting private sector ‘payment service’ firms and from the anti-productive economic stagnation that imperfectly available non-digital national currency still permits notwithstanding its Fed-managed elasticity. Much as digital value-storage and payment media like Alipay and M-Pesa have enabled far greater value-expression and associated value-generation in historically ‘under-banked’ nations like China and Ethiopia, so will Democratic Digital Dollars enable the same in the U.S. The only difference will be that here this medium of value-storage and transfer will be publicly afforded as the essential public infrastructure that it is, just like its predecessor payment technologies of U.S. Mint-stamped coins, Fed-issued Dollar Bills, and Treasury-issued Greenbacks, T-Bonds, T-Notes, and T-Bills.81 Having

81 See again Hockett, Rousseauvian Money, supra note 66; Hockett, Payment Polyphony and Monetary Hierarchy, supra note 126; Hockett, Money’s Past, supra note 66; and Hockett, The Capital Commons, supra note 66; Hockett, Digital Greenbacks, supra note 66.
publicly issued these money tokens while money has been primarily material, we shall continue to do so as money becomes primarily digital.\(^{82}\)

This steady expansion of digital value-storage and transfer availability to all will be facilitated—indeed, it is all but guaranteed—by the structural simplicity of the Democratic Digital Dollar Plan, which replicates that of a simple ledger or account book maintained among friends, family members, or multiple depositors holding accounts at the same bank. As straightforward as book-keeping, account-keeping, and the algebra from which accounting derives, the digital dollar platform bids fair to proliferate widely among units of political organization on the strength of its own ease of administration and its rent- and stagnation-ending fecundity.

The likelihood of such intergovernmental payments system conglomeration through ‘compacts’ suggests that ultimately our ‘highest’ level of government itself—our federal government, with its (i.e., with our) plenary jurisdiction over all matters monetary and commercial within our national union—will do well to build and administer a national Plan that includes all state and local Plans. The fact that such a system will enable optimal development of the Green New Deal as well, along the lines discussed above, suggests not only that development along these lines is probably inevitable, but also that forward movement as quickly as possible is equally desirable. Hence the Fed-administered Democratic Digital Dollar plan proposed above. On the way there, however, it might be simpler to commence with a Treasury rendition of the Plan, particularly amid pandemic such as is now underway at the time of this writing.

It is straightforward, in light of the foregoing discussion, to envisage what at least the simplest, Treasury rendition of such a plan would look like. The Treasury rendition of the Democratic Digital Dollar Plan would, yet again, be structurally identical to the state and local renditions schematized above. All that would differ, also again, would be the scale and scope of the Plan as measured by (a) the number of participating legal persons, and (b) the number of kinds of Public/Private remittance that the new payments platform would facilitate.

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\(^{82}\) Id.
With respect to (a), all persons within U.S. jurisdiction who have occasion to transact with the federal fisc—citizens, residents, businesses—would now have P2P Digital Dollar Accounts of the kind sketched above, through which they would pay and be paid by other legal persons and governmental units with Accounts on the platform. In effect, the Master Account and Account Administrator of Figs. 3.5 and 3.6 would simply become a Treasury Master Account and the Treasury Department, respectively.

With respect to (b), the number of kinds of Public/Private remittance facilitated now would include all forms to which federal instrumentalities are party in addition to those to which state and local governmental units are party. Hence federal benefits and credits like Social Security, Federal Farm Credit loans, Small Business Administration loans and the like; procurement payments such as by the departments of Transportation,
Defense, or the like; fines and penalties; and taxes or tax refunds and credits like EITC all would now flow through the national Digital Dollar Plan pipeline.

The result would be a complete and fully integrated federal, state, and local P2P payment platform and associated Democratic Digital Dollar, with localities able to administer dollar-denominated community currency systems, states able to join and to integrate localities in that project of intrastate payment system completion, and the U.S. Treasury providing the platform through which payments flow among household, business firm, municipal, state, and federal ‘treasuries.’ As with the state and local renditions sketched above, moreover, so here implementation would proceed in two stages, beginning with the establishment of individual accounts enabling remittances between Treasury and all holders, and proceeding thence to enabling payment flows among all account holders inter se, including for purposes of ATM access to cash. Pictorially, things would accordingly look as depicted in Fig. 3.7.

All of the foregoing would be true in pretty much any period of late twentieth and early twenty-first-century U.S. history. It is probably also worth noting, however, one variant of the Treasury Plan that both could and now probably be should be instituted immediately. At the time of this writing, the U.S. Congress is authorizing direct cash payments from Treasury to U.S. citizens and businesses hard-hit by the ‘social distancing’ and ‘shelter in place’ imperatives occasioned by the spring 2020 Coronavirus pandemic. This has confronted both Congress and Treasury with an especially poignant challenge—namely, how to get payments out to the 25% of the population who are unbanked or underbanked, and how to get payments more safely and quickly—without use of paper, which is a virus vector—to the millions more who do not have ‘direct deposit’ arrangements with Treasury.

As it happens, Treasury already has an infrastructure ready to hand, which it could quickly expand, to handle this problem. Through Treasury Direct, anyone with a bank account and a Social Security or Taxpayer I.D. number can open a transaction account—a Treasury Direct Account, or ‘TDA’—with Treasury within five minutes online, through which to transact with Treasury in Treasury securities. This means that Treasury already has, in effect, a digital infrastructure corresponding to ‘Stage 1’ as
described above—that is, ‘vertical’ P2P connectivity between public fisc and individual account holders. All that is missing are two readily supplied additions—(a) ‘horizontal’ connectivity between Treasury Direct accounts themselves, and (b) capacity to transfer legal tender—that is, Federal Reserve Notes—between accounts.

An immediate measure that could be taken before summer of 2020, then, would be (a) for Treasury to put in place ‘horizontal’ connectivity between digitized TDA wallets, and (b) for Congress to authorize a new Treasury Bill—call it a ‘Treasury Dollar Bill’ or ‘Treasury Dollar’—valued at one Federal Reserve Note per that will count as legal tender just like Federal Reserve Notes. This is the author’s ‘Treasury Dollar Plan’ now under consideration by members of the U.S. House Financial Services Committee and the Senate Banking Committee.83

It is to be hoped that this plan will be adopted and implemented as quickly as possible. Then, once the spring 2020 pandemic has passed, the system can be more fully integrated with, or perhaps folded into, a full Democratic Digital Dollar and People’s Fed plan such as that discussed above, as the pandemic’s end allows for more painstaking fine-tuning. Summing up the foregoing, Fig. 3.7 schematizes what a Treasury Dollar Plan en route to a full Democratic Digital Dollar and People’s Fed plan might look like. Terms and symbols continue to bear the same meanings they’ve had in prior diagrams, with the one partial exception that ‘$’ here refers to Treasury Dollars rather than Federal Reserve Notes—a distinction that makes no difference other than in respect of issuing authority.

Again, in time this system could migrate to Fed administration and be fully integrated into the incrementally restructured Fed as sketched above. As noted earlier, this would in effect follow the script of the paper

83 See, for example, Robert Hockett, The Treasury Dollar Act of 2020, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3563007; Robert Hockett, A Treasury Dollar Plan, available at https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=3567829; Robert Hockett, ‘Digital Dollars for All,’ Wall Street Journal, April 6, 2020, available at https://www.wsj.com/articles/digital-dollars-for-all-11586215100; Robert Hockett, ‘Why Now for a Treasury Dollar? Because Coronavirus,’ Forbes, March 29, 2020, available at https://www.forbes.com/sites/rhockett/2020/03/29/why-now-for-a-digital-treasury-dollar-because-coronavirus/#1dc97a521305; Robert Hockett, ‘How to Keep the Digital Dollar Democratic: A Treasury Dollar / Treasury Direct Plan,’ Forbes, March 24, 2020, available at https://www.forbes.com/sites/rhockett/2020/03/24/how-to-keep-the-digital-dollar-democratic-a-treasury-dollar-bill%2D%2Dtreasury-direct-plan/#132acd6e37c8; Hockett, Digital Greenbacks, supra note 66.
dollar itself, which began as the Treasury-issued ‘Greenback’ in the late nineteenth century, then migrated to Fed issuance in the early twentieth century as more fine-tuned monetary operations grew in both urgency and feasibility. Whether we go this route or continue to charge Treasury with this task, perhaps while working a gradual consolidation of Fed and Treasury operations as I have suggested in prior work, can be decided in future.

3.5 Pictorial Summary and Synthesis

It might be helpful to summarize the financial architecture elaborated above one more time in pictorial form, now including state-level public banks and continuing (though shrunken) privately owned banks. Figure 3.5 does so. Terms, line segments, and arrows mean what they’ve meant in prior diagrams, with two additions: First, the horizontal arrows at bottom depict interactions with the Fed or NIC via their regional offices or subsidiaries, which can but need not be financial flows. Second, an ‘issuer/investor’ is a financial intermediary, which in the diagram issues to (i.e., is funded from) the left and invests (i.e., funds) to the right (Fig. 3.8).

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84 Id.
85 The consolidation prospect is vetted at length in Hockett, Capital Commons, supra note 66.
Fig. 3.8  Reformed bank/Fed/ NIC relations and financial flows. (Source: Author’s creation)