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The Wealth of Our Commonwealth: Money, Capital, and Finance in a Productive Commercial Republic

Robert Hockett

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The Wealth of Our Commonwealth: Money, Capital, and Finance in a Productive Commercial Republic

Robert Hockett[*]

There is a share of the investment capital available in any society that is generated by the public. In contemporary societies with well-developed payment systems and effective public governance, this share tends to grow large in comparison to that originated by non-public sources, the latter is intermediated and thus must be pre-accumulated, while the former is generated and is the source of what is accumulated. In spite of these truths, the US outsources management of its public capital stock to private sector financial institutions. This is a practice that a host of underappreciated collective action predicaments endemic to decentralized market exchange, most of them recursive and hence iteratively self-worsening without limit, ensures will result in misallocation and, therefore, poor modulation of credit aggregates as well. What is needed to draw public capital out of bubble-inflation and back into productive investment is to bring it back under public management, a project for which the present exposition provides a full architecture. This architecture is modeled as a stylized public balance sheet, taking the US Treasury and Federal Reserve System as a consolidated case study. Public liabilities take the form of Democratic Digital Dollars issued through interest-bearing digital Business and Citizen Wallets. Public assets take the form of public credit extended by the Treasury's Federal Financing Bank ('FFB') and a newly 'Spread Fed' only for productive, not speculative, projects. A National Reconstruction & Development Council ('NRDC') and Price Stabilization Fund ('The People's Portfolio') complete the picture, respectively affording democratic guidance as to what counts socially as 'productive' and collaring volatility among Systemically Important Prices and Indices ('SIPIs'). Our public capital stock is a public resource in need of public management, which must be managed productively by and for the community.

[*] Edward Cornell Professor of Law, Cornell University; Adjunct Professor of Finance, Georgetown McDonough School of Business; Senior Counsel, Westwood Capital, LLC; Senior Fellow, New Consensus; Advisory Board, Public Banking Institute; Advisory Board, Stanford Digital Currency Lab; Founding Board, Digital Fiat Currency Institute. Formerly Federal Reserve Bank of New York and International Monetary Fund. Thanks to my colleagues at these institutions and to my 'Sounding Board' on matters financial: Dan Alpert, Kaushik Basu, Sarah Bloom Raskin, Natalie Braun, Rana Foroohar, Sandra Lee, Paul McCulley, Katherina Pistor, Bob Shiller. Posthumous thanks to A. Hamilton, R. Hilferding, R. Luxemburg, G. Myrdal, J. Necker, J. Schumpeter, and Knut Wicksell.

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INTRODUCTION

There is a share of the investment capital available in any society that is generated by the public.[1] The origination and disposition of this share–the directions of its flow and the purposes of its use–are determined by the public whether deliberately or by default, and whether all members of the public are fully cognizant of the fact or are not.

In contemporary societies with well-developed payments systems and effective procedures of public governance, the public share of investment capital tends to grow large in comparison to the share provided by non-public sources. The reason is that the latter share is intermediated and thus has to be pre-accumulated, while the former share is generated and indeed the source of what is accumulated.

I call the publicly generated share of a society's investment capital by turns 'the Public Capital Stock,' or 'the Wealth of the Commonwealth,' and aim in the present Article to show that it exists, how it exists, and how it is best managed and utilized. The institutional upshot finds expression on the asset and liability sides of what I shall call the 'Public Balance Sheet' or 'Citizens' Ledger,' which I model as a partly consolidated Treasury and Central Bank balance sheet.[2]

On the liability side of the Public Balance Sheet, the institutional upshot of my analysis and exposition takes the form of a publicly administered digital savings and payments platform and associated system of interest-bearing digital 'Citizen,' 'Business,' and 'Guest' Wallets. The common currency of this system – what I will call a Fed-issued 'Democratic Digital Dollar,' or '3D' – will be a digital rendition of the U.S. Dollar as we presently know it and be freely convertible into and out of all other physical forms that the US Dollar now takes.[3]

1. 'Investment Capital' – in essence, purchasing power spent upon inputs to production. *See infra* Part I.C.

2. *See infra* Part I (explaining terms that become terms of art in this exposition are capitalized pursuant to a procedure described therein).

3. *See, e.g.,* Robert C. Hockett, *Digital Greenbacks: A Sequenced "Treasury Direct" and "Fed Wallet" Plan for the Democratic Digital Dollar,* 25 J. OF TECH. L. & POL'Y 1 (May 12, 2020), (proposing a number of digital fiat currencies and associated platforms, including the 3D, a Digital Greenback, and a Treasury Dollar. The reasons for each are explained in the papers that introduce them. Were the proposal advanced in the present Article to be adopted, these earlier offerings would be at most interim

This liability side supplementation of present arrangements will prove on analysis to be not only desirable, but in fact indispensable. For it turns out to be requisite not only to distributively just commercial and financial inclusion, but also to (a) savings and payments efficiency, (b) optimal money turnover and thus macroeconomic growth, (c) effective transmission of central bank monetary policy and (d) commercial and financial privacy, and (e) the capacity of our Republic's currency to give full expression to all forms of publicly beneficial behavior that we *as* a republic decide ought to be publicly encouraged, compensated, or rewarded as 'productive.'

On the asset side of the Public Balance Sheet, the institutional upshot of my analysis and exposition takes the form of restored central banking functions and facilities that give full expression to the conviction that we the public must, through the instrumentalities of our Republic, reclaim and retain a more active role in the direct, locally sensitive allocation of our Public Capital Stock than our current regime of 'outsourcing' or 'franchising' the task to large, private sector financial institutions permits us.[4] This proves to be the only means of overcoming a host of underappreciated yet long-term catastrophic collective action failures, most of them recursive and hence iteratively self-worsening without limit, that now prevent adequate Productive, as distinguished from Speculative, investment of our Public Capital Stock.[5]

The asset side reforms to our Public Balance Sheet laid out below also prove requisite to the effective discharge of that money-*modulatory* task which nearly all now acknowledge, after decades of neglect of macroprudential finance-regulatory policy, to be a primary purpose of our central bank. For Modulation and Allocation of the Public Capital Stock, which the present author has for well over a decade now urged that we keep analytically distinct in our theoretical modeling, are *not* fully separable as a *practical or operational* matter. Fully effective Modulation requires attentive Allocation – in particular, the avoidance of under-allocation to Production and over-allocation to counterproductive Speculation. [6]

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measures en route to the 3D proposed here); Robert Hockett, *The Treasury Dollar Act of 2020* (Mar. 27, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3563007. *See* A08686A, 2019–2020 N.Y. State Assemb., Reg. Sess. (N.Y. 2019) (The Empire State Inclusive Value Ledger Establishment and Administration Act of 2019).

4. This Article can be viewed as a sequel of sorts to Robert Hockett, *The Capital Commons: Digital Money and Public Finance in a Productive Commercial Republic* (Cornell Law Faculty, Working Paper No. 125, 2018), https://scholarship.law.cornell.edu/clsops_papers/125; Robert Hockett, *Finance Without Financiers*, 47 POL. & SOC'Y 491 (2019) https://journals.sagepub.com/doi/epub/10.1177/0032329219882190. *See also* Robert Hockett & Saule Omarova, *The Finance Franchise*, 102 CORNELL L. REV. 1143, 1145–46 (2017).

5. These problems do *not* afflict fully *privately* originated investment capital, at least not in ways that impose externalities that need concern the public *qua* public. Hence the reconstruction of our financial system effected below leaves them largely untouched. In effect, they will simply now have to be what they have long falsely claimed to be – 'intermediaries.' They will be, that is, mutual funds, or 'narrow banks' that invest only private, not public capital. *See infra* Part III. *See also* sources cited *supra* note 4.

6. The distinction between and relations among what the present author calls 'credit-modulatory' policy on the one hand and 'credit-allocative' policy on the other are fundamental to the author's work of the past 12 years, and failure to attend carefully to their relations accounts for a surprisingly large portion of the most salient financial and macroeconomic disasters of the past century. For essential background, see, e.g., Robert Hockett, *A Fixer-Upper for Finance*, 87 WASH. UNIV. L. REV. 2013 (2010) (introducing the distinction and proposing 'regulation as modulation' as preferred model of financial supervision); Robert Hockett, *The Macroprudential Turn: From Institutional 'Safety and Soundness' to Systemic 'Financial Stability' in Financial Supervision*, 9. VA. L. & BUS. REV. 201, 214 (2015) (interpreting the move toward macroprudential finance oversight as reflecting long-awaited implicit

My full analysis and exposition proceed as follows. First I show both that and how we the Public, through the institutions of our Republic, generate the greater part of our Investment Capital, our Public Capital Stock. Then I show how our present system of outsourcing the *management* of Public Investment Capital to profit-maximizing private sector banking and 'shadow banking' institutions is neither logically justified by the putative reasons now commonly proffered for it, nor operationally consistent with the task of long-term productive Capital Investment, hence Productive Capital Allocation and effective Capital Modulation.

From these arguments, I turn to designing a set of optimal institutional arrangements that will ensure, not just permit, precisely that desirable development which our current arrangements prevent: productive long-term investment for ongoing national development, the proceeds and collateral benefits of which are equitably enjoyed by literally every Citizen, Business, and Guest of our Republic.

Here, we shall find, is the key to that optimal Allocation and Modulation just referenced.

This key is as simple as the Asset and Liability side reforms to our Public Balance Sheet previewed above, with an assist from a new FSOC-inspired National Reconstruction and Development Council ('NRDC') comprising the heads of the Fed, the Treasury, and all cabinet-level Executive Agencies with jurisdiction over our principal national infrastructures and industries, assisted by an upgraded Federal Financing Bank ('FFB'). A Price Stabilization Fund, or 'People's Portfolio,' through which to maintain the stability of Systemically Important Prices and Indices ('SIPIs'), and a system of equitable macroeconomic growth sharing through what I call Treasury Growth Dividends ('TGDs'), complete the picture.

I. Capital

My first task is to make good on the first claim I made in introducing this Article – that the greater part of Investment Capital is publicly generated. This Part discharges that task through a carefully ordered sequence of cumulative steps, each of which makes use of and hence defines key terms of art as we proceed. Parts II and III then show how not, then how best, to *manage* our Public Capital, using the *language* of this Part in building upon the *lessons* of this Part.

A careful and suitably detailed exposition of the present nature and future potential of our Public Capital Stock requires, among other things, that we understand the process of capital investment and capital accumulation themselves. Explicating and understanding that process in turn requires that we organize thought through the use of well-defined concepts or categories of thought that have application to financial practice and financial 'reality.'

In some cases, the concepts that we require are already well captured and conveyed by clear, unambiguous terms of art familiar to lawyers and financiers

recognition of the distinction's regulatory importance). For discussion of the practical inseparability of the conceptually distinct allocation and modulation functions, and of the consequences of this inseparability for the sustainability of our present practice of assigning allocation to Treasury and modulation to the Fed. *See* Hockett, sources cited supra, note 4. And for a popularly accessible discussion of the conceptual distinction and the practical difficulty of maintaining it, *see* Robert Hockett, *Money in Context: Part 1*, L. & POL. ECON. PROJECT (Apr. 8, 2020), https://lpeproject.org/blog/money-in-context-part-1, and Robert Hockett, *Money in Context, Part 2*, L. & POL.ECON. (Apr. 9, 2020), https://lpeproject.org/blog/money-in-context-part-2.

generally, and to economists occasionally. In other cases, the concepts that we require are presently named by ambiguous, equivocal, open-ended, or clearly but inconsistently employed terms of art, and in still other cases, they have yet to be named by any useful terms at all.

Probably few fields of study are more plagued by this species of terminological Babel than the field of finance–unless it be economics. 'Capital,' 'money,' indeed the word 'finance' itself… what does one mean when one uses such words? I shall aim to define all terms clearly upon each occasion of introduction over the course of the article, and will 'capitalize'–pun half-intended– their occurrences both upon definition and then at all subsequent points of the analysis. I will do this in order to highlight the fact that they are 'technical' terms with particular meanings for our purposes.

I will start with 'Capital'–surely the single most mysteriously used term in the whole of finance, if not economics more broadly.[7]

A. 'Capital'

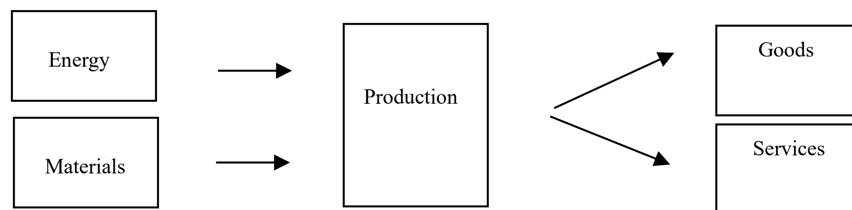
'Investment Capital' lies at the core of my claims and analyses, and indeed figures in the very first sentence of the present exposition. So I will commence by defining that term. In so doing, it proves helpful first to define 'Capital' generically as anything used in the 'Production' of something else, then to differentiate separate species of this genus through further distinctions and associated lexical refinements.

'Investment Capital,' thanks to an idiosyncrasy of the terminological hand we are already dealt, then emerges as one of these species.[8]

1. Production

Let us begin with the 'Production' in relation to which capital usually is understood. Most activity that we treat as bearing 'economic' significance has some connection to 'production' or 'productive activity,' and all forms of 'Capital' seem to be understood by reference to the same. We can define such 'Production' as the application of energy by some individual or collective agent either to transform given materials into other, more desired material 'Goods,' or to generate desired material 'Services.' Pictorially:

Figure 1: Stylized Production Function



7. *See, e.g.,* Robert Hockett, *From 'Law In' to 'Law And': Some Legal Foundations of Economic Analysis* in LAW, ECONOMICS, AND CONFLICT (Kaushik Basu & Robert C. Hockett, eds., 2021).

8. The idiosyncrasy is that, strictly speaking, all forms of capital are by definition 'invested,' such that the prefix 'investment' shouldn't do any work. As it happens, however, the prefix does do work because common usage has come implicitly to define 'investment capital' simply as *non-material* capital, understood in contradistinction to 'hard capital,' 'physical capital,' 'machine capital,' and the like.

Production on this rendering can be effected by individual agents or collective agents, commonly called 'organizations,' 'associations,' or 'firms', and can be pursued under any number of property, contract, or counterpart governance arrangements of the kind that we find in all societies, commercial or otherwise.[9] In this sense, the term is meant very broadly.

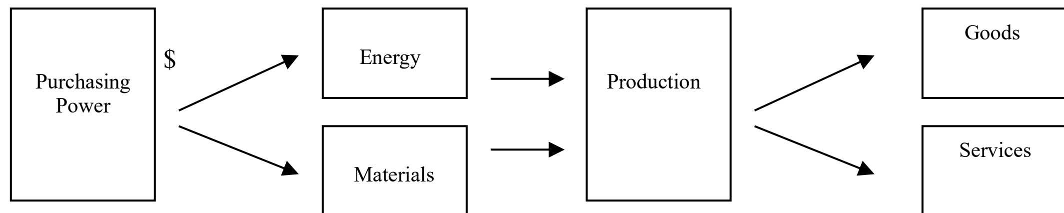
2. Generic Capital

In a society in which Goods and Services provision, transfer, or distribution is effected through direct rationing or apportioning by a central administration rather than through market exchange, 'the Capital Stock' will simply be the aggregate of those material objects that the society as a singular collective agent deploys either in the Production of other material objects or in the delivery of services. In Aristotelian terms, we might label these objects 'Means-Goods' as distinguished from 'Ends-Goods'–Goods consumed only in the Production of other Goods or in the provision of Services, rather than solely for survival, nutrition, or enjoyment.[10]

In a society where at least some Goods and Services provision, transfer, or distribution is effected through *exchange* rather than direct rationing or apportioning, and in which exchange is in turn effected through *barter*, the Capital Stock will simply be the previous aggregate, on the one hand, as differentiated on the other hand into (a) the still centrally rationed or apportioned Stock, and (b) the portion of Stock that the society does *not* apportion or ration directly as a singular collective agent, but instead assigns or consigns to the initiative of individual members of the society–thereby fostering 'market exchange' (in this case, in bartering form) as a species of what is sometimes called 'private ordering.'

Finally, and most saliently for our purposes, in a society where transfer or distribution is done at least partly through exchange and exchange is effected, in turn, not through barter but through a generic *medium* of exchange–a 'Money'–the Capital Stock will appear under *three* aspects. The first two will be those just formulated–Capital as the sum of objects that either are or can be directly deployed by the society or its members in the Production of Goods or delivery of Services–while the third will effectively amount to the quantum of *exchange media*, or 'Purchasing Power,' or 'Money' deployed to secure *command* over objects of the aforementioned kind.

Figure 2: Stylized Production Function in a Monetary Exchange Economy



9. Hockett, *The Capital Commons*, supra note 4, at 23.

10. One could, of course, treat pleasure or welfare as 'products,' as orthodox welfare economists in effect do, but the object of the present exercise is precisely to separate out for its own treatment the raw and produced *material inputs* to these individual 'utility functions.'

3. Generic Capital in Production–Investment Capital

It is not uncommon to employ the term 'Investment Capital' only to designate Capital in the third guise just formulated, even while overlooking or making nothing of the fact that it is exchange *media*, or 'Money' of some form, that one is then typically talking about. The latter omission is perhaps forgivable, however, given the multiple functions that Money discharges *beyond* merely serving as a medium of exchange.[11]

Hence we shall define the term here–again, 'Investment Capital'–simply as Purchasing Power deployed to produce or provide Goods, Services, or, through sale of the same, yet greater Purchasing Power.[12] In such case, Investment Capital will be fully represented by the box to the far left of *Figure 2*, while what we might then distinguish as Physical Capital will be represented by the two boxes stacked immediately to its right.

Generically speaking, 'Investment Capital' on this understanding can also be thought of as 'Financial Wealth' used to generate greater Wealth.[13] Hence the many rough synonyms for 'Investment Capital' in common usage, which include not only 'money capital' and 'finance capital,' but also 'liquid wealth' and the like. 'Wealth' is an especially ambiguous term, however,[14] while 'money' and 'finance' discharge more functions than that which I wish here to single out with 'Investment Capital,' so I will be sparing in my use of those other terms, capitalizing them only when using, not merely mentioning, them.[15]

In my rendering, then, the user of Investment Capital employs Purchasing Power to gain control over the disposition of objects or services (including energy supplies) purchased or rented, in order therewith to expend energy to generate what amounts, in commercial societies, ultimately to *more* potential Purchasing Power. This the user does through the Production or generation of more Goods or Services that can be rented out or sold–that is, 'liquidated' or 'monetized'–even if some of the latter are *not* ultimately (even meant to be) rented out, sold, liquidated, or monetized.[16]

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11. *See* Hockett, *Money in Context: Part 1*, *supra* note 6; Hockett, *Money in Context: Part 2*, *supra* note 6.

12. There is of course an isomorphism here with Marx's celebrated 'M-C-M' rendering of capitalist production in KARL MARX, CAPITAL: A CRITIQUE OF POLITICAL ECONOMY VOL. I 146 (Frederic Engels ed., Samuel Moore and Edward Aveling trans., International Publishers 1897)(1867)(". . . M-C-M, the transformation of money into commodities and the change of commodities back into money; or buying in order to sell.").

13. This is effectively the mode of analysis employed in Sraffa's monumental work. *See* PIERO SRAFFA, THE PRODUCTION OF COMMODITIES BY MEANS OF COMMODITIES (1960).

14. The word derives, of course, from the adjectival and adverbial forms of the word 'good' – 'well' – and accordingly associates terms like 'commonweal' and 'commonwealth' with 'the common good.'

15. The use/mention distinction, to which I will hew strictly, is helpfully laid out in W.V. QUINE, MATHEMATICAL LOGIC 23-26 (Harper & Row Publishers rev. ed. 1963).

16. *See* Marx, *supra* note 12, at 149-53 (describing the way that surplus value is created when money is transformed into commodities which is then transformed into a greater amount of money, which Marx calls "M-C-M").

This is how we both generate and accumulate Wealth–how we grow in 'prosperity' or, in an earlier idiom, 'opulence,' in any monetary exchange economy undergirding a commercial society.[17]

B. Investment

In societies that consign a significant portion of Investment decision-making to individual initiative, prompted by individual incentive to profit, Capital lends itself to 'Finance' and, through Finance, what I will call Financial 'Stratification.'[18] The latter emerges from individually rational efforts by individual agents to re-socialize risks that attend their privatized Investment activities even when they are Investing effectively in Public Investment Capital. These are efforts that we shall find often aggregate into collectively irrational, because counter-productive and wealth-destructive, outcomes.

We'll come to that. The point to emphasize *here* is that multiple 'levels' of Capital contribution can interpose themselves–in finance parlance, 'Intermediate'–between initial disposers of Capital on the one hand, and the processes of Production that Investment Capital 'capitalizes' on the other hand. This gives rise to more salient analytic distinctions and associated terms of art that prove useful at the expository stage to which we are headed.

1. 'Investment' & 'Finance'

While it is common in some contexts to employ terms like 'finance' and 'investment' more or less interchangeably, it will be best for present purposes to restrict our use of the word 'Investment' to circumstances in which Investment Capital, as defined just above, is at work in financing Production. Hence we'll use both 'Investment' and its cognates only in productive contexts, meaning in turn that it will serve as an antonym of sorts to 'gambling,' 'gaming,' 'betting,' 'wagering,' 'speculating,' or 'mere speculation.'

I am, of course, aware of the difficulties in some circumstances of sorting between 'investment' and 'speculation' given their overlaps rooted in risk, and hence am deliberately denigrating this form of skepticism in defining our terms as I do here. I do so because this alleged difficulty is much overblown, and then serves to provide cynical cover for what is no more than complacency or surrender in the task of reclaiming control for productive purposes of our Public Investment Capital.

There will be more to say on this matter in due course. Suffice it for now to observe that, unlike Sorites, most of us can use words like 'baldness' and 'heap' sensibly, notwithstanding there being no evident integer *n* such that fewer than *n* hairs definitively qualify Socrates as 'bald,' or such that fewer than *n* grains

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17. Opulence of course figures as the proper object of economic policy in Adam Smith's Wealth of Nations, as well as the work of most other practitioners of 'political economy' before the 'marginalist' turn of the 1870s. ADAM SMITH, THE WEALTH OF NATIONS (W. Strahan and T. Cadell, London, 1776). That shift can accordingly be marked as the beginning of a move from preoccupation with material production to a strange new preoccupation with 'subjective utility' a la Bentham. The corresponding terminological shift from 'political economy' – that is, the 'home economics' of the polis, or polity – to mere 'economics' signals that change rather starkly.

18. *See generally* Robert Hockett, *Metamarkets* (2010) (working paper) (on file with the author).

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disqualify a quantum of sand from the status of 'heap.' 'That's life,' as one says and so is it likewise finance.

'Finance' I shall use somewhat more generally, and indeed vaguely, than 'Investment.' I will treat it as genus to Investment's species, embracing all contexts in which Purchasing Power is deployed to produce goods or generate further Purchasing Power, irrespective of whether this is done through Production or via other means–means that include gambling or Speculating.

2. Stratification & *N*-ary (a.k.a. 'Meta-') Markets

In what I and some others call the 'Primary' case of Capital Investment and Production, the Investment and Production process as described above involves both material and juridical elements or 'inputs'–physical objects or processes on the one hand, and legally enforceable claims to the right of their use or disposal on the other hand. In what I will call the 'Secondary,' 'Tertiary,' or indeed any *N*-ary case, in turn, the process involves only juridical elements–claims on the claims generated in the (*N*-1)-ary case.[19] In light of their essential reference to other 'lower level' markets in determining the Money value of Claims, we can call all such Claims markets 'Meta-Markets.'

In a typical Primary Market case, for example, I will deploy Purchasing Power to take rights in 'raw materials,' which I will transform into 'finished' goods or services through a Production Process that might also involve my purchasing 'labor services'–that is, renting labor.[20] The material elements here are–surprise–the mentioned materials: the goods or services. The juridical elements are my rights in the same, as well as to any surplus net of inputs–any 'profits'–that I glean through a sale, should I sell.

In a typical *Secondary* case, in turn, you confer *your* purchasing power upon *me*, whereupon I now proceed through the process that I've called the Primary case. The contractual consideration that you have likely required of me as a condition for use of your Purchasing Power is now your legal entitlement–your right, your justiciable claim to agreed compensation–be that a debt claim, an equity claim, or some hybrid of these.

This is entirely 'legal,' or juridical, in the sense that you now need not 'dirty your hands' with material objects or processes of any sort to take part in Production. Secondary participation of this kind accordingly enables remote participation in material Production–as do Tertiary and other *N*-ary forms with $N>3$.[21] And this form

19. *Id.*

20. The distinction nowadays drawn between 'labor' and 'material' inputs to production appears to be rooted in the repudiation of human ownership. Where there is chattel slavery, humans can be owned and hence figure among the objects consumed in production – *all* inputs are 'capital' inputs. Where chattel slavery and similar forms of servitude are prohibited, humans are rented instead of owned and hence differentiated from physical objects – inputs divide into 'labor' and 'capital.'

21. Care must be taken not to confound 'primary' and 'secondary' here with those terms as used in contemporary financial markets – a potentially difficult task inasmuch as the same sort of stratification is involved, with the difference residing simply in different 'starting points' – different 'primary cases' and hence different numbers assigned the successive layers in the hierarchy. In financial market parlance, the term 'primary' refers to what I'm calling 'secondary,' while the term 'secondary' refers to markets in which claims generated below are 'negotiable' – that is, 'alienable,' 'saleable,' 'tradable,' 'exchangeable,' etc.

of Meta-Market remoteness from Primary Markets, we will see, can lead to attenuation that grows not productive, but production-indifferent or counterproductive.

3. Intermediation, Derivation, 'Financialization'

There is a tendency on the part of many who speak of finance, particularly those keen to convey an impression of possessing recondite knowledge, to speak of 'financial intermediation' instead of 'finance.' There is nothing necessarily intermediating, nor should there be anything intimidating, about 'finance,' however, any more than there is about that species of Finance which is Productive Investment. Intermediation is an artifact entirely of Stratification as just defined, hence of remote and entirely juridical participation in Production as just described.

In a typical *N*-ary case as just described, for example, someone confers upon you the Purchasing Power that you confer upon me in the scenario earlier specified (hence *N*=3), or confers it upon someone else who confers it on you so that you can confer it on me (*N*=4), etc. In all such cases, Intermediation emerges simply because *N* exceeds 1. The larger *N* is, in turn, the greater the margin by which Meta-Markets come to exceed Primary Markets in the notional value of Money turnover, or what is more tellingly called 'market churn.' And that is all there is to it–apart from the dysfunction that such churn can foster.

When *N* grows very large, or when the number of remote participants in Production at any stratum *N*>1 grows very large, Intermediation can grow more salient than Production itself it can grab our attention, generate problems or otherwise get 'in our face.' Meta-Markets, that is to say, can come to exceed Primary Markets in significance, whether we read significance in terms of the notional value of money turnover or in terms of the hours of human attention 'paid' to the markets in question.

This can in turn lead one to think that Finance is all or primarily about Meta-Markets and Intermediation. Conflation of Finance with Financial Intermediation in this way signals thought of Finance as abstracted, inadvertently or otherwise, from Finance's foundational purpose, which is Production through Productive Investment. That is unhealthy if our wish is to produce our own future, in which we must Productively Invest. We can usefully label the process through which this shift of attention and activity from Productive Investment to Financial Intermediation occurs–the process through which Meta-Markets come to exceed Primary Markets in significance–the process of 'Financialization.'

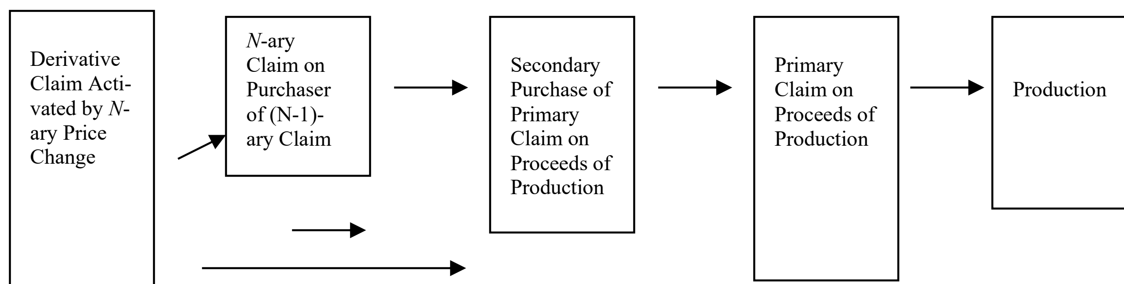
Investment Stratification is not the sole source of attenuated participation in Production, hence of Financialization. In a typical 'Derivative' case, for example, I purchase from you a contractually contingent claim referencing events that might befall my (or perhaps someone else's)[22] *N*-ary claim on Production. The contingency in question is then called a 'triggering event,' a 'referenced event,' an 'insured event' or, in financial derivatives parlance, 'an underlying.' The 'underlying'

22. The parenthetical 'someone else's' highlights a critical difference between primary insurance markets, in which the *Insurable Interest Doctrine* holds legal sway, and the secondary insurance – that is, derivatives – markets, in which it does not. In the first case, I can bet on – that is, insure against – my own property's being damaged, but not against yours being damaged. In the second case, I can bet on anything. This form of untethering is present not only in secondary insurance – that is, derivatives – markets, but also in repo markets that permit unrestricted rehypothecation of collateral. *See* sources cited, *supra* note 4.

just is the claim one is effectively 'hedging'–that is, insuring or betting upon–through the purchase of further, now contingent and offsetting, claims.

Here too, as in the *N*-ary cases associated with Investment Stratification, only juridical elements–legally vindicable contractual claims–are involved, be they contingent or otherwise. Hence the less elliptical synonym for 'Derivative' that is 'Derivative Contract.' And hence the suggestion above both *N*-ary cases where N>1 and derivative cases enable remote participation in material Production.

Figure 3: Stylized Representation of Stratified & Derivative Markets



The more remote this participation, it should be noted, the more 'Intermediated' and, therefore, potentially 'Financialized' the relation between Investment Capital and Production becomes. For again, I shall define here the oft-used but seldom defined term 'Financialization' simply in terms of degrees of remoteness from Production along either or both of two axes implicitly referenced already above: (a) the numerical value of *N*, and (b) the notional value, or 'churn,' of transactions occurring at any *N*>1.

Participation in some of these cases out in 'the real world' can become *very* remote. For in *N*-ary cases, remoteness grows directly in tandem with *N*. And in Derivative cases, for their part, the claim-conferrers are typically interested in Primary Production not in the capacity of direct or indirect investors in Production for Production's (or sale's) sake, but instead in the capacity of agents who have wagered on the values or price paths of underlying *claims on the proceeds* of the Production, or of claims on such claims, or on claims on such claims on such claims, etc.

The short-term market values of these claims can vary, often enormously, from the longer-term market values of what is produced through Production processes–a source of 'slippage' we shall find to lie at the core both of the Investment/Speculation distinction and of the incapacity of our present system of outsourced management of Public Investment Capital to allocate or modulate Public Capital productively and stably.[23] In effect, this dysfunction is simply the by-product of consigning Public Investment to private sector agents, while permitting the same agents to re-socialize Production-associated risk with abandon.[24]

We can say more: given the contractual nature of both Derivative Claims and *N*-ary Claims in Stratified Financial Markets, we can expect to see lawyers and

23. *See generally* Robert Hockett, *Wall Street's 'Ok Boomer' Moment-What They're Not Saying About GameStop*, FORBES (Jan. 31, 2021), https://www.forbes.com/sites/rhockett/2021/01/31/wall-streets-ok-boomer-moment--what-theyre-not-saying-about-gamestop/?sh=1490b97f49a6.

24. Re-socializing by hedging and thus pooling the relevant risk – in this case, with one's 'insurers,' a.k.a. derivative counterparties.

financiers proliferate in number relative to engineers and applied natural scientists as an economy and society move from preoccupation with Production to preoccupation with Investment, thence from Investment to Finance, thence from Finance to 'Financial Intermediation,' and thence from Financial Intermediation to full on Financialization. These things are all of a piece, and proceed from that severing of Finance from Production which the consigning of Public Capital to Private management not only brings, but structurally *must* bring.

You read that rightly. The tendencies to which I refer are inherent in any system of Investment that consigns the deployment of Public Investment Capital to private initiative. And this suggests that privately ordering production, as 'capitalist' economies do, might not be sustainable without publicly ordering finance. Demonstrating the inherence of the mentioned tendencies and thus the likely truth of the latter supposition, which requires explication of certain collective action predicaments latent in all forms of decentralized market exchange, takes us straight to the ultimately Public source of literally all Investment Capital, as well as to the virtual impossibility of good private management of Public Capital.

C. Money

Now is the time, counterintuitive as it will initially ring, to turn from 'Investment Capital' to the 'Purchasing Power' in terms of which I defined it above. This affords us a crucial additional angle on Investment Capital itself, including not only its properties and behavior in its commercial and financial habitats, but also its source–the Public.

1. Paying

'Purchasing' as used in the term 'Purchasing Power' presupposes exchange and hence payment. 'Power' for its part suggests legal or normative efficacy,[25] and variable quantifiability,[26] the prospect of holding or transferring 'more' or 'less' Purchasing Power. This in turn opens the door to some scale, measure, or metric's becoming useful or even necessary for purposes of efficient exchange in some societies.

Modern 'Financialized' societies in which Investment Capital 'flows,' like the populous commercial societies and complex exchange economies on which they are constructed, are such societies. We typically call the scales–the scalar measures of value–that they adopt 'monies,' in the 'unit of account' sense of the word that is salient in accounting.[27]

Accounting… this too is needed in modern 'Financialized' societies in which Investment Capital tends to 'flow,' as in the complex commercial societies and exchange economies on which such societies are constructed. For it is simply the tracking of juridical claims–the contractual rights referenced repeatedly above.

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25. *See generally* Robert Hockett, *Rousseauvian Money* 38 (CORNELL LEGAL STUDIES RESEARCH PAPER SERIES No. 18-48 May 15, 2018).

26. Robert Hockett, *Putting Distribution First,* 18 THEORETICAL INQUIRIES IN L. 159, 181 (Jan. 22, 2017).

27. *See* Hockett, *Money in Context: Part 1*, *supra* note 6.

In commercial societies and the exchange economies in tandem with which such societies grow, transfers of most things, including contractual and hence juridical claims, are reciprocal. This is all that the doctrine of contractual 'consideration,' alluded to above, amounts to. And this practice is what underlies the practice of so-called 'double-entry bookkeeping,' or modern Accounting.

2. Accounting

Accounting in exchange economies like ours is the practice of tracking contractually exchanged reciprocal obligations–an obligation's being simply the flip-side of a claim. (My obligation to you is your claim upon me. You 'own' what I 'owe.')

'Mental accounting' suffices to track flows of claims and obligations in narrowly circumscribed, low transaction-volume–that is, 'low velocity'–contexts.[28] Such contexts typically also allow for exchange to be barter–hence for obligations and claims to be discharged as quickly as they are incurred. As transacting grows in complexity, volume, and turnover rate, however, mental accounting gives way to Ledger Accounting or 'bookkeeping,' while the latter comes to employ a generic 'unit' of account for purposes of simultaneous quantification and commensuration.[29]

What one is owed–that which one 'owns'–per a ledger we call one's 'Credit,' which is accounted as a 'Financial Asset.' That which one owes we call 'Debits,' or 'Debt'–which is accounted as a 'Financial Liability.' We call the discharge of credits and debits 'Payment.' And when the debits arise from a sale, we call the payment a 'Purchase,' in the sense used above in the phrase 'Purchasing Power.'

3. Crediting / Debiting

The fact that barter involves the simultaneous discharge of mutual obligation is why instantaneous barter does not involve Credit, Debt, or Money. The latter arises only in cases of non-simultaneity, meaning in turn that they make use of time. Credit, Debit, and time hang together. So then do *Money* and time–'time is money'– since Money comes into the picture only when Credit and Debit, and the Accounting that tracks Credits and Debits, come into view. Hence the role played by *time* in the celebrated Swedish and Austrian accounts of Capital outside of the Anglosphere, not to mention Fisher's, Keynes's, and Minsky's later Wicksellian and neo-Austrian accounts of Money, in the late 19th and 20th centuries, respectively.[30]

Because Money is simply the measure of quantifiably variable Credit and Debit, it is 'only natural' that Money, as unit of account, should morph into money as 'medium of exchange.' For again, Credit and Debit arise from exchange, and one must exchange something for something else, which if not bartered can only be Money.[31] This is why Money is sometimes called 'spendable credit.' It is why

28. *See* Hockett, *supra* note 25, at 28.

29. Hockett, *supra* note 26, at 178

30. Robert Hocket, *Modern, Pre-Modern, or Post-Modern Money? A Brief Guide for the Perplexed,* FORBES (Oct. 26, 2020), https://www.forbes.com/sites/rhockett/2020/10/26/modern-pre-modern-or-post-modern-money-a-brief-guide-for-the-perplexed.

31. Money-payment and barter jointly and complementarily determine the entirety of payment space. What is not one is the other.

money can also be called, what I called above, 'Purchasing Power.' Money, Purchasing Power, the measure of both, or of Credit and Debit… these all come down to one thing. All are embedded in 'common practice'–practices of Exchanging, Paying, and deferring Paying; hence Crediting, Debiting, and Accounting.

This tells us yet more about Purchasing Power and therefore Investment Capital. Money as just described is just 'that which pays' in a Payment Practice or 'Payments System,' and 'that which counts' in a system of Debit and Credit Accounting.[32] And since, thanks both to Payment Practices and to the 'legal tender' laws that typically sharpen them, Money is Purchasing Power,[33] Money is likewise Investment Capital as defined above.

II. Public Capital

Now we are fully equipped to see how publicly-generated Investment Capital–what we shall also call 'Public Investment Capital' and 'the Public Capital Stock'–comes to exist and what makes it possible. We can also then see why it must be publicly managed.

A. Payments Systems / Platforms

Commercial societies typically provide and publicly administer Payments Systems and the Accounting rules under which such systems operate. Credits and Debits flow 'through' such Systems, and Accounting Rules determine which Credits and Debits 'count' for Payments purposes, what 'counts' as discharge or Payment, and how the magnitudes of such Credits and Debits are measured–viz., in terms of a scalar 'Money.'[34] But, this being so, the Public is also thus able to generate Investment Capital–simply by conferring Credits that can be spent through the Payments System that it provides and administers, and hence assume Purchasing Power.

It is obvious that a Public *can* confer Purchasing Power, and hence generate Investment Capital, by fiat or 'helicopter drop.'[35] It is less obvious that Publics *already do so*. And understanding both *that* and *how* they do so is crucial to understanding both how modern Publics–call them '*Re*publics'[36]–have come to generate the greater part of deployable Investment Capital within their territorial jurisdictions, and why better governance of this share's deployment is now both possible and critically necessary.

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32. *See* Robert Hockett, *The Democratic Digital Dollar: A Digital Savings & Payment Platform For Fully Inclusive State, Local, and National Money & Banking Systems,* 10 HARV. BUS. L. REV. 1, 3 (2020); ROBERT HOCKETT, FINANCING THE GREEN NEW DEAL: A PLAN OF ACTION AND RENEWAL (2020). *See generally* Robert Hockett, *Money's Past is Fintech's Future: Wildcat Crypto, the Digital Dollar, and Citizen Central Banking*, 2 STAN. J. OF BLOCKCHAIN L. AND POL'Y 1 (2019); Hockett, *Finance Without Financiers*, *supra* note 4, at 498.

33. *See* Hockett, *supra* note 25, at 27.

34. *Id.* at 20 (simple credit and debits units, incidentally, figure as the monetary system in Philip K. Dick's short story, 'We Can Remember It for You Wholesale,' on which the Paul Verhoeven film *Total Recall* is based.).

35. *See generally* sources cited, *supra* note 32.

36. *Res Publica*, REI PUBLICAE (2023) https://reipublicae.org/vocabulary/res-publica (from the Latin *res publica* – roughly, 'public thing' or 'public entity').

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B. Banks

We'll start with the Banks–specifically, what the law calls 'Depository Institutions,' including the 'Commercial Banks' that now dominate the depository landscape–since these are the primary conduits through which Public Investment Capital is generated and allocated.

You go to a bank for a loan to finance a remunerative project–a project you are sure will be profitable and can show to be likely to prove profitable. You need purchasing power to purchase your project's inputs, but you are cash-poor because all that you have is your own private promissory note. Your note is not legal tender–it is not recognized as Money–and hence cannot serve directly as monetized Investment Capital. Neither can mine. So, you go to the bank to exchange your promissory note–swap it–temporarily for *public* promissory notes. These *do* count as legal tender, as Money, and hence Purchasing Power usable to finance Production.[37]

Now the bank is going to evaluate your proposed project before approving your proposed swap. I want to talk about how it does that in a moment, for much hinges on that. But first, let us see how the swap works and how it turns privately approved loans into publicly issued Investment Capital.

If the bank approves your swap application, it is going to trade for your promissory note not quite literal public promissory notes, but what used to be called their fiduciary equivalent.[38] It is going to open an account in your name, credit an account already there in your name, or provide you a check–another variant on our old friend the promissory note–that instructs someone else to credit you.

Now for the kicker: you can immediately *spend* this credit–it is monetary from the get-go, requiring no antecedent accumulation of gold in a sack, bills in a vault, or whatever. You simply insert a chip, swipe a strip, or key a blip and you've paid for the inputs to your bank-financed project, be they machine tools or a ticket to Vegas (we'll come back to that). This confers upon bank loan Money a peculiar attribute, depicted in *Figure 4*: While some of it is privately intermediated in the form of exogenously deposited funds, most of it is endogenously generated in the form of bank-conferred loan proceeds in newly-opened or credited spendable deposit form. Diagrammatically, this point is captured by the fact that none of the flows represented by arrows in *Figure 4* need be temporally prior to any others.

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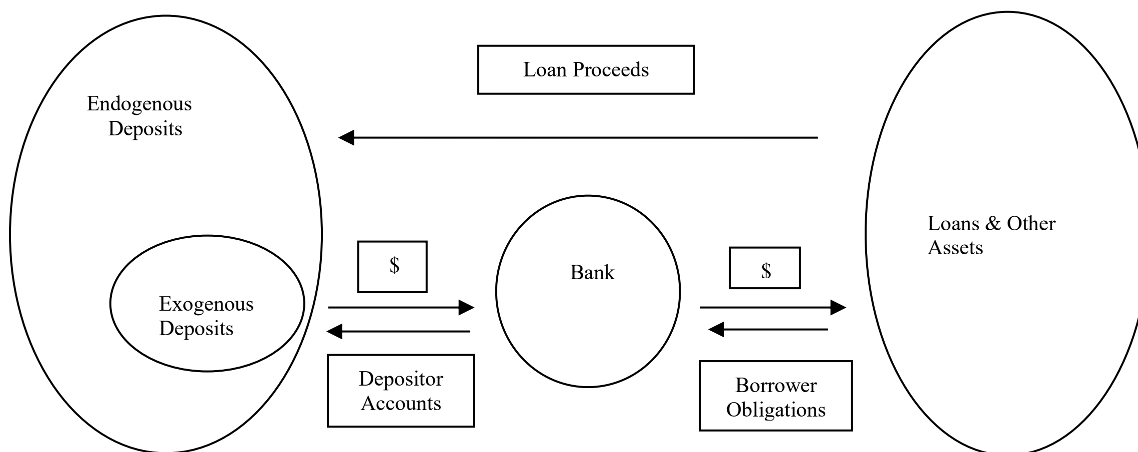
37. Robert Hockett, *What Is 'The Comptroller of the Currency' – And Why Does It Matter?*, FORBES (Jan. 19, 2021), https://www.forbes.com/sites/rhockett/2021/01/19/what-is-the-comptroller-of-the-currency--and-why-does-it-matter/?sh=1c0d10a8717a. ("Look at a dollar, read across the top. A dollar is a Federal Reserve Note – a 'note' as your promissory note is a note. But it is more widely usable. That is why it is money – public money.")

38. *See generally* Knut Wicksell, *Geldzins und Güterpreise*, 8 The Econ. J. 31 (1898).

Figure 4: Exogenous Deposit and Endogenous 'Bank' Money



This form of Monetized Public Investment Capital changes everything and has done so for centuries. It not only enables Productive Investment, but also allows effectively infinite, hence infinitely wasteful and counterproductive, speculation in Meta-Markets. Its analysis accordingly lay at the core of the work of the greatest economist whom you might never have heard of, Sweden's Knut Wicksell (1851-1928), who called this stuff 'bank money.'[39] You've heard of Keynes, and 'the Austrians,' though. Fragments–and alas, *only* fragments–of Wicksell's insights found their way into contemporary thinking through Keynes in the Anglosphere and 'the Austrians' beyond. But Wicksell's followers drew only modulatory, not allocative, lessons from his work. And that is our tragedy, as we are nearly now ready to see.

Keynes and the Austrians 'got' the endogenous money and consequent bipolar 'swinging' we find in financial markets to which Wicksell attended with ceaseless attention to detail. That's all that Keynes's 'credit money' spin on Wicksell's 'bank money,' and Austrians' 'business cycle' spin on his 'cumulative process' effectively were. That is why 'neo-,' 'post-,' 'classical-,' and others whom I call '*x*, *y*, *z*-Keynesians' of all stripes fixate on the '*macro*-economics' that they credit Keynes with inventing. And it is why Austrians fixate on 'taming' endogenous money by shackling it to finite-supplied shiny metals or 'Taylor rules.'

None of these bromides helps much, however, as surely the past eighty years should have demonstrated. And this is because you cannot get the macro right without getting the micro right. You cannot well modulate unless you well allocate.[40]

39. *Id.*
40. *See* sources cited *supra* note 6 (the distinction between and relations among what the present author calls 'credit-modulatory' policy on the one hand and 'credit-allocative' policy on the other which are fundamental to the author's work of the past 12 years).

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And unfortunately, we cannot get allocation right under our current arrangements of outsourcing.

C. Outsourcing

How do Banks (and a few other 'shadow banking' Financial Institutions)[41] come by this power that you and I lack–the power to issue credit instruments immediately spendable as money? How do they become those to whom we 'outsource,' in the idiom I used above, the allocation of our Public Investment Capital?

What makes this possible–what makes your loan effectively a private note/ public note swap–is that the bank is a publicly licensed institution networked into our national payments system. At the *center* of that system sits (wait for it) our *central bank*. In the US, that is the Fed, a public instrumentality that oversees banks chartered by yet other public instrumentalities–the suggestively named 'Comptroller of the Currency' for national banks, and state banking commissioners for state banks.[42]

Now, as noted above, a functioning Money is just 'that which pays' in a payments system–'that which counts' in a system of debit and credit and value accounting. It is we, the same Public that licenses our Banks, who legislate what shall pay, what shall count, and who shall disseminate it when we generate it, *ex nihilo*, through public-private note swapping of the kind that I've just said Bank lending amounts to. And here in the US, again, we have legislated that the public sector Fed shall generate and hence modulate the full supply of this 'Bank Money,' while the private sector Banks to which we outsource the lending function shall allocate it.

I am not a licensed bank, so I can only *purport* to lend to you by 'opening an account' in your name and handing you a chip card or strip card to 'swipe the swap.' But when you swipe it to purchase your inputs–machine tools or plane tickets or otherwise–nothing will happen. It 'does not count.' It will not pay. It is not Money, it is not a Public Capital instrument swapped for your private capital instrument. Nor is it that instrument's instantly generable and indefinitely extensible fiduciary equivalent–a 'bank account.' For again, I am not a Bank.

Banks hold this power simply and solely because and insofar as we the Public have conferred it upon them. Through this conferral, we have conferred upon them the power both to disseminate and to allocate our Publicly generated Investment Capital. We have, in other words, 'outsourced' to licensed Banking Institutions the capacity to act as authorized issuers and distributors of our monetized public full faith and credit–our Public Investment Capital, our *Money*.

We do this, probably, for two reasons that we have not noticed are no longer operative. First, before we had developed viable state fiscal and monetary capacities, the lion's share of Investment Capital was indeed privately supplied, meaning the Banks in which private sector accumulators held it were natural allocators on those accumulators' behalf. And second, we tended to believe these suppliers of

41. *See* sources cited, *supra* note 4.

42. *See* discussion *infra* Part III(a) regarding the Comptroller. Hockett, *Money's Past is Fintech's Future: Wildcat Crypto, the Digital Dollar, and Citizen Central Banking*, *supra* note 32, at 10; Robert Hockett, *What is 'The Comptroller of the Currency' – and why Does it Matter?*, FORBES (Jan. 19, 2021), https://www.forbes.com/sites/rhockett/2021/01/19/what-is-the-comptroller-of-the-currency--and-why-does-it-matter/?sh=15e0fd3f717a.

Capital were both well-incented and well-situated to disseminate our Capital *productively*–that is, in ways that facilitate Production as defined above.

But the first belief lost its validity in the US with the coming of a nationally issued currency and nationally-chartered banking system during the Civil War–effectively the time at which the US became a unitarily sovereign nation-state with full state capacity.[43] The second belief lost validity with the stratification of *N*-ary and Derivative markets after that, as we shall now see.

Now, were all Investment 'Primary' Investment in the sense specified above, as more of it seems to have been in the past than is the case now, faith in 'outsourcing' the Allocation task would not be an altogether implausible expectation. Because we do not constrain *N*-ary or Derivative 'investments,' however, and because these have accordingly proliferated over the past half-century through the above-defined processes of Stratification, Derivation, and Financialization, that faith has grown ever more sanguine.

The reason is that the more such Stratification and associated Claim-proliferation that occurs over time, the more opportunity there is to direct Purchasing Power to the purchase of *N*-ary Claims through which one profits less by Production than by accurately guessing the future market prices of (*N*-1)-ary Claims. And this over time comes to divert Investment Capital away from Production and toward Production-indifferent Speculation.

The reason for *this*, in turn, hinted at earlier, is that short- to medium-term profitability in the Claims markets need not correspond, in the short- to medium-term, to Productivity in the Goods and Services markets, and can indeed operate *counter*-productively. In fact, as we will now demonstrate, it is virtually certain to do so, thanks to the pervasiveness of multiple species of Collective Action Problems in both Primary and *N*-ary 'Meta-Markets,' including what I call '*Recursive* Collective Action Problems'–or 'ReCaps'–in decentralized Capital and Money markets. It is time now to examine those.

1. Collective Action

Collective Action Problems are choice situations in which everyone's' individual, rational acts aggregate into collectively self-defeating, and in that sense, irrational, outcomes.[44] In this sense, they are paradoxical, 'tragic,' in the classical Greek, 'damned if you do, damned if you don't' sense of the word.[45]

The most salient non-recursive Collective Action Problems where Production is concerned stem from what I call Controllability and Capturability problems, respectively, in economies in which Production is consigned to decentralized 'private ordering' of the kind noted above. The first–Controllability Problems–induce collectively irrational Under-Investment in Productive industry. The second–Capturability Problems–induce collectively irrational Under-Investment in infrastructures upon which efficient Production depends.

Where productive *industry* is concerned, to begin with, individual households and firms are unable to control the background conditions–full employment in 'high

43. *See* sources cited, *supra* note 42. *See also* Hockett, *The Capital Commons*, *supra* note 4, at 49.

44. *See* Robert Hockett, *Recursive Collective Action Problems: The Structure of Procyclicality in Money Markets, Macroeconomies, and Formally Similar Contexts*, 3 J. OF FIN. PERSPS. 1, 8 (2015).

45. Tragedy is species to Misfortune's genus.

quality' occupations,[46] continuous effective demand, secular price stability, etc.–requisite to long-term Investment profitability.[47] Hence, they can find it individually rational to bet on price movements in *N*-ary Financial and Derivatives markets rather than invest 'patient capital' in projects that take longer to materialize.[48] But such individually rational decisions aggregate into collectively irrational outcomes–Under-Investment in Primary Markets, Over-Speculation in Meta-Markets, and consequent industrial and financial fragility.[49]

Where *infrastructure* is concerned, in turn, the gains to national income to be had from state-of-the-art infrastructure are generally diffuse and individually uncapturable, amounting to what the economists call positive externalities. They also manifest over long time horizons exceeding individual lifespans.[50] But this means they are difficult for individual investors to capture and profit by. Thus, it can again be individually rational for private sector agents to Underinvest–in this case, in productivity-enhancing infrastructure, which amounts to a classic public good–while again over-speculating in Meta-Markets.[51]

Hence again, individually rational decisions to refrain from investing will aggregate into collectively irrational Under-Investment–in this case, in infrastructure–and Over-Speculation on price movements in non-Primary ('*N*>1') strata of Financial activity on the part of the polity as a whole.[52]

2. Recursive Collective Action

The dysfunctions wrought by the Collective Action Problems that plague decentralized Financial markets grow worse by orders of magnitude as they feed or morph into *Recursive* Collective Action Problems. ReCaps are Collective Action Problems with 'feedback effects.'[53] They are self-worsening in consequence of their structure, which involves an iterative process pursuant to which individual reactions at time *t*+1 to events that occur at time *t* do not counteract those events, but repeat them in a more acute form.

Examples abound in decentralized goods, Banking, and Capital markets. A few familiar examples will make the point:

Inflation: You and I see prices rising, and hence rationally buy more now rather than waiting till later; but this just makes prices rise faster. *Deflation*: You and I see

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46. *See* Daniel Alpert, et al., *The US Private Sector Job Quality Index,* Cornell Legal Stud. Rsch. Paper No. 20-33 (2019) (discussing 'high quality' employment, which has been steadily dwindling in the US for fifty years even when official 'unemployment' was low; developing and applying a tractable measure of 'job quality' and demonstrating steady decline since the early 1970s).

47. *See* Hockett, *supra* note 44, at

48. The importance of this explanation of 'financialization' and associated macroeconomic dysfunction cannot be overstated, yet appears to be entirely overlooked Private capital *cannot find yield* in contemporary primary markets, hence quite *rationally* speculates on movements in securities prices and secondary market indices, often through taking *derivative* positions. *See* Hockett, *Finance Without Financiers*, *supra* note 4, at 515; Robert Hockett & David Grewal, *Financialization* (Eur. Pub. L. Org., Working Paper, 2014); Robert Hockett, *Market Churn to Market Cap: A 'Financialization' Index* (Eur. Pub. L. Org., Working Paper, 2015).

49. *See* sources cited, *supra* note 4.

50. Hockett, *Finance Without Financiers*, *supra* note 4, at 496.

51. Hockett, *The Capital Commons: Digital Money and Public Finance in a Productive Commercial Republic, supra* note 4.

52. *Id.*

53. *See* Hockett, *supra* note 44, at 6.

prices falling, and hence rationally defer buying and hiring till later, ; but this just makes prices fall further and unemployment rise faster. *Bank Run*: You and I hear that our bank is faced with liquidity trouble, hence rationally head there to withdraw our funds; but this simply hastens the eventuality we fear. *Asset Price Bubble*: Simply a hyper-inflation in financial markets. *Market Crash* or *Asset 'Fire Sale'*: Simply a debt-deflation or 'bank run' on assets. And so on.

The Stratification, Derivation, and Financialization developments noted above to be naturally recurring phenomena under decentralized Financial arrangements stemming from the recursive mechanisms that underlie ReCaps. They also give full play to the mechanisms through which Speculation comes steadily to displace Productive Investment in market economies where Finance is as decentralized as Production.[54] For a market in Claims at stratum *N*+1 upon Claims at stratum *N* is precisely what enables betting–Speculating–directly on price movements at stratum *N*–price movements that need not solely, and certainly do not directly, reflect success or otherwise in Production at 'ground level' (stratum *N*=0). Financial Recursion just is the repetitive iteration of this form of betting.

As noted above, betting of this kind from the point of view of those seeking to hedge at any stratum *N* is effectively the attempt to re-socialize–to 'spread' or 'share'–the risks that attend either Productive activity or lower stratum (*N-M*, with *M*>0) bets on Productive activity when these risks are individually borne, which in this (decentralized Production) context they are by definition. Financial Intermediation and Derivation, hence Stratification and Financialization, are simply the natural, collectively irrational (because counter-Productive) upshot of these individually rational efforts.

3. Underinvestment / Overspeculation

Where Production is directly Financed without Intermediation–as it is, for example, when conducted by either a lone entrepreneur or a society collectively acting as a single composite entrepreneur–Production risk is hedged or diversified simply by Investing in more than one project. Only where Production and Investment are *both decentralized* does the diversification of 'Investors' supplement or supplant the diversification of Investments.[55] Only then do diverse 'portfolios' of '*Investors*' become as crucial as portfolios of *Investments*.

Were only Private, pre-accumulated Investment Capital, without newly generated Public Investment Capital, the sole form of Capital flowing to this form of Investor diversification through betting, there would be no occasion for system-wide Hyper-Speculation and Under-Investment. For the funds that would flow in this direction would have to have been pre-accumulated, hence would be both finite in supply and losable by the supplier (who would accordingly have 'skin in the game').[56]

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54. *See* Hockett, *Financing Without Financiers*, *supra* note 4, at 510.
55. *Id.* at 502.
56. *See* IRVING FISHER, 100% MONEY (1935). This is the point behind '100% money,' '40% money,' and other 'narrow banking' proposals ever since Fisher's. Keynes politely declined to endorse the plan upon receiving Fisher's invitation to do so, as the plan included no public-issuance to offset the private contraction that Fisher's narrow banking proposal would bring – in the midst of a debt-deflation no less. Regrettably, the many revivals of Fisher's proposal proffered since 2009 suffer the same defect.

Where indefinitely extensible (because generated rather than intermediated) Public Capital enters the picture as it does through Bank and Shadow Bank lending, however, real mischief looms. The reason is that the infinitely iterable process that is Financial Recursion now has an indefinitely extensible *source of betting money* to boot–money that is not the bettor's to lose. This combination, then–Public Capital with Private Intermediation and Iteration–is the proverbial witches' brew that in the long term is insupportable.

It cannot be stated too often that ReCap dynamics are the underlying micro-structure that makes this all possible. For the implication is that the problem we face is itself *structural*, it does not depend upon any form of individual irrationality, individual immorality, or informational inefficiency to occur, meaning in turn there is no regulatory or criminal law 'fix' to the problem. (The latter is not a 'bug,' but a 'feature.') The *structure* of ReCap dynamics simply denies these iterative, self-referential processes stable equilibria notwithstanding–indeed, *because* of–individual rationality. There are no naturally occurring counter-active tendencies that will eventually kick in to stop ReCaps from 'spiraling out of control.' Lack of (individual) control thus issues in *more* lack of control.

In none of these cases do market participants *wish* to behave in collectively irrational manners. It is just that, again, they *cannot individually control* the decentralized macro-environments pursuant to whose internal micro-structures these dynamics all operate – they are (inflating or deflating) price 'takers,' not 'makers.'[57] And this means their *not* acting collectively irrationally – that is, their not acting individually rationally – will bring much quicker 'suicide' than the alternative. At least there is some hope, after all, that you might 'beat the crowd' to the failing bank or the theatre door.

The pervasiveness of Collective Action Problems in decentralized markets quite generally, and the *abundance* of *Recursive* Collective Action Problems in Capital Markets in particular, render diffuse private sector institutions poor allocators of Public Capital–at least if not carefully guided or effectively commandeered by the Public that licenses them. Solutions to Collective Action Problems require exercises of Collective Agency, and that is all that coherent Publics or governments are–sites of Collective Agency where 'we' act as one in our joint capacity, in order jointly to maintain a background environment in which each of us can enjoy efficacy to act productively, not counterproductively, in his or her individual capacity.[58]

Joint action is required to enable effective several action–this is the best way to think of Collective Agency, which we are now finding to be necessary if there is to be Productive Allocation, and hence effective Modulation, of our Public Investment Capital.[59]

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57. For a case study in the primary, then secondary and derivative mortgage markets, which underlay the present author's eminent domain plan for underwater mortgage loans during the last financial crisis, see Robert Hockett, *Paying Paul and Robbing No One: An Eminent Domain Solution for Underwater Mortgage Debt*, 19 (5) CURRENT ISSUES IN ECONOMICS & FINANCE 1 (Federal Reserve Bank of New York, 2013), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2173358; Robert Hockett, *It Takes a Village: Municipal Condemnation Proceedings as Underwater Mortgage Cure*, 18 STAN. J. L., BUS. & FIN. 121 (2013), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2038029; Robert Hockett, *'We Don't Follow, We Lead': How New York City Will Save Mortgage Loans Nationally by Condemning Them Locally*, 124 YALE L. J. 131 (2014), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2532704.

58. *See* Hockett, *supra* note 25, at 13.

59. *Id.*

III. Public Capital Management

This takes us on to our final subject: what effective Collective Agency in managing our Public Capital Stock, and hence good governance and Productive Investment of our Capital Commons, entails. What follows is grounded in the nature of Public Investment Capital, and the dysfunctions that attend its Private management, drawn out above. Let us turn back, then, to some of the subjects with which we opened, now considering them from a more relentlessly Public point of view–that of 'Us' in our joint capacity, rather than 'you' and 'me' in our several capacities.[60]

A. Public Accounting

Let us return first to Accounting, but to the Accounting specifically in connection with the Public Capital Stock and its proper purposes. To do this is effectively to imagine, through double-entry bookkeeping, a full Public Balance Sheet of the kind mentioned in the introduction of this Article. The latter in turn can be disaggregated at will for particular purposes into a sheaf of distinct interlocking, sub-Public, *partial* balance sheets.

Suppose, for example, that the Public Capital Stock is managed by a Public Bank. It is at the national level what we might call a 'Central' Bank in virtue of its operation as the sole 'Financial Intermediary' between, or 'at the center of,' parties who transact in Public Investment Capital.[61] The Central Bank in such case will have Assets and offsetting Liabilities as does any Bank–or, for that matter, any person or entity that experiences Capital inflows and outflows.

In the case of ordinary Commercial Banking Institutions, the greater part of Liabilities are Deposit Liabilities–the obligations under which Banks operate to enable withdrawals or payments from Depositor accounts. There will be other Liabilities too–obligations on bonds sold in bond markets, for example–but again, Deposit Liabilities will make up the lion's share. This, you might have guessed, is how banks play the role that they do in constituting the national Payments and hence Credit dissemination system described above. (Recall what your loan is, and how it is extended to you.)

On the Asset side of the Bank's Balance Sheet, in turn, are the Bank's many 'Investments,' which might or might not be Productive Investments. Among these, of course, is your Promissory Note as described above. Likewise, all other Investments that the Bank has made–additional loan Promissory Notes, more negotiable Debt instruments like corporate bonds and U.S. Treasury securities, etc., are all manners of Bank betting, Investing, or both.

But now note: the Collective Action Predicaments noted above tend to lead, we observed, to Under-Investment in long-term industrial and infrastructural improvements, hence in Production and Productivity. In many cases, those who run Banks will hope instead to place bets on price swings in *N*-ary and Derivatives markets. That is where the 'quick buck' is found, and that is what the individual shareholders, both individually rationally, and collectively irrationally, are after. That is, again,

60. *Id.*

61. Note that in a certain sense that will be recognizable thanks to the foregoing, we all do that every day in spending dollars, which are tradable liabilities issued by the Fed as surely as bluechip Apple bonds are tradable liabilities issued by Apple.

because they cannot control the macro-environment that enables Investments to be profitable and cannot individually capture most of the value that's generated by Primary Investment. So the Collective Action Problems that plague decentralized Capital Markets will find expression on 'short-termist,' hyper-'Financialized' Bank Balance Sheets.

Now return to the Balance Sheet of a Central Bank managing the Public Capital Stock and imagine what this might look like. Unlike the case of the Commercial Bank, in the case of the Central Bank, there is no pressure exerted by shareholders for whom it is individually rational to insist on a quick buck. Rather, those who manage the Capital Stock do so with a view to the stably and steadily growing long-term wealth and well-being of society's constituents–those in whose name the Central Bank acts.

Moreover, because it is unitary and is any society's most inclusive Collective Agent in the Investment realm, the Central Bank faces no Collective Action Challenges whatever, and likewise is able both to Control the macro environment in the relevant respects and to Capture and Monetize gains. None of the dysfunctions that plague private-sector Capital allocators are present here. The Central Bank, in effect by definition, just *is* the *solution* to those problems. It is the Republic's duly authorized collective agent in the realm of Money and Finance.

Does that mean there's no place for Private Sector Capital Allocation, or that a Central Bank or like instrumentality should altogether replace, or, in essence, displace Private Sector Banks and other Financial Institutions? No, but it does mean the relation between Central and Non-Central Banks, and the relation between that Bank and households and firms, should be different than it is now.

Let us get the easy case out of the way first. I noted in opening this Article that Public Investment Capital steadily outpaces Private such Capital in contemporary societies with full state capacity and well-functioning payment systems. That suggests there at least *is* some such Capital–'Private' Capital. I also noted in connection with Bank lending that I cannot in my personal capacity disseminate monetized Public Full Faith and Credit as Banks can, and that I must accordingly pre-accumulate anything I would lend. That, too, suggests that there is some such Capital–'Private' Capital.

And lo–there is. The sum total of privately held Capital can be lent as Investment Capital alongside of Public Investment Capital. Insofar as this happens there is Private Investment Capital flowing along with Public Investment Capital. Nothing I have said in my exposition thus far suggests or implies otherwise. Nor, therefore, does what I have just said about Central Banking have any bearing as of yet upon private Capital flows. For all of that was about Publicly managing *Public* Investment flows.

It is already clear we can do both, then. Note now that, *were* we to do both, then the *Privately* managed Banking and Capital management industry would be what seemingly all financiers nowadays falsely claim of *all* Capital and Finance now –namely, that it is all about Intermediation. Insofar as the Public share of the Capital Stock is not pre-accumulated but is instead generated, the Intermediation picture is patently–indeed is absurdly and embarrassingly–false.[62] But by the same token, inasmuch as *Private* investment capital *is* pre-accumulated, *its* management *can* be said to be all about Intermediating.

62. *See* sources cited, *supra* note 4.

It follows that taking management of the Public share of the Capital Stock away from the Private sector financier institutions to which we now outsource it, and bringing it 'in-house' for Public Management, would simply *make* true what financiers now falsely *claim* to be true. It would make all financiers *bona fide* Intermediaries.

Why do we not do this? Why do we not take them at, and hold them to, their word?

But what then of the Public share, you might ask? And what of the Central Bank balance sheet I began to describe just above?

This is the point at which to query in somewhat more detail why we ever outsourced the management of Public Capital to private entities in the first place, and to ask whether and how we should 'insource' those functions now. As noted above, the most plausible 'best lights' interpretation of this practice is as registering a judgment that profit incentives would prompt private sector Banks and other Financial Institutions to invest all our Capital with maximum efficiency, having every reason, through profits, to channel it to its proverbial 'most valued uses.' 'Close to the ground' and embedded in local economies as they were, moreover, these institutions were thought to be better *able* to invest wisely as well.

The pervasiveness of Collective Action Problems, discussed above, gives the lie to the incentive argument. The capacity argument, for its part, is not much better, particularly given how the Collective Action Problems affect incentives themselves–namely, by shifting them toward favoring bets placed on short-term price movements. Because the financial instruments upon which people bet are traded on Wall Street and in a few other so-called 'money centers' worldwide, and because our law after 1997 no longer requires them to stay local, big American Banks do the lion's share of their investing in those mentioned 'money centers.' That is where 'the money' is, because that's where the betting is.

Wall Street has accordingly become just the Las Vegas of the American Northeast. Scarce wonder that Vegas-style casinos like Mr. Trump's go bankrupt in New York and New Jersey–they are not needed. And Manhattan is much more attractive.

So much, then, for all affirmative arguments hitherto proffered for letting private firms manage even Public Capital. How about negative arguments to the effect that, thanks to our systems of financial regulation, outsourcing isn't so bad?

The 'best lights' take on this line of thinking runs thus: our Banking and broader Financial System, including the Capital markets, constitute a species of public-private partnership, a partnership best interpreted, as I have done on multiple occasions, as a franchise arrangement.[63] The franchisor is the public–what I am calling in this Article the generator of the Public Capital Stock.[64] The franchised good just is that stock–the monetized full faith and credit, the 'money supply,' of the US. The Banks and other Financial Institutions authorized to lend in the manner described above are the franchisees–authorized purveyors of Public Capital.[65]

The licensing and broader regulatory regimes to which we subject franchisee institutions are the quality standards to which we hold them on this conception.[66] Scarce wonder that our first national banking regulator, still with us to this day, is

63. *See* sources cited, *supra* note 4.
64. *Id.*
65. *Id.*
66. *Id.*

called the Comptroller of the Currency.[67] These standards are of a piece with the standards that we find enforced in *all* franchise arrangements, from Holiday Inn to McDonald's and beyond.[68] We try to set our 'money quality' standards with a view to encouraging and facilitating Productive Investment and Productive activity as described above, while simultaneously discouraging misallocation and over-generation (a.k.a. 'inflation') of our Money.[69]

We also aim to preserve the 'safety and soundness' (that is a bank-regulatory term of art) of the franchisee institutions themselves, in light of both (a) their status as vertebrae of our Money-disseminating and Payments System, and (b) their consequent capacities to communicate their own maladies, virus-like, systemically to other institutions.[70] Hence our modes of entry regulation, leverage regulation, liquidity regulation, and deposit insurance–especially when these are used macroprudentially.[71]

The problem is that none of this addresses the core underlying vulnerability, which sounds in Allocation. The (individually rational) preference for short-term betting over long-term Investment is an *Allocative* preference. Yet, our finance franchise's quality control standards are not primarily Credit-*Allocative*, but Credit-Modulatory. They are about aggregates, which we manage in order to steer between inflation and deflation, not about 'picking winners and losers.'[72] Our problem remains: Public Investment Capital, the overwhelmingly greater part of our Capital Stock, is 'Invested' both wastefully and counter-productively. Mere 'regulation' of the kind to which we are now accustomed won't help.

Can regulation help? To an extent, yes. The Glass-Steagall regime that stayed in place for nearly 70 years until just over 20 years ago was meant to keep Bank Money out of Betting Markets and in actual Investment Markets. Ditto the forced localization rules mentioned above, along with interest-on-deposits regulation ('Regulation Q') aimed at removing one source of speculation motive.[73] But even apart from their vulnerabilities to political undercutting as happened throughout most of the 1990s and after, these are suboptimal modes of Capital Allocation because they work mainly through *ex-post* reaction to failings–particularly failings relating to profitability–not *ex-ante* screening out of merely Speculative 'Investments.'[74]

What might such 'ex-ante screening' look like, and might it be supplemented or replaced altogether by direct Public Investment? The answer to the second query is yes, and that to the first query is what I will provide now in justifying that yes. I am going to schematize an architecture for the Public management of our Public Capital Stock.

67. *Id. See also* Hockett, *What Is 'The Comptroller Of The Currency'*, *supra* note 42.
68. *See* sources cited, *supra* note 4.
69. *Id.*
70. *Id.*
71. *See* sources cited, *supra* note 6.
72. *Id. See also* sources cited, *supra* note 4.
73. *Id.*
74. *Id.*

B. Public Liabilities

Let's start with that Central Bank once again. The US's Central Bank, the Fed, already issues the principal liability that all of us use in Purchasing, Paying, Speculating, and Investing. That is the US Dollar, or Federal Reserve Note ('note' short for 'promissory note') noted above. The Fed also maintains a system of Reserve Accounts for our Banks, thereby operating as a 'Bank to the Banks'–hence 'Central' Bank–and using these accounts both as a tool of monetary policy (interest on reserves, or 'IOR') and as a liquidity management device ('reserve requirements').

There is no reason the Fed cannot fill out or indeed complete this arrangement as it now: (a) transitions, as it aims to do, to issuance of a digital dollar, and (b) upgrades, as it is already now doing, the national payments platform ('FedNow').[75] All it need do is to issue all citizens and authorized guests interest-bearing digital wallets with connectivity to the new payment platform , and enable transactions through these wallets along both the 'vertical' dimension, connecting them to the Fed itself, and the 'horizontal' dimension, connecting them to one another.[76]

Here is how it will work. First, every citizen, business, and legal resident receives an interest-bearing digital wallet–call it a Democratic Digital Dollar (3D) Wallet–accessible by desktop, laptop, smartphone, or other device. Second, each such wallet is endowed with: (1) what I call 'vertical' connectivity to a 'master account' on the liability side of the Fed balance sheet; and (2) what I call 'horizontal' (again, P2P) connectivity to all other wallets.[77]

I call the resultant digital payments platform the 'Democratic Digital Dollar,' or '3D,' platform at the national level, for which I've proposed both Fed and Treasury ('Digital Greenback' and 'Treasury Dollar') renditions.[78] I call it the 'Inclusive Value Ledger' (IVL) platform at the state and local levels,[79] with one version now before the New York State Legislature and another before the city of Kansas City.[80]

On any rendition, wallet holders are enabled to pay taxes, licensing fees, and other remittances, as well as to receive tax refunds, program funds, and other disbursements, along the platform's vertical dimension. Then they can also make real-time payments to *one another* along its *horizontal* dimension.

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75. *See* Hockett, *Digital Greenback*, *supra* note 3; Hockett, *The Treasury Dollar Act of 2020*, *supra* note 3.

76. *See* Hockett, *Digital Greenback*, *supra* note 3; Hockett, *The Treasury Dollar Act of 2020*, *supra* note 3.

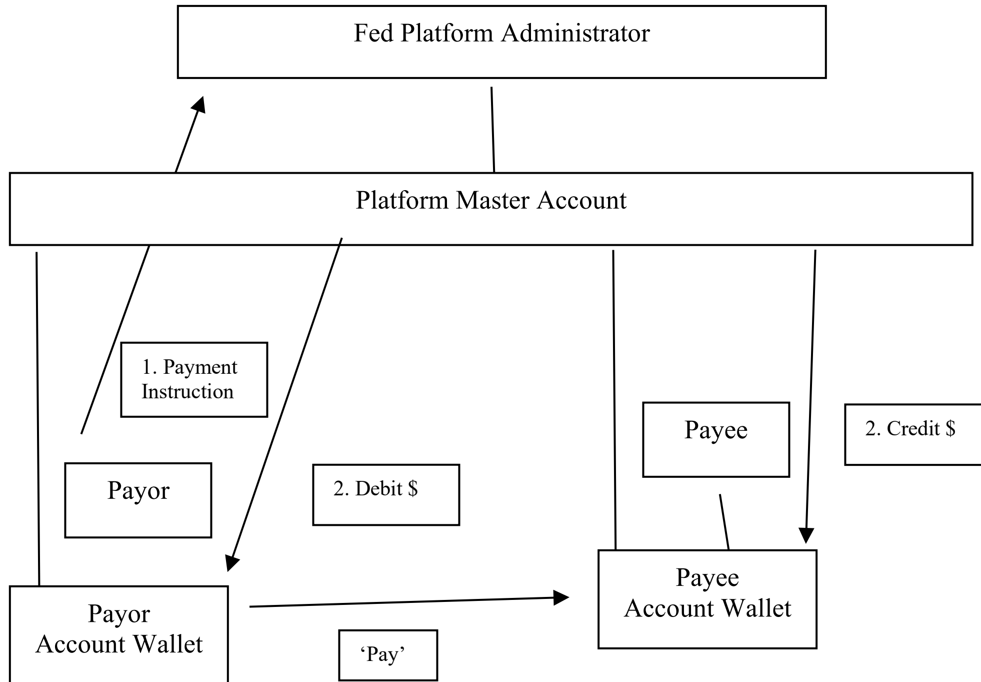
77. *See* Hockett, *Digital Greenback*, *supra* note 3; Hockett, *The Treasury Dollar Act of 2020*, *supra* note 3.

78. *See* Hockett, *Digital Greenback*, *supra* note 3; Hockett, *The Treasury Dollar Act of 2020*, *supra* note 3.

79. *See* Robert Hockett, *The New York Inclusive Value Ledger: A Peer-to-Peer Savings & Payments Platform for an All-Embracing and Dynamic State Economy,* CORNELL LEGAL STUD. RSCH. PAPER NO. 19-39 (2019).

80. *See* A08686A, 2019-2020 N.Y. State Assemb., Reg. Sess. (N.Y. 2019) (recognizing it as the Empire State Inclusive Value Ledger Establishment and Administration Act of 2019).

Figure 5: Democratic Digital Dollar ('3D') & Wallet Architecture

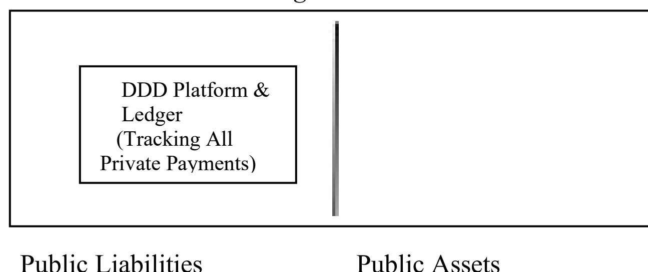


Private sector payments over the platform will occur on the liability side of the Fed balance sheet, just as accounts and payments now respectively subsist and occur on the liability sides of combined private sector bank balance sheets which themselves are , in effect, on the Fed balance sheet at one remove, via the banks' Reserve Accounts at the Fed. In effect, this will give perfect account-book reflection to the fact that, in trading with one another 'severally' in our private capacities, we are all trading liabilities that we 'jointly' issue–Fed promissory notes–in our public capacity.

It is really that simple. This should not be surprising. Think about it: presently private sector banks hold privately extended loans on the asset sides of their balance sheets and corresponding privately-owned demand deposits on the liability sides of their balance sheets. All we are doing is moving those portions of both of these that involve public capital to the public balance sheet, leaving all that involves only private capital as is.

All Private sector payments, then, will occur on the liability side of the Central Bank balance sheet, just as accounts and payments now subsist and occur on the liability sides of combined private sector bank balance sheets which themselves are in effect on the Fed balance sheet at one remove via the Banks' own Reserve Accounts tracked on the Fed balance sheet. In other words, they will occur within the small rectangle on the left-hand side of the stylized balance sheet that is Figure 5, which reverses the conventional placement of assets and liabilities (left and right, respectively) to maintain continuity with *Figure 5*.

Figure 6: Public Balance Sheet



Public Liabilities Public Assets

Before turning to the Asset Side of the Public Balance Sheet, it is worth pausing to enumerate some of the advantages that this change to the Liability Side of the sheet–this move to making our Central Bank *our* Bank, the *Republic's* Bank–will entail.

1. Inclusion & Growth

In a commercial society or exchange economy like our own, a Payment System must be considered an essential public utility–a functionality that justice requires we make freely available to all. We don't pay to use sidewalks, nor do we, or small businesses, pay to use nickels or dollar bills. Neither then, should they have to pay to use digital payment media as these now increasingly replace paper currencies and metal coins, which private sector payment companies do require them to do.[81] Call this the justice, inclusion, or public utility rationale for the DDD Platform.

Meanwhile, we measure the size and growth of our economy by reference to transaction volume. It follows that a more seamless and efficient payments system, by enabling more rapid transacting and hence larger transaction volumes within any time interval–again, 'turnover,' or 'velocity'–means greater growth and a larger economy over time. So, of course, does greater inclusion itself. Call this the growth or efficiency reason for a universal DDD Platform. Justice and growth thus converge to commend it.[82]

2. Efficient Monetary Policy

A DDD Platform also will enable much faster fiscal stimulus or monetary policy transmission than does our present system of Private Sector Banking institutions which we can only hope will transmit federal stimulus money to consumers in the form of cheap credit. Instead, we will be able to drop digital 'helicopter money' directly into our digital DDD Citizen Wallets. As noted above, the Fed even can offer interest on savings in Wallets, enabling us then to move such rates up or down when we must slow down or speed up spending activity, diminishing or growing transaction volumes. We will even be able to micro-target specific sectors of our

81. *See id.*; *see also* Hockett, *Digital Greenback*, *supra* note 3; *see also* Hockett, *The Treasury Dollar Act of 2020*, *supra* note 3; *see also* Hockett, *supra* note 79.
82. *See* Hockett, *Digital Greenback*, *supra* note 3; *see also* Hockett, *The Treasury Dollar Act of 2020*, *supra* note 3; *see also* Hockett, *supra* note 79.

economies where spending appears to be either overheating or dangerously cooling.[83]

3. Value & Privacy

A digitized and universalized Fed Balance Sheet also will enable public authorities, if authorized by statute, to dispense monetary rewards to 'care work' providers and other contributors to the public good that our present payment arrangements render too difficult for most governments to deem feasible. A teen who helps gradeschoolers with homework after school, for example, or a friend or family member who cares for a 'shut-in,' can quickly transmit digital 'proof of work' (POW) to a city, state, or even federal social services authority and receive spendable DDD credits in return.[84] Given the savings to municipal, state, and federal budgets that such work demonstrably affords over time, thanks, among other things, to a healthier and better educated Citizenry, crediting it over the DDD Platform is readily justified even on long-term fiscal grounds, let alone 'Good Society' grounds.[85]

Finally, going digital will offer commercial and financial data privacy benefits too. Unlike Private Sector Banks and many online payment service firms, Public Sector administrators of Fed Liabilities do not do what they do for profit – there are no non-criminal 'carrots' to entice 'data harvest' and sale. Such administrators also are subject to Fourth Amendment constraints as state actors, unlike, say, Wells Fargo or Facebook–there is a 'stick.' No matter how one looks at the matter, then, it seems clear we should institute a universal DDD Platform on the Liability Side of the Fed Balance Sheet as the Fed digitizes the dollar and upgrades the national Payments Platform.[86]

Turn now to the Asset Side of the Public Balance Sheet–in this case, the Fed Balance Sheet.

C. Public Assets

Corresponding to the Liabilities on any Balance Sheet are, of course, offsetting Assets.[87] This is tautologously true by operation of what in Accounting we call 'double entry bookkeeping'–essentially the algebra of Credits and Debits.[88] What Assets will correspond to the new Liabilities, in the form of digital Citizen and Guest Wallets, just sketched on the Fed's Liability Portfolio? The answer, believe it or not, is straightforward in light of the foregoing discussion.

83. *See* sources cited, *supra* note 3; *see also* sources cited, *supra* note 4; *see also* sources cited, *supra* note 32; *see also* sources cited, *supra* note 75; *see also* sources cited, *supra* note 78; *see also* Hockett, *supra* note 79; *see also* N.Y. State Assemb. A08686A.

84. *See* sources cited, *supra* note 3; *see also* sources cited, *supra* note 32; *see also* sources cited, *supra* note 75; *see also* sources cited, *supra* note 78; *see also* Hockett, *supra* note 79; *see also* N.Y. State Assemb. A08686A.

85. *See* sources cited, *supra* note 3; *see also* sources cited, *supra* note 32; *see also* sources cited, *supra* note 75; *see also* sources cited, *supra* note 78; *see also* Hockett, *supra* note 79; *see also* N.Y. State Assemb. A08686A.

86. *See* sources cited, *supra* note 3; *see also* sources cited, *supra* note 32; *see also* sources cited, *supra* note 75; *see also* sources cited, *supra* note 78; *see also* Hockett, *supra* note 79; *see also* N.Y. State Assemb. A08686A.

87. *See* sources cited, *supra* note 4.

88. *See* Hockett, *supra* note 25, at 19.

First, just as Bank Loans correspond to Bank Deposits, so will loans of this same type–with a crucial qualification–correspond to Fed Wallet Accounts that function as new, publicly administered demand deposit accounts. Second, insofar as our Republic undertakes to rebuild and reconstruct after not only a devastating pandemic but also decades of financial, infrastructural, and productive deterioration, it will engage in much direct Public Investment, the Assets corresponding to which will also reside on the Fed's Asset Portfolio.

How this all works is not hard to explain, especially if we resort once again to a few figurative depictions.

1. Gatekeeping

Start with what above I called 'Gatekeeping.' We noted that Private Sector Banking institutions extend loans with a view to profitability, which they are under at least some degree of fiduciary obligation to do on behalf of their disaggregated shareholders who quite rationally–individually rationally–wish to see profits maximized. We also noted that in light of the collective action problems that pervade decentralized market economies, there is no reason under present arrangements to think profits correlate to Production as distinguished from Speculation.

Portfolio regulation under current Banking law, which understandably attends more to Bank solvency and hence profitability than to Bank investments' Productivity, does nothing to change this dynamic.[89] All rides on institutional 'safety and soundness,' so that portfolios are regulated only in respect of the 'quality' (that is, reliable profitability) and diversity of the Assets they hold. So long as these criteria are met, the 'Investments' are permissible and even Fed-monetizable.[90]

But now imagine that Banks were funded directly by the Fed, that the Fed had to approve the loans it extended Banks, just as Bank lending departments must approve the loans Banks extend us, and that the criteria applied in the approval process sounded in Productivity rather than mere profitability? In such case, we would have, in effect, a perfectly workable, 'new and improved' version of what the old Glass-Steagall regime was meant to be, and a Public Sector complement to the 'narrow banking' that scholars have advocated after all financial crashes over the last century–proposals that always have come a cropper precisely because, absent such a complement, they spell cataclysmic contraction, deflation, and terminal crash.[91]

What we would do, then, is segment Private Sector Bank lending into two categories – lending of Private Capital and lending of Public Capital. In the former case, Banks would *actually* be what they now routinely claim *falsely* to be–one-to-one 'Intermediaries.' Loans made with a view to profitability alone rather than Productivity would have to be 'backed up 100%' by deposits, and the latter would have to be antecedently deposited and hence pre-accumulated, not generated by the lending itself as flow-charted above in connection with my discussion of Public Capital management 'outsourcing.' This segment of Bank lending would be, of course, 'narrow banking,' or on Fisher's rendering, '100% Money' banking.[92]

89. *See* sources cited, *supra* note 4.
90. *See* sources cited, *supra* note 4.
91. *See* sources cited, *supra* note 4; *see also* FISHER, *supra* note 56, at 129 and accompanying text.
92. *See* FISHER, *supra* note 56, at 129 and accompanying text.

Banks in this segment would be genuine Intermediaries. They would be mutual funds. They would be what they always pretend to be. Meanwhile,…

Where management of indefinitely extensible Public Capital is concerned, we would operate differently. Banks that depleted their antecedently accumulated deposit monies on loans extended for profit alone irrespective of Productivity would have to resort to the Fed in advance for more 'loanable funds,' rather than be blessed *post hoc* with Fed accommodation through the Payments System of all loans not apt to be unprofitable, and the Fed would evaluate loan applications with a view to Productivity rather than profitability alone.[93] This is what it ought to do, after all, inasmuch as it operates as the steward of our Public Investment Capital, our 'Credit-Money,' which is meant solely to fuel Productive development and Wealth accumulation.

But is the Fed equipped to do this sort of thing? The answer is that it once was, can still be, and must be made to be thus equipped once again. That takes us to a few structural and operational reforms that the Fed must now undertake in order to redeem its original promise–a promise that has been forgotten over the course–I nearly wrote 'curse'–of five decades of 'Financialization.'

2. Spread the Fed

The US was both early and late to the central banking game.[94] On the one hand, Treasury Secretary Hamilton's first Bank of the U.S., and its successor, Secretary Gallatin's Second Bank of the U.S., were late 18th and early 19th century institutions that combined functions we nowadays associate with both central banks and development banks.[95] They were central banks inasmuch as they issued 'circulating media'–moneys–whose supplies could grow 'elastically' to accommodate growing transaction demand as the national economy grew.[96] They were development banks inasmuch as they looked to finance both infrastructure projects and 'startup' manufacturing enterprises that promised to catapult the fledgling US into the front rank of advanced industrialized nations.[97] And they partnered with private sector Banks in performing both sets of functions.[98]

On the other hand, many Americans during the founding era were suspicious of large aggregations of Financial Capital, especially when concentrated in 'money center' cities like Boston, New York, and Philadelphia.[99] They had experienced, both directly and indirectly, the speculative and predatory-lending abuses of such institutions as they had operated in London and, to a lesser extent, Paris and Amsterdam. Indeed, many of the Founders themselves had been victims, in their estimation, of the large London banking houses from which they had earlier received agricultural loans–loans that tended to bankrupt them after unforeseen and

93. *See id.* at xvii.
94. *See* Robert Hockett, *Spread the Fed: Distributed Central Banking in Pandemic and Beyond*,14 VIRGINIA LAW & BUSINESS REVIEW 89 (2020); *see generally* Robert Hockett, *Spread the Fed, Part I*, LPE PROJECT (Aug. 12, 2020), https://lpeproject.org/blog/spread-the-fed-part-i; Robert Hockett, *Spread the Fed, Part II*, LPE PROJECT (Aug. 12, 2020), https://lpeproject.org/blog/spread-the-fed-part-ii.
95. *See* sources cited, *supra* note 94.
96. *See* sources cited, *supra* note 94.
97. *See* sources cited, *supra* note 94.
98. *See* sources cited, *supra* note 94.
99. *See* sources cited, *supra* note 94.

unhedged crop failures or, in the case of some of them, excessive purchases on credit of European luxury goods.[100]

The upshot of these latter attitudes and experiences was the 'sunsetting' of the Second Bank of the U.S. by 1836, a long period of chaotic Private Sector 'wildcat' banking thereafter, and only halting moves in the direction of restored central banking until 1913.[101] The compromise ultimately reached in the Federal Reserve Act of that year was a case study in creatively pragmatic, American-style 'having it both ways-ism.'

To recur to a distinction highlighted above, it reflected at least implicit awareness of the fact that the Public must take an active role in both the Modulation and Allocation of its Investment Capital. And it did so in a manner tracking the federated nature of our polity itself, a *structure* that itself gave expression to the recognition that some matters–like Credit Modulation–must be done through maximally inclusive Collective Agency, while other matters–like Credit Allocation–are best also informed by more localized Collective Agents attentive to facts 'on the ground.'[102]

The FRA gave institutional expression to this ancient wisdom by what I call 'distributing' our central banking vertically over two organizational tiers, and horizontally across the bottom tier.[103] On the latter, a set of regional Federal Reserve Banks, incorporated as public-private joint ventures and governed by boards appointed by public and private sector parties alike, would monitor the development and hence development credit needs of specific regions of the nation with distinct national economies.[104] They would then undertake to ensure that these needs were met, both (a) by sharing with local enterprises the information and analysis of regional economic conditions conducted by their research departments, and (b) by literally monetizing credit instruments issued by those exercises when those instruments financed bona fide Productive activity.[105]

This was ongoing local development assistance in all but name.[106] And it not only ensured actual Productive investment on a region-by-region basis across the Republic, but also assured *Citizens* that this was indeed the purpose of our new central bank, which would not be permitted to be captured by concentrated Northeastern financial interests and then commandeered to their own, increasingly speculative, purposes. The Federal Reserve Board, meanwhile, constituted the top tier and was entirely Public. It would oversee and regulate the system as a whole, coordinate among the separate FRBs, and thereby ensure that the Allocative operations of the latter remained consistent with the nationwide Credit-Modulatory task of the Board.[107]

This system seems to have functioned effectively until the latter months of the so-called 'Roaring 20s,' when pent-up postwar consumer and then responsive

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100. *See* sources cited, *supra* note 94.
101. *See* sources cited, *supra* note 94.
102. *See* sources cited, *supra* note 94.
103. *See* sources cited, *supra* note 94.
104. *See* sources cited, *supra* note 94.
105. *See* Hockett, *Spread the Fed: Distributed Central Banking in Pandemic and Beyond*,
106. *See* sources cited, *supra* note 94; *see also See* Robert Hockett, *The Fed is a Development Bank – Make It Our Development Bank Again*, FORBES (Sept. 30, 2020), https://www.forbes.com/sites/rhockett/2020/09/30/the-fed-is-a-development-bank--make-it-our-development-bank-again.
107. *See* Hockett, *Spread the Fed: Distributed Central Banking in Pandemic and Beyond*, *supra* note 94, at 5–6; *see* Hockett *the Fed is a 'Development Bank' – Make it Our Development Bank Again*, *supra* not 106.

'investment' demand combined with a public administration keen just to 'get out of the way' to produce real estate and financial asset price bubbles, fueled primarily by speculative Northeastern banking institutions, beyond the capacity of an ideologically divided Fed Board and New York Fed to manage.[108] The reforms put into place during the 1930s in response to Fed failures to counteract both the asset price hyperinflations of the late 1920s and the post-crash debt-deflation of the 1930s aimed responsively to 'up' the Fed's Modulatory and Allocative 'games.'

The establishment of the Federal Open Market Committee ('FOMC'), still with us today, was the Modulatory response. Glass-Steagall, Bank branching and conglomerating restrictions, and interest on deposit ('IOD') regulation–Regulation Q–*not* with us today, were the Allocative response. It is easily demonstrated–it *has* been demonstrated–that the bubbles that burst in 2006-2009 inflated precisely, in owing to worsening national Modulation and Allocation of Public Capital from the 1970s through the 1990s. All of the Allocative reforms of the 1930s had been effectively repealed by 1999, and the Fed for its part was run by a man who, astonishingly, seemed possessed of no understanding whatever of all central banks' critical Modulatory role.[109]

In the wake of the dramas of 2006-09, both the Fed and the Congress have, partly thanks to the urgings of a fairly small number of us who have pushed macroprudential financial regulation for years, reawakened to the Modulatory task.[110] But there has been next to nothing done to restore Allocation to the national Capital Management agenda. For one thing, the Volcker Rule, meant to be a 'new and improved' Glass-Steagall, is nothing of the sort, and is in any event now all but a regulatory dead letter.[111] For another thing, nothing serious has been done or proposed, at least until this past spring, to restore the Fed's earlier focus on *Regional Development* and associated *Productive Investment*.

Enter the present author's 'Spread the Fed' proposal, which aimed first at decentralizing and 'distributing' administration of the Fed's new Covid-responsive Municipal Liquidity and Main Street Lending facilities in the spring of 2020, then at 'hardening' this re-distribution into a permanent new local and regional development finance structure that restores to our 21st-century economy what the Fed once provided to our early 20th-century economy.[112] The key points are these…

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108. The principal form that ideological blinkering took was that of a particularly 'strong' form of the so-called 'real bills doctrine.' In general, the doctrine holds that lending solely in connection with productive projects will not tend to inflation because the credit-money issued fuels production of the very goods and services that will absorb the new credit-money. That is correct as far as it goes. Where mischief emerges is when one elides from this modest rendition of the doctrine to the 'strong' form, which holds that inflation can't happen so long as the Fed lends on this basis. In effect, this claim assumes away exogenous sources of money over-supply and under-supply. *See* Robert Hockett, *The Once and Future Fed*, FORBES (Feb. 21, 2021), https://www.forbes.com/sites/rhockett/2021/03/23/the-once-and-future-fedand-treasury-part-1.

109. One supposes that an acolyte of Ayn Rand is not well primed to appreciate needs of collective agency – a(n) (over-)reaction, perhaps, to the over-collectivization of everything in Rand's own Soviet Union during the 1930s.

110. *See* Hockett, *A Fixer-Upper for Finance*, *supra* note 6, at 1244–45.

111. *Id.* at 1272.

112. *See* sources cited *supra* note 94. The author has been assisting state and municipal officials to tap into the new Fed facilities. See, e.g., *See, e.g.*, Robert Hockett, *The Fed's Municipal Liquidity Facility: Present and Future Possibilities and Necessities*, Memorandum, May 2020, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3597732; Memorandum from Robert Hockett on Updated Community QE / Fed Municipal Liquidity Facility to State and Local Legislators, Execs., & Pub. Fin. Dept's (Apr. 28, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3589851; Memorandum

New York City's and San Francisco's pandemics are not Butte's or Oahu's pandemics. Nor are the Covid-wrought harms to Tanya's Tractor Repair in Tampa the same harms as those to Hank's Hardware in Hiawatha or Whitey's Wine Bar in Wyandotte. Moreover, the sheer numbers of localities and businesses nationwide now needing help far exceed the capacities of any small staff of just one regional Federal Reserve Bank to track and address. It accordingly makes no sense to concentrate, as we did till the end of 2020, administration of the MLF in the New York Fed and of the MSLF in the Boston Fed. These administrations must be spread, as Covid-affected municipalities and businesses themselves are spread, across the entirety of our continental Republic. *This is what Regional Fed Banks are for*.[113]

By the same token, there does remain an essential coordinative and Credit *Modulatory* role *complementing* this Allocative role, a role that the Fed Board exists to discharge. It is officially the Fed, not the Regional FRBs, that issues the tradable liabilities that are the monetized form of our Public Capital Stock–our Federal Reserve Notes, or dollars. And it is the Fed that must Modulate their supply and ensure synchronization of Productive Fed lending across regions. So, what we must do, first to consummate and complete our national pandemic response, then to assure national reconstruction and development–perpetual development–ever after, is to 'Spread the Fed' in a manner that both replicates and updates its original design.[114]

What will that look like? As noted above, the Fed's framers envisaged and instituted a *federated* Fed, but they did so in 1913, when the nation's economy was regionally distributed in ways very different from now. One Fed Bank in California and two in Missouri, along with others in Atlanta, Richmond, Philadelphia, Cleveland, Minneapolis, and so on, actually made at least some productive, monetary, and political sense back then, before the rust belt had rusted and the Sunshine State had become the Silicon State (in at least two senses), among other things. But it makes no sense save perhaps 'path-dependence' sense now.[115]

In order for the Fed to grow more intimately and continuously involved in assisting with the financing of continuous productive development as just envisaged, then, it will have to be not only re-distributed, but redistributed. That is to say that its Regional *Banks* will have to re-synch with the regional *economies* that we actually *have*, not merely those we once *had*.[116] There appear to be two mutually complementary ways to do this without raising hackles or 'stepping on toes.' One is to incorporate additional new Regional Federal Reserve Banks, rather than trying to 'reshuffle' those that we have. Think of it as a central banking counterpart to 'Court

from Robert Hockett on Community QE / Fed Municipal Liquidity Facility to State and Local Legislators, Execs., & Pub. Fin Dept's (Apr. 12, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3574157; Robert Hockett, *Community QE: An April Game Plan for States and Cities*, FORBES (Apr. 12, 2020), https://www.forbes.com/sites/rhockett/2020/04/12/community-qean-april-game-plan-for-states-and-cities/#138495c03624; Robert Hockett, *Optimize Community QE: An Open Letter to Fed Chairman Powell*, FORBES (June 14, 2020), https://www.forbes.com/sites/rhockett/2020/06/14/optimize-community-qean-open-letter-to-fed-chairman-powell; Robert Hockett, *Community QE – Illinois Signs On, and Eligibility Further Expands, But "Penalty Rates" Still Have to Go*, FORBES (June 5, 2020), https://www.forbes.com/sites/rhockett/2020/06/05/community-qe--illinois-signs-on-and-eligibility-further-expands-but-penalty-rates-still-gotta-go/#5b593cfb18f2; Robert Hockett, *Welcome to Community QE: Now Let Us Put it to Use*, FORBES (Apr. 9, 2020), https://www.forbes.com/sites/rhockett/2020/04/09/welcome-to-community-qe/#1e84d9fcc415.

113. *See* sources cited, *supra* note 112.
114. *See* sources cited, *supra* note 112.
115. *See* sources cited, *supra* note 112.
116. *See* sources cited, *supra* note 112.

packing' that doesn't do mischief, but instead simply adds sorely needed functionality.[117]

So, say, Missouri keeps its two Feds, but California now gets one in Los Angeles in addition to that in San Francisco–Southern and Northern California being so different, after all, in their economies, their cultures, and (thank Heaven) their tastes. Cleveland and Philadelphia, too, keep their Feds, notwithstanding their now being comparatively smaller in population and Productive output, relative to the nation as a whole, than they were one-hundred years ago before the great New Deal era and postwar westward migrations and industrializations.

The other means of redistributing the Fed, which as I say complements the first, amounts to a means of more *fully* 'spreading the Fed.'[118] That is to close up as many interstices as remain between new and old Regional Feds by expanding the practice of opening *Branch Offices* in larger cities that lack their own Regional Feds. The Fed System already does this, of course, but it does so anything but adequately. There is no Fed presence at all, for example, in the State of Hawaii. Yet Hawaii will likely be, of necessity, one of the most significant users, on a per capita basis, of the new Fed MLF and MSLF facilities. If we do not end up opening a Honolulu Fed, then (if we do, I'd like to spend a sabbatical there), then at the very least the San Francisco Fed or a future Los Angeles Fed should keep a Branch Office there.[119]

Only in this general manner will we close all the smaller gaps that remain after we close the larger ones with more Regional Feds. Unless, of course, more of our states charter public banks more or less on the celebrated Bank of North Dakota model, which then themselves work in collaboration with their relevant Regional Feds. These banks could then both afford nonprofit banking services to all and assist the Fed Regional Banks in identifying appropriate recipients of Fed liquidity assistance–as the BND itself has done in such stellar fashion in recent weeks, outperforming all other banks of all kinds in getting PPP money to businesses.[120]

At least as importantly in the longer term, they could also assist the Fed Regional Banks in rediscovering their original mandate. For that was, again, to assist with the financing of *productive primary* market investment–investment that enables every American to improve her individual and our collective material life–not gambling on price movements in secondary financial and tertiary derivatives markets. Here is the key to assuring only Productive lending of Public Investment Capital by Private Sector Banking institutions going forward.[121]

As suggested above, Banks will have to receive Fed preclearance before lending Fed Money, and the Fed will for its part condition its lending on investments' likelihoods of being not merely profitable, but Productive, in the Primary Market sense laid out above. And what better way to ensure this but to interpose, between 'remote' Washington Fed and supposedly 'locally responsive' Private Sector Banking institutions, regional Fed Banks that are responsive to local productive enterprise needs, and charged with evaluating proposed loans with a view to their

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117. *See* sources cited, *supra* note 112.

118. *See* sources cited, *supra* note 112.

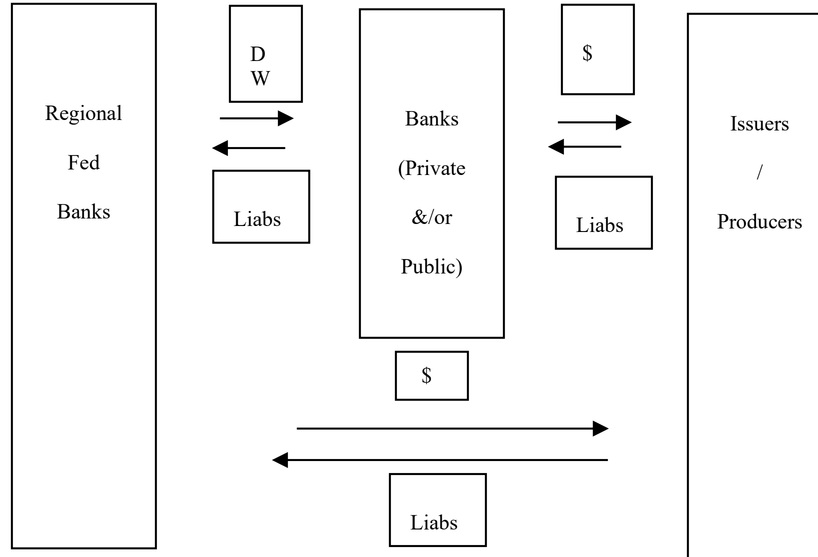
119. *See* sources cited, *supra* note 112.

120. *See* Andrew Van Dam, *North Dakota Businesses Dominated the PPP. Their Secret? A Century-Old Bank Founded by Radical Progressives*, WASH. POST (May 15, 2020), https://www.washingtonpost.com/business/2020/05/15/north-dakota-small-business-ppp-coronavirus (explaining the success and operation of the North Dakota Bank).

121. *See* sources cited, *supra* note 112.

contributions to bona fide Productive 'Reconstruction and Development'? Diagrammatically, then, we would have:

Figure 7: Reformed Bank/ 'Spread Fed' / Producer Relations



Some of this lending will be direct, in the form of direct Fed discounting of privately issued paper issued for production, and some of it will be indirect, flowing through private sector banks and public banks accessing the Fed's Discount Window just as Paul Warburg envisaged well over a century ago. All that changes relative to current practice is that the Regional Fed Banks now: (1) take the lead role in lending; (2) resume early 20th-century direct lending to producers; and (3) condition all lending on *ex-ante* showings of reasonably likely production.

Lending of genuinely *private* capital, for its part, need not change at all. (Self-styled 'conservatives' should love this). Banks may make loans for productive *or* merely speculative projects, provided they fund the loans fully with deposits, in effect *making* themselves what they routinely now falsely *label* themselves–'intermediaries.'

The reason is straightforward in light of the discussion above: unproductive lending is only a problem when publicly generated and indefinitely extensible public capital, not privately accumulated scarce private capital, is what is lent. This is the kernel of wisdom in Irving Fisher's '100% Money' proposals of the early-mid 1930s, which came a cropper only because they were all about 'shalt not's, not 'shalt's, where public capital is concerned. Ditto the updates of Fisher at present on offer.[122] What these all lack is a 'shalt' in respect of public capital–the 'shalt' of productive investment. And that is precisely what I am prescribing.

But now you might ask whether I've been too fast and too loose with this 'Productivity' and 'Development' talk I've been on about. Can we really distinguish, when we get right down to it, between Productive Investment and 'mere Speculation'? And who decides which counts as which in 'fuzzy' borderline cases?

122. *See generally* FISHER, *supra* note 56 and accompanying text.

The answer in this case is two-fold. First, most cases are not fuzzy or borderline. Loan applications are always required to specify expected revenue sources that loans will open. These in turn will be specified by reference to whether the borrower plans to produce and sell Goods or Services–to take part in the Production and facilitation thereof–or instead simply to purchase *N*-ary financial instruments for subsequent sale on (*N*+1)-ary Meta-Markets. Plans of the first sort are Productive. Plans of the second sort are Speculative.

As noted above, Banks will be free to continue making loans of the second kind on the same terms as they do now. They will simply have to use only Private Capital in doing it. Public Capital, for its part, will be reserved for loans of the first type, which newly 'Spread' Regional Federal Reserve Banks with explicit Regional Development mandates will be perfectly well situated to identify. In this sense, what is proposed here is not for the Public to 'take over' finance. It is for the Public to end the Private takeover of Public Capital, reserving Public to Public and Private to Private.

How about 'borderline' cases? Here, there are two answers. First, it will not be difficult to formulate decision rules for such cases that 'err on the side of inclusion' in hard, tight-money times and then 'err on the side of exclusion' during a boom, loose-money times. Indeed, this will be almost a requirement imposed by the Fed's Modulatory task.

But more importantly still, if we become serious about actual Productive Investment again as a Productive Commercial Republic, then we will not only reform our Central Bank. We will also establish a new national institution–or rather, a new organizational structure among existing national institutions–to define, plan, and coordinate long-term Productive Public Investment, much as did Hamilton's and Gallatin's First and Second Banks of the U.S. This institution will, in effect, develop and continually revise our Republic's operational definition of 'Production' and 'Development.'

3. National Investment & Price Stabilization

In other work, I have proposed establishment of new twinned national development institutions patterned in some ways after the War Industries Board/War Finance Corporation pairing and War Production Board/Reconstruction Finance Corporation pairing of the First and Second World War and New Deal eras, and in other ways after the Financial Stability Oversight Council (FSOC) of the post-2008/post-GFC era.[123] Those pairings and conciliar arrangements, I have shown, simply reinstated in updated form Treasury Secretary Hamilton's Society for the Promotion of

123. *See* Robert Hockett, *U.S. Must Take Equity Stakes in the Companies It Rescues*, FIN. TIMES (Mar. 28, 2020), https://www.ft.com/content/86a333d0-6dc3-11ea-89df-41bea055720b; Robert Hockett, *The US Must Ramp Up Production by the World Wars I & II Playbook, Not the 2008 Playbook*, BUS. INSIDER (Mar. 29, 2020), https://www.businessinsider.com/coronavirus-pandemic-us-should-ramp-up-ventilator-mask-manufacturing-2020-3; Robert Hockett, *We Are at War and Need Wartime Institutions to Keep Our Economy Afloat*, THE HILL (Apr. 4, 2020), https://thehill.com/opinion/white-house/491166-were-at-war-and-need-wartime-institutions-to-keep-our-economy-producing; Robert Hockett, *How to Mobilize the Military to Produce the Supplies America Needs to Fight the Coronavirus*, NEW CONSENSUS (Mar. 2020), https://newconsensus.com/files/pandemic-production.pdf; Robert Hockett, *Immediate Coronavirus Economic Mitigation Measures*, NEW CONSENSUS (Mar. 2020), https://newconsensus.com/files/pandemic-economic-mitigation.pdf.

Useful Manufactures and his Bank of the United States, which functioned both as a money-modulating central bank like our Fed and as a national development bank.[124]

The basic idea is this: Our Republic is now at last recovering from the ravages of pandemic and a renewed worsening of racial and ethnic divisions, rooted in developmental inequity. This comes atop the newly 'existentialized' threat of climate change that has emerged over the last decade. Whether we call it a Building Back Better or a Green New Deal, something like a national reconstruction and development is going to be necessary.[125]

The sheer scale of the needs, along with the sheer number of distinct industries that will be touched, will in turn require an FSOC-like *coordinating council* to prevent mutually conflicting and needlessly overlapping national reconstruction and redevelopment efforts. It will also be necessary to facilitate adequate collaboration not only across executive departments, but also public and private sector agents, and among all 'levels' of government in our federated polity.

What we must do, then, is establish what I call a National Reconstruction and Development Council (NRDC) charged with the task of developing and executing: (1) a comprehensive yet coherent national pandemic response, then (2) a likewise comprehensive yet coherent infrastructural reconstruction, and then (3) an ongoing and continually updated national development strategy–let's formalize it as an 'NDS'–recognized to be every bit as essential as national defense policy, national economic policy, national environmental policy, and so on.[126] (Indeed the first is a prerequisite to all others).

In light of this mission, the Council must comprise the heads of the Fed, the Treasury, and all cabinet-level and other relevant Executive Agencies with jurisdiction over national Industry and Infrastructure–e.g., the Department of Energy, the Department of Transportation, the Federal Trade Commission, the Small Business Administration, the Department of Education, the Department of Labor, the Environmental Protection Agency, and so on. These persons will be charged with formulating long-term national development strategies within each of their respective jurisdictional mandates, then 'synching up' and synthesizing them into a single coherent and non-duplicative whole.[127] In so doing they will be doing what our national defense agencies do every year in their combined National Defense Strategy Statement.

Now the *financial* operations of NRDC, managed as they are by the Investment Committee that I have proposed as an arm of the NRDC, reminiscent as they are of Hamilton's bank, the WFC, and the RFC in developing means by which private sector agents can participate in public investment, are a subject for other work – indeed I elaborate these operations extensively in other work, where an upgraded rendition of Treasury's already existing Federal Financing Bank ('FFB') plays the role.[128] Where the NRDC is relevant here, however, is in its capacity to help afford

124. *See* HOCKETT, FINANCING THE GREEN NEW DEAL: A PLAN OF ACTION AND RENEWAL, *supra* note 32; Robert Hockett, *Productive Public-Private Partnering in Crisis and Beyond*, 63 CHALLENGE 14 (2020); Robert Hockett, *An FSOC for Continuous Public Investment: The National Reconstruction and Development Council*, 10 MICH. BUS. & ENTREPRENEURIAL L. REV. 45, 45 (2020).

125. *See* sources cited, *supra* note 123; *see also* sources cited, *supra* note 124.

126. *See* sources cited, *supra* note 123; *see also* sources cited, *supra* note 124.

127. *See* sources cited, *supra* note 123; *see also* sources cited, *supra* note 124.

128. *See* sources cited, *supra* note 123; *see also* sources cited, *supra* note 124; Robert Hockett, *The National Reconstruction and Continuous Development Act of 2021*, (Oct. 21, 2020). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3775616; Robert Hockett, *Building Back Better with or*

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guidance to Fed Regional Banks both as to what projects at any given time are considered urgent public development needs and hence perforce 'Productive,' and as to what regions and what localities have special needs in connection with particular projects.[129]

For the NRDC's first mission, at least after reconstruction, is to develop an ongoing and continually revisable National Development Strategy. And this will virtually, by definition, amount to a democratically public determination, in broad terms at least, of what is politically cognizable as 'Productive.' Hence the NRDC can assist regional Fed's in their 'gatekeeping' function as outlined above. The FFB, in turn, might very well end up issuing financial instruments which the new 'People's Fed' can also invest in, adding these to its portfolio alongside the trillions in Treasury and other Agency securities that it holds now.[130*12*]

Yet another class of new Public Investment instruments that the new Fed might hold could be shares in a new Price Stabilization Fund, or 'People's Portfolio,' which I also propose in other works.[131] Here the idea is to recognize that some market prices are, along with certain price indices, what I call 'systemically important' by analogy to the SIFIs that FSOC designates. These are prices that pervasively enter either directly into other prices as inputs, or indirectly into other prices by serving as benchmarks or reference points for other pricing decisions or Derivative Contracts of the kind discussed earlier.[132] The Fed, in effect, already recognizes one SIPI and then acts in markets to 'collar' its movements within one narrow band–namely the money rental, or 'interest' rate. And recent years have seen it widen the sphere to include mortgage instruments and, now, even broad portfolios of corporate instruments.[133]

I believe it inevitable that the Fed will wish to target more such prices in the future in the name of systemic financial stability. In time, the most efficient means of handling this growing number of instruments traded in broadened Fed open market operations will be to hold them all in one fund or, in investment-company-speak, 'family of funds.' This fund will have to be managed in close coordination with the development and execution of NRDC-determined national development policy, not to mention the gatekeeping function in respect of private sector bank lending in keeping with evolving national development strategy.

It will make sense, then, either for the NRDC's Investment Committee (the FFB) to manage this fund and sell the Fed interests in it, or for the Fed itself to assemble and manage the Fund. Either way, this will be another set of assets for the newly augmented Public Asset Portfolio corresponding to the newly augmented

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Without Senate Help – The Invest America Plan, FORBES (Nov. 9, 2020), https://www.forbes.com/sites/rhockett/2020/11/09/the-investamerica-planreconstruction-with-or-without-senate-help.

129. *See* sources cited, *supra* note 123; *see also* sources cited, *supra* note 124; *see also* sources cited, *supra* note 128.

130. *See* sources cited, *supra* note 123; *see also* sources cited, *supra* note 124; *see also* sources cited, *supra* note 128.

131. *See* HOCKETT, FINANCING THE GREEN NEW DEAL: A PLAN OF ACTION AND RENEWAL, *supra* note 32; Robert Hockett, *Open Labor Market Operations*, CHALLENGE, Apr. 26, 2019, at 113; Robert Hockett, *How to Make QE More Helpful—By Fed Shorting of Commodities,* BENZINGA (Oct. 14, 2011, 8:41 PM), https://www.benzinga.com/news/11/10/1988109/how-to-make-qe-more-helpful-by-fed-shorting-of-commodities; Robert Hockett, *Treasury Growth Dividends*, 3 STAN J. BLOCKCHAIN L. & POL'Y 1 (2020).

132. *See* sources cited, *supra* note 131.

133. *See* sources cited, *supra* note 131.

Liability side of the Fed balance sheet brought by Citizen, Business, and Guest Wallets.[134]

Finally, we can imagine one additional source of augmentation of *both* the asset and liability sides of the new People's Fed balance sheet: If development works now that investment's productive again, national wealth will be growing. So, then, will the Fed's asset portfolio, as investment returns flow in. Why not share these with Citizens, in a manner of growth-indexed UBI–at least as consistent with consumer price stability? In other work, I have proposed these as 'Treasury Growth Dividends,' so-named in virtue of their association with my proposed Treasury Dollar.[135] If we go the full Fed route, however, those will be best handled as I have just described.

Once again, either way, the mutual augmentation of both sides of the Fed Balance Sheet seems fitting–indeed fully vindicating of the very point of this Analysis and Exposition. For this has been ALL about reclaiming public capital for publicly cognizably productive investment–investment that grows the Republic's wealth. And the Republic's wealth just is the Citizens' wealth–that is, what they owe and are owed by one another.[136]

Bring these together with the 'Upgraded Fed' schematized above, and you have all that you need for efficient and effective public capital management both in reconstructing right now and in developing–or rather, perpetually *re*developing–ever after.

The NRDC, which in combining executive agencies is democratically accountable, democratically determines what we as a polity deem 'productive,' and acts to coordinate–in an information-aggregating and -facilitating sense–ongoing productive development across our full continent-spanning Republic. Meanwhile, our 'People's Fed,' which, remember, is *part* of our NRDC, assists local businesses and local banks nationwide at the more 'micro' level, acting as a system of local development banks per the original vision of the Federal Reserve Act of 1913.

Figure 8 depicts the upshot. It is meant not to replace or displace *Figures 6 & 7*, but simply to combine and flesh out a bit more detail left implicit in both of them. Here we see: (1) the role that the NRDC will play in democratically determining what counts as 'development' and hence what is 'productive,' (2) the role that the regional Federal Reserve Banks will play in choosing and funding investments thus counted as 'productive,' and (3) the combined role that the FRB and the NRDC Investment Committee and any fund or funds that it manages will play in assuring inter-regional allocative balance and, therefore, aggregate modulatory effectiveness in the financing of productive development projects nationwide.

The Price Stabilization Fund (PSF) or 'People's Portfolio' for its part can be either an NRDC fund or a Fed fund. Either way, the Fed and the NRDC will have to be 'on the same page' where its investments are concerned, the NRDC with a view to cross-sectoral allocative needs entailed by development needs, and the Fed with a view to cross-regional allocative needs in relation to modulatory needs.

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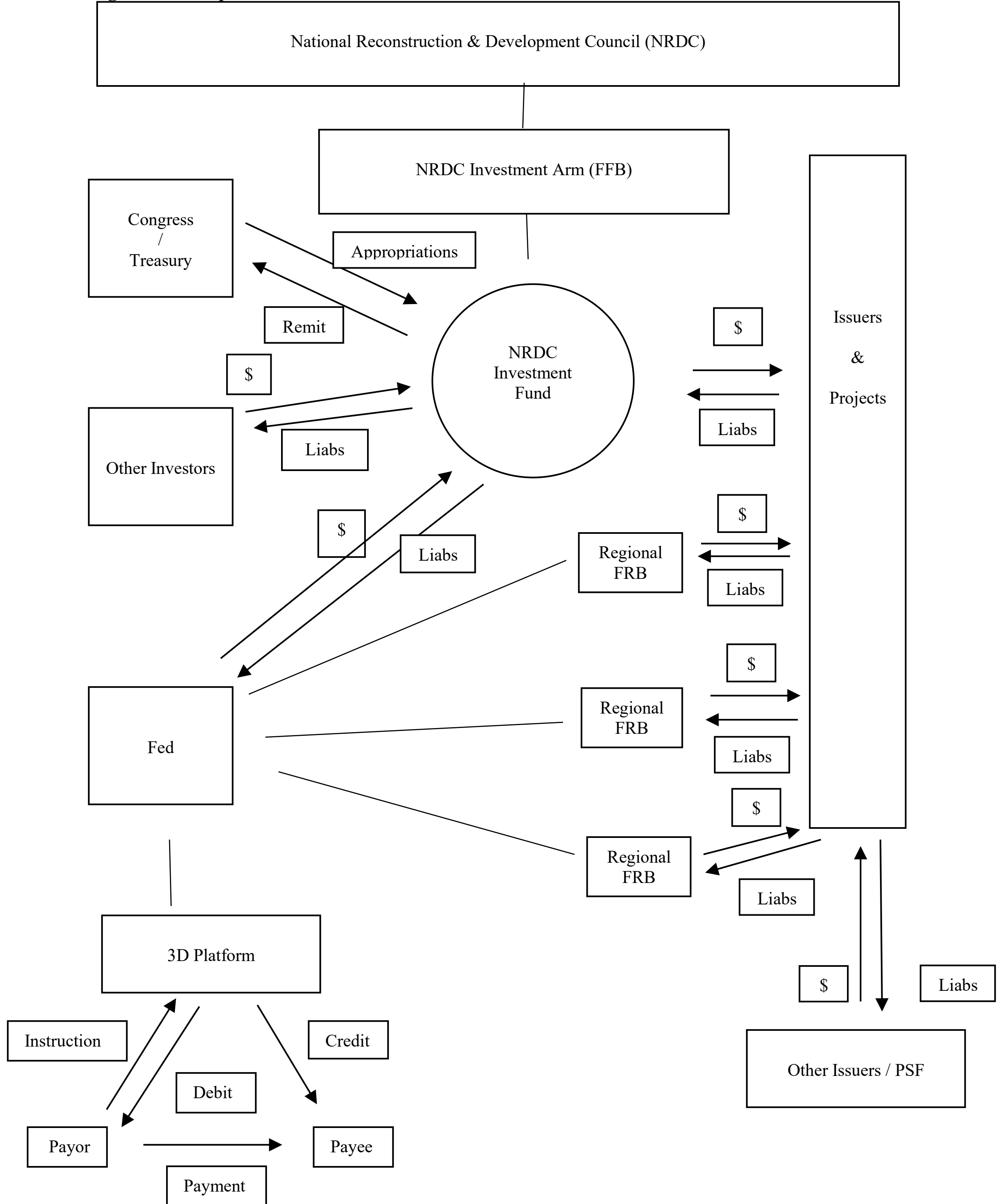
134. *See* sources cited, *supra* note 131.
135. *See* Hockett, *Treasury Growth Dividends*, *supra* note 131; Robert Hockett, *Treasury Growth Dividends*, FORBES (May 18, 2020), https://www.forbes.com/sites/rhockett/2020/05/18/treasury-growth-dividends/?sh=5516a203517e.
136. *See* discussion *supra* Part II; *see also* Hockett, *Rousseauvian Money*, *supra* note 25.

Figure 8: 'People's Fed'/NRDC/PSF Administrative & Financial Flow Structure



CONCLUSION

At the conclusion of his epoch-making *General Theory*, Keynes tantalizingly suggested that developed economies in the future might require a 'socialization of investment' if they are to grow steadily and stably in material opulence.[137] In so saying, he aligned himself, knowingly or otherwise, with both Rudolf Hilferding and Rosa Luxemburg, whose earlier *Finanzkapital* and *Accumulation of Capital*, respectively, later influenced Keynes's most gifted disciple, Joan Robinson.[138] Now, approximately one century after these thinkers thought and then wrote, we seem in the U.S. to be corroborating what all four conjectured for Britain and Europe.

I believe I have shown as much here and have shown what to do about it. With a bit of assistance from Wicksell, I believe I have demonstrated the distinction between Public and Private Investment Capital, shown why the Public and Private sectors must manage their own shares of the aggregate, and designed a full architecture to enable that–an architecture that amounts to a natural extension of present arrangements, and changes them neither a whit more nor a whit less than is requisite to achieve the twin tasks of Productive Capital Allocation and effective Capital Modulation. The next steps, of course, are to pass laws and get moving. And here, I must say, prospects have not in our lifetimes looked as good as they look now.

Virtually everyone seems to agree now that there is something seriously wrong with arrangements that tear Public Capital from publicly cognizably Productive Investment. All appear likewise to agree that a national reconstruction, followed by serious national redevelopment, is in order. And now the ideas of public options for banking, and even central bank-issued digital currencies, seem at last to be gaining real traction as well. Add in enthusiasm for a Building Back Better or Green New Deal, and it grows difficult not to be happily flabbergasted by this virtual 'perfect storm' of readiness to do simultaneously all the needs doing–on the Asset and Liability Sides alike of our Public Balance Sheet, our Citizens' Ledger.

These things, I think, are all sure to happen at some point if darker–or hotter–forces don't tear down or burn up our Republic or world before we've arrived. For the logic that forces them on us is hard not to see once it has been pointed out. That is especially so in view of the dysfunctions that this logic shows to be inevitable *until* we do it, as these dysfunctions now manifest all around us. But there is no sense in simply waiting for all of this to happen. The thing to do now is to do it and do it now. Ours is a Capital Commons whether we see it and use it or not. It is, as the financiers say, 'money lying on the table.' It is time now to take it and grow it–for it is ours.

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137. *See* JOHN M. KEYNES, THE GENERAL THEORY OF EMPLOYMENT, INTEREST, AND MONEY 187 (1936). *See* also HOCKETT, FINANCING THE GREEN NEW DEAL: A PLAN OF ACTION AND RENEWAL, *supra* note 32.

138. RUDOLF HILFERDING, FINANCE CAPITAL (1910); ROSA LUXEMBURG, DIE AKKUMULATION DES KAPITALS: EIN BEITRAG ZUR ÖKONOMISCHEN ERKLÄRUNG DES IMPERIALISMUS (1913); JOAN ROBINSON, THE ACCUMULATION OF CAPITAL (1956) (Robinson even titled her own opus after Luxemburg's.).