

The Finance Franchise

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I see, therefore, the rentier aspect of capitalism as a transitional phase which will disappear when it has done its work...Thus [I] might aim in practice ... at an increase in the volume of capital until it ceases to be scarce, so that the functionless investor will no longer receive a bonus; and at a scheme of direct taxation which allows the intelligence and determination and executive skill of the financiers... (who are certainly so fond of their craft that their labour could be obtained much cheaper than at present), to be harnessed to the service of the community on reasonable terms of reward.

- J.M. Keynes¹

CONTENTS

I.	INTRODUCTION: MYTHS OF ‘SCARCITY’ & ‘INTERMEDIATION’	
II.	THE CORE FRANCHISE: BANKS, CENTRAL BANKS, FULL FAITH & CREDIT	
	A. <i>Banks: Loans Make Deposits</i>	
	1. The Orthodox View: ‘Deposits Make Loans’	
	2. The Facts of the Matter: Loans Make Deposits	
	B. <i>Central Banks: Deposits Are Money</i>	
	1. The Central Bank as ‘Accommodator’	
	2. The Central Bank as Franchisor	
III.	FROM ‘SUN’ TO ‘PLANETS’ TO ‘MOONS’: SHADOW BANKS & CONGLOMERATES	
	A. <i>Shadow Banks: Other Promises Are Money Too</i>	
	1. Repo Markets	
	2. Credit Derivatives Markets	
	3. Money Markets	
	B. <i>Bank Conglomerates: From Rent-Seeking to Subsidy-Leaking</i>	
	1. Bank Holding Companies	
	2. Financial Holding Companies	
IV.	WHEN FRANCHISORS FORGET THEIR ROLE: SECONDARY MARKETS, COLLECTIVE ACTION PROBLEMS, & ‘FINANCIALIZATION’	
	A. <i>Financialization? An Interpretation</i>	
	1. Previous Accounts	
	2. A Fuller Account: Secondary Markets & Collective Action	
	B. <i>Financialization: A Model</i>	
	C. <i>Financialization: The Model Corroborated</i>	
	1. Before ‘Great’ Recession: 2008-	
	2. Before ‘Great’ Depression: 1929-	

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¹ J. M. KEYNES, THE GENERAL THEORY OF EMPLOYMENT, INTEREST, AND MONEY, Chapter 24 (1936).

V.	RECLAIMING THE ROLE: HOW TO MANAGE - AND CONDUCT - MY FINANCE
A.	<i>Macroprudential Market-Moving & Contingent Public Governance</i>
1.	Macroprudential Market-Moving
2.	Contingent Public Governance
B.	<i>Public Investment & Capital Diffusion</i>
1.	A Public Investment Authority.....
2.	A Capital Diffusion Authority
D.	<i>And What of the Shadows? A Closing Note on ‘Wildcat’ Currencies, Endogenous Money, & Regulatory Arbitrage</i>
VI.	CONCLUSION: FINANCE WITHOUT ‘FINANCIERS’

I. INTRODUCTION: MYTHS OF ‘SCARCITY’ & ‘INTERMEDIATION’

Many discussions of finance and financial systems, including some by a number of otherwise sophisticated lawyers and economists, bear a remarkable yet seldom remarked characteristic. This is their simple assumption that finance capital² is both scarce and supplied principally, if not solely, by private saver-investors. This twofold assumption appears to underwrite, among other things, the familiar but misconceived ‘loanable funds’ take on finance proffered by some orthodox economists and those who follow them.³ Per this understanding, banks and other financial institutions primarily ‘intermediate’ between private suppliers and various demanders of scarce funding.⁴

The intermediated scarce capital assumption also prompts often-heard policy prescriptions proffered by lawyers and politicians, to the effect that debt-writedowns, bankruptcy, and related regimes should not go too easy on debtors, lest worried creditors raise borrowing costs and thereby cause injury, in the long run, to the very constituencies these

² By ‘finance capital’ I mean funds that flow either into goods- or service-productive investment projects or into tradable financial instruments bearing some ultimate relation to such projects.

³ The loanable funds account of interest rates appears to have originated, in sophisticated modern form, with Wicksell. See Knut Wicksell, *GELDZINS UND GÜTERPREISE: EINE STUDIE ÜBER DIE DEN TAUSCHIRT DES GELDES BESTIMMENDEN URSACHEN* (1898). For a typical contemporary articulation, see, e.g., CAMPBELL R. MCCONNELL & STANLEY L. BRUE, *ECONOMICS* 547 (2005).

⁴ See, e.g., Zvi Bodie & ROBERT C. MERTON, *FINANCE* 22-23 (2000) (modeling financial flows as transfers from ‘surplus units’ to ‘deficit units,’ couched in turn as ‘households’ and ‘firms’). See also the popular web-based economics site AmosWEB Encyclonomic Webpedia, web-available at http://www.amosIb.com/cgi-bin/awb_nav.pl?s=wpd&c=dsp&k=banks (‘Banks play an important role in the economy as financial intermediaries, matching up lenders and borrowers.’).

practices aim to assist in the short run.⁵ Finally, the intermediated scarce capital assumption lends credence to routine portrayals of public investment and credit-allocation policies as ‘crowding out’ or ‘distortive’ of otherwise allocatively efficient, ‘private’ capital markets.⁶

What is remarkable about the intermediated scarce capital assumption is its flat inconsistency with my experience of ‘real, existing’ financial markets over long stretches of the past century, on the one hand, and the complex mechanics of actual banking systems on the other hand.⁷ As most any financial market participant or observant financial regulator will readily (if not anxiously) attest, the cardinal feature of the American and indeed global financial economies of recent decades has been their proneness to capital glut, credit excess, and associated ‘desperate searches for yield’ by would-be investors.⁸ These characteristics have produced at least three asset price bubbles and busts in as many decades since the mid-1980s, to say nothing of those of the early 20th century.⁹

Both the orthodox economic and the untutored ‘man in the street’ understandings of how banking and broader finance work, in short, stand on its head the reflective understandings of

⁵ I have for some time been advocating an approach to underwater mortgage loan debt that makes use of municipal eminent domain authority. The most oft-heard argument against the plan proffered by industry groups is that it will result in mortgage rates’ being higher in future – to which the obvious response, after decades of reverse redlining and other forms of glut-rooted predatory lending, is, ‘do you promise?’ For more, see, e.g., Robert Hockett, *Paying Paul and Robbing No One: An Eminent Domain Solution for Underwater Mortgage Debt*, 13 CURRENT ISSUES IN ECONOMICS AND FINANCE (Federal Reserve Bank of New York, 2013).

⁶ See generally Olivier Blanchard, *Crowding Out*, in THE NEW PALGRAVE DICTIONARY OF ECONOMICS (2nd ed. 2008).

⁷ The ‘real, existing’ language is of course an allusion to postwar comparisons of ‘real,’ or ‘actually existing’ socialism as practiced in Eastern Bloc nations, on the one hand, with classical Marxian prescriptions on the other hand. See generally RUDOLF BAHRO, *THE ALTERNATIVE IN EASTERN EUROPE* (1977). The term ‘shadow banking,’ more on which below, was coined by the authors’ friend and colleague Paul McCulley, then Managing Partner at the Pacific Investment Management Company, or ‘PIMCO.’ See ...

⁸ Terms such as ‘glut,’ ‘excess,’ and the like must of course be understood by reference to a baseline. My baseline, as further elaborated infra, Part IV, is that quantum of finance-capital necessary to fund reasonably pursuable improvements to material life – i.e., ‘real’ economic ‘development’ – on the one hand, and to provide adequate liquidity to secondary markets in financial instruments associated with projects of the aforementioned kind on the other hand. Anything more than that is ‘excess’ or ‘glut,’ the measure of which can be tracked in the ratio of secondary market transaction volume to primary market capitalization, the latter being the financial market counterpart to ‘real’ economic development. See infra, Part IV, for further detail.

For recent literature noting the presence of capital gluts in recent decades, see, e.g., Daniel Alpert, Robert Hockett, & Nouriel Roubini, *The Way Forward*, white paper, New America Foundation (October 11, 2011), web-available at http://newamerica.net/publications/policy/the_way_forward. Also Ben S. Bernanke, *The Global Savings Glut and the U.S. Current Account Deficit: Remarks at the Sandridge Lecture, Virginia Association of Economists*, March 10, 2005, web-available at: <http://www.federalreserve.gov/boarddocs/speeches/2005/200503102/>.

⁹ Id. Also ...

actual bankers and central bankers, as well as a good many borrowers, other financial market participants, and financial regulators. They contradict, in other words, the informed judgement of people whose vocational successes and livelihoods ride on their knowing both what they are doing and the environments in which they are doing it.

This strange inversion bears important repercussions for what one takes to be possible or advisable where the production, accumulation, and distribution of real wealth are concerned. If I believe finance capital to be scarce, intermediated, and unavoidably under the ultimate direction of a relatively small number of *rentiers* who ‘own’ it, for example, then I am apt to put up with much more in the way of long term maldistribution and short-to-medium term misallocation than I otherwise would.¹⁰ I might even view them as regrettably unavoidable concomitants of capitalist growth itself.¹¹ And if, to the contrary, I see finance capital for what it actually is – at bottom, a socially supplied resource that in whole or in part can be socially directed – then I am apt to be rather more boldly insistent on growth’s being ‘real’ and inclusive.¹²

My aim with this paper is to justify and encourage the bolder insistence just mentioned, on the strength of a proper understanding of both (a) finance and (b) the central role played by my banks and ‘the public’ therein.¹³ In my rendering, finance capital is no more than tangentially private and intermediated. The great bulk of it is publically provided and must be in large measure publicly directed. Private ‘intermediaries’ are primarily purveying a public resource, sometimes adding value in so doing, other times not. The key to ensuring a healthy financial system that aids real and inclusive economic development,¹⁴ I argue, is first to

¹⁰ By ‘maldistribution’ I mean skewed distributions of income and wealth among those who share the proceeds of productive activity. By ‘misallocation’ I mean flows of finance toward channels found later to have been inefficient or otherwise undesirable. More on present tendencies toward both forms of dysfunction in due course.

¹¹ See, for example, ...

¹² ‘Real’ as distinguished from merely credit-fueled ‘speculative,’ and ‘inclusive’ as distinguished from maldistributive. More on all of this, again, *infra*.

¹³ The central role that I have in mind goes beyond the ‘constitutive’ role which the public sector clearly plays in setting the proverbial ‘rules of the game’ and determining what financial contracts will be honored on what terms. It includes in addition the principal commodity in which all parties to financial transactions trade – the full faith and credit of the United States. But more of this *infra*.

¹⁴ I deliberately speak in terms of ‘development’ rather than ‘growth’ as the normatively interesting object of economic policy throughout this paper, for reasons rehearsed further below and elaborated more fully elsewhere. See *infra*, Part V; and Robert Hockett & Saule Omarova, *Public Actors in Private Markets: Toward a Development Finance State*, 84 WASH. U. L. REV. ___ (2015) (forthcoming).

understand the true roles and comparative advantages of the public and private therein, then to act in manners that capitalize on these roles and advantages for the good of us all.¹⁵

Part II commences the project by carefully elaborating my account of bank-centered finance. It shows in detail how finance actually ‘works’ in a developed banking system administered by a central bank or equivalent monetary authority. What emerges from the account is that a modern banking system with privately owned banks and a publicly administered sovereign currency is a species of public-private partnership. In effect, it is a *franchise* arrangement. Per the terms of this arrangement, privately owned banking institutions act literally as franchisees in dispensing an essentially public resource – in America, the full faith and credit of the United States – on terms set by the franchisor central bank.

Part III rounds out the picture begun in Part II. It first shows how the so-called ‘shadow banking’ sector replicates most of the franchise-like characteristics of the regular banking system, even while avoiding the conditions franchisors usually impose. Public guarantees of the institutional infrastructure and financial instruments through which this sector operates, I demonstrate, play much the same role here as Fed recognition of loan-made deposits plays in the more orthodox banking sector covered in Part II. Part III also shows how financial holding companies of the kind authorized by the Gramm-Leach-Bliley Act of 1999¹⁶ have developed as means of enabling non-bank financial firms likewise to capitalize on the protections and authorizations that my system of financial regulation confers upon banks.

Together, Parts II and III map the structure of a financial system that is a bit like a ‘solar’ system, with the central bank figuring as sun, the banks as its planets, and coordinate financial institutions as moons in a single integrated nexus.¹⁷ This network channels the full faith and credit of the United States toward private actors, with various privately owned ‘franchisee’ institutions playing a variety of dispensary roles. Orthodox understandings of banking and

¹⁵ I think objections to the effect that ‘Arrow’s Theorem’ shows there to be no ‘good of us all’ ridiculous, and are happy to explain why if asked. See generally Robert Hockett, *Pareto versus Welfare* (working paper, web-available at); and Robert Hockett, *Why Paretians Can’t Prescribe: Preferences, Principles, and Imperatives in Law and Policy*, 18 CORNELL J. L. & POL’Y 391 (2009).

¹⁶ Financial Services Modernization Act of 1999, P. Law ... cite

¹⁷ The central bank supplies most of the system’s energy, while likewise exerting most of its gravitational pull. The banks cluster immediately around it, absorbing much of its energy, while a variety of nonbank financial institutions for their part gather round the banks themselves in order to tap into the same source of energy and gravitational ballast.

finance, Parts II and III jointly suggest, simply miss, overlook, or underappreciate this basic structure, perhaps owing to their roots in an earlier tradition of political economy whose formative period was one of specie-backed currency and associated capital scarcity that had little place for central banks or public credit. In so doing, these orthodox understandings obstruct full appreciation of the actual risks and opportunities I face as a polity where finance and the ‘real’ economy are concerned.

Part IV takes up the latter observation by beginning to draw salient *policy* implications from the account of finance elaborated in Parts II and III. It first emphasizes two critical conclusions that stem from that account. The first is that in a modern economy with a sovereign and elastic currency, the central bank or monetary authority determines, by design or default, the quantum of finance capital available for investment or speculation at any given time.¹⁸ The second is that this same authority determines, again by design or default, the allocation of that capital.¹⁹ These two facts confront the central bank or monetary authority with a weighty responsibility – a responsibility which, when undischarged, virtually guarantees financial and economic dysfunction.

When the central bank or monetary authority neither recognizes nor acts in informed and deliberate regard of its special responsibility as franchisor, Part IV argues, the macroeconomy tends to fall prey to ‘financialization.’ This I define as a natural process per which finance, left primarily in the hands of the ‘franchisees,’ comes increasingly – and without need of venality or irrationality of any kind – to be treated as a substitute for, rather than as a facilitator of, ‘real’ economic development.²⁰ Financiers understandably looking for quickly realizable ‘yield’ in the absence of any firm public commitment to sustained and inclusive real growth, I argue, come to find better prospects in financial ‘innovations’ associated with consumer debt than with real economic development. This in turn furthers, while being furthered by, both widening income and wealth inequality and a widening gap between secondary market trading volume and

¹⁸ The argument is not that there are no theoretical limits or constraints, but merely that the limits seldom if ever are practically reached in the modern era, while the constraints are for their part readily manageable, all so long as policy makers are attentive to salient data and its significance. More of this, too, *infra*.

¹⁹ The argument in this case is both that the polity engages already in a good bit of deliberate credit allocation, and that many if not most other policies bear appreciated or unappreciated distributional consequences.

²⁰ The sense of ‘rationality’ that I have in mind is that which is at work in collective action problems, the hallmark of which is their aggregating individually rational decisions into collectively irrational outcomes. More of this both immediately then further below. Ditto ‘venality’ and the ‘real’ in ‘real economy.’

primary market capitalization. These mutually complementary processes bring in turn heightening systemic risk, mounting financial fragility, and ultimate macroeconomic breakdown and slump.

The financialization process, as I see and elaborate it in Part IV, bears the structure of a particularly formidable recursive collective action problem. It is a process – a *cluster* of processes, really – pursuant to which multiple individually rational decisions progressively aggregate into collectively dangerous outcomes. Collective action problems, of course, require collective agents for their solution; and the requisite agent in this case just is the ‘franchisor’ – the central bank or monetary authority, acting in the name of the sovereign public, whose full faith and credit diffuse ‘franchisee’ financiers are dispensing in the first place. The upshot of Part IV, then, is that in a financial system and macroeconomy such as ours, the ‘franchisor’ must take a lead role in channeling toward real development the financial flows that it itself makes possible, on pain of continuing cycles of financialization and macroeconomic breakdown if it does not.

Part V turns to sketching a broad plan for continuous, proactive, ‘real’ and ‘inclusive’ public-private investment and stability-maintenance on the part of the ‘franchisor,’ a plan whose fuller details I have proposed in earlier work under the rubric of a ‘development finance state.’²¹ Key here is to partner public with private in a manner that (a) channels funding toward enduring and ‘real’ primary market, rather than ephemeral and excess-credit-fueled ‘speculative’ secondary-market growth on the one hand, while (b) minimizing misallocations occasioned by government ‘capture’ or missing Hayekian information on the other hand. It is the public partner that takes primary responsibility for (a), while the publicly recruited and overseen private partners work to assure (b).

In other words, Part V suggests, while the funding and liquidity-providing roles that I once needed private capital to play are no longer critical as they once might have been, the ‘price-discovery’ role that diffuse private market actors play still can be useful. My task is to harness the latter without fooling ourselves into thinking I still require the former. Insofar as I get this balance right, Part V continues, the private partner in that public-private partnership

²¹ See Hockett & Omarova, ‘Public’ Actors in ‘Private’ Markets, *supra* note 13.

which is finance ceases to be a ‘financier’ in the classical sense – that of indispensable supplier or mobilizer of scarce or dispersed capital. Rather, the private partner simply is someone who facilitates public action – like the dealer banks with which the New York Fed trading desk deals in conducting its rate-setting open market operations (OMO), for example. Or s/he is someone who aids necessary public information-gathering as to the future prospects of alternative possible public investment paths, by sending ‘signals’ through buying and selling behavior.

What Parts II through IV set the stage for and Part V ultimately sketches, then, is a mode of finance that no longer pretends to be purely or principally capitalist or socialist. It is public and private in more or less equal measure, as perhaps befits a polity that purports to be democratic on the one hand, and whose ‘public’ is accordingly constituted by the whole of its ‘private’ on the other hand. It is a mode of finance in which everyone, and hence no one, is ‘financier’ in the classical sense – precisely because finance is of critical import to all, hence a matter that is fully as publicly as it is privately salient.

On that note, Part VI concludes and looks forward.

II. THE CORE FRANCHISE: BANKS, CENTRAL BANKS, ‘FULL FAITH & CREDIT’

Both the orthodox, technical and the naïve, ‘man in the street’ understandings of financial intermediation appear to take the word ‘intermediation’ more seriously than institutional facts warrant.²² This is especially so where the institutional facts in question concern those banks, ‘shadow banks,’ and bank holding companies that constitute the skeleton of my broader financial system. The error turns out to be costly – in terms of both opportunity foregone and calamity unaverted. In this Part and the next I accordingly sketch, diagnose, and correct what I view as the cardinal error of orthodox takes on finance. In the following Parts I then show the consequences, respectively, first of getting things wrong, then of getting things right.

A. Banks: Loans Make Deposits

1. The Orthodox View: ‘Deposits Make Loans’

²² See, e.g., sources cited supra, notes 3 and 4.

Per the ill-informed orthodoxy, banks and other financial intermediaries link accumulators of surplus financial capital with households, firms, and sometimes government instrumentalities that require temporary access to that capital.²³ There is accordingly an exogenous, privately provided potential ‘supply’ of finance capital on the one hand, and a mix of both private and public sources of ‘demand’ for this capital on the other hand.²⁴

Interest rates and other financing costs emerge as *prices* on this understanding.²⁵ They amount in effect to money rental rates, determined by the confluence of fund-supply and fund-demand just as other prices are determined by the confluence of *x*-supply and *x*-demand for any *x*. This is the venerable, if institutionally naïve, ‘loanable funds’ model of finance, per which ‘deposits make loans,’ savings determine investment, and funding costs are just rental rates that equilibrate privately provided fund-supply with privately and publicly originating fund-demand.²⁶

The loanable funds model of finance carries certain implications of a decidedly conservative cast where questions of policy are concerned. One is the belief that public and private would-be users of funds compete for access to a more or less well-defined and exogenously given pool of private capital, such that public borrowing or capital-gains taxing in consequence can ‘crowd out’ badly needed private investment.²⁷ This picture of course underwrites the familiar charge that governments can ‘discourage growth,’ by rendering growth-fueling investment more expensive, when they either tax-away or borrow too much from the pool.²⁸ This picture also, of course, treats the public sector as simply one borrower among many – a borrower of privately supplied funds, no less.

Another, albeit weaker, implication sometimes drawn from the loanable funds model of finance is that the investment-allocation of scarce loanable funds is in general best left to the

²³ *Id.*

²⁴ *Id.* Sophisticated purveyors of this picture of course acknowledge that the size of the pool will vary with perceived profitable investment opportunities, consumer price inflation, and other macroeconomic factors inasmuch as savers and investors can always choose to save or invest less and hoard or consume more under unpropitious circumstances. But the key point is that they view the supply of loanable funds as nevertheless ultimately limited to what private savers have managed over time to accumulate.

²⁵ *Id.*

²⁶ *Id.*

²⁷ See Blanchard, *supra* note 5.

²⁸ *Id.*

private suppliers of these funds. The thought seems to be that the private suppliers either in general have a right, or are in any event generally best positioned in light of competencies and incentives, to determine what investment projects are most apt to yield returns sufficient to warrant their making their funds available, on whatever terms that they do, in the first place.²⁹

Public investment thus tends to be cast as an ‘outlier,’ ‘special case’ form of investment on the loanable funds view. It is best restricted to the financing of non-excludable, non-rivalrous ‘public goods’ production of the sort that tends to be rationally underprovided by private actors owing to ‘free rider’ effects.³⁰ The intermediated loanable funds view of finance is thus also at home with a minimalist view of the public sector or state, per which the latter borrows, taxes, and spends as little as possible out of savings that are, after all, in the first instance privately owned and supplied. And even then the public must act only in reactive not proactive, market-failure-correcting ways.

2. The Institutional Facts of the Matter: Loans Make Deposits

Given the inherently controversial character of the policy orientations encouraged by the ‘intermediated,’ loanable funds view of finance, one might have expected proponents to take pains to corroborate the view’s accuracy. As it happens, however, the view appears simply to be assumed by those who proffer or build on it. Perhaps this is because it just seems to some people things ‘must’ be this way. Or perhaps it is because things actually were this way two or three centuries ago, during the founding era of modern political economy.³¹

Whatever the source of the intermediated loanable funds view, it is quite incorrect in any economy with an elastic, ‘fiat’ currency issued by an effective central government. Indeed even the most cursory examination of how the banking and broader financial systems actually function in such economies reveals at once that the loanable funds view is not only inaccurate, but is as it were ‘*180 degrees*’ inaccurate. Every casual direction explicitly postulated or implicitly assumed by the intermediated loanable funds model of finance, in other words, is

²⁹ A thorough exposition and critique of this familiar view can be found in RICHARD MARKOVITS, TRUTH OR ECONOMICS: ON THE DEFINITION, PREDICTION, AND RELEVANCE OF ECONOMIC EFFICIENCY (2008).

³⁰ Id.

³¹ Perhaps a history or two on the founding period of political economy and the conditions of capital scarcity that attended this period.

opposite that which is most saliently operative in my actual banking and financial markets. And this is so precisely because the state through its central bank or monetary authority, as collective agent of the public and issuer of its currency, is necessarily the central actor in modern banking and financial markets. It in effect provides that which all private financial purveyors purvey.

The best way to substantiate these perhaps initially counterintuitive claims is to begin with the mechanics of a simple bank lending transaction. I can then radiate (a) ‘upward,’ to the crucial roles played by the central bank and other public instrumentalities in underwriting and administering the money production and propagation process, and (b) ‘outward,’ to other financial transactions that vary in readily tractable, incremental ways upon the commercial loan prototype. Attending carefully to these mechanical details opens the door to a rich appreciation of the centrality of ‘the public’ in ‘private’ finance capital generation and allocation.³²

To begin with a simple lending transaction, then: When a bank receives application from a creditworthy entrepreneur to borrow, it does not, *pace* the pictures propagated by charming Frank Capra films or colorful stories of medieval metalsmiths, peer into the vault to determine how much in the way of depositors’ funds are on hand to lend out to others, then put available such funds at the disposal of the borrower. Nor does the bank engage in any contemporary analogue to that act – checking its reserve balance at the regional Federal Reserve Bank and transferring funds to the borrower therefrom, for example, or drafting a check to the borrower thereon.³³

No, what the bank actually does is simply to open or credit an account in the name of the borrower, then book this transaction as an asset and a liability of its own on the one hand, and an asset and a liability of the borrower on the other hand.³⁴ The transaction books as an asset of the

³² My claim here should not be confused with the truism – itself somehow missed by many an economist – that financial instruments and practices are constituted by law inasmuch as the former are contracts and the latter are regulated. In my view, that observation is so obviously correct that it wouldn’t bear noting at all were it not for the surprising numbers of people who manage to overlook it. What I am claiming, however, is something more. It is that the credit itself which ‘flows’ with finance is a publicly generated resource. For more on the first claim, see, e.g., Hockett & Omarova; Lothian; Pistor.

³³ The latter prospect is that which is envisaged by purveyors of the ‘money multiplier’ myth, per which the central bank determines broad money aggregates as determinate multiplier of a fixed quantum of ‘base money’ comprising currency and reserves held at the central bank. More on this misconception below.

³⁴ An accessible, while not ‘dumbed-down’ account of the mechanics of bank lending is Michael McLeay et al., *Money Creation in the Modern Economy*, BANK OF ENGLAND QUARTERLY BUL., Q1 (2014), web-available at <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q1prereleasemoneycreation.pdf>. See also the helpful video series the Bank of England has produced to complement the article, web-available at

bank inasmuch as the bank is now owed on the loan. It books as a liability of the bank inasmuch as the bank must now honor all drafts drawn on account by the borrower up to the loan amount. The transaction books as an asset of the borrower inasmuch as s/he now owns and is able to draw payments upon a new (or newly loan-grown) account. It books as a liability of the borrower inasmuch as s/he must repay the bank per the terms of the lending agreement.

As a matter of accounting, no particular Newtonian-like law concerning, say, the ‘conservation of assets relative to liabilities’ is violated by the loan transaction as just characterized. There continues to be a 1-1 correspondence between assets and liabilities, which by accounting convention always are mutually canceling.³⁵ There is nevertheless now more ‘money’ at work in the economy, however, as routinely tracked by that measure of money known as ‘bank-,’ ‘credit-,’ or ‘broad-money.’³⁶ And in this sense the transaction does, until the loan is discharged and extinguished, effectively violate any monetary counterpart to, say, the Newtonian ‘conservation of energy.’ For the bank has indeed (temporarily) ‘created’ this ‘bank-money,’ not simply ‘transferred’ some quantum of ‘loanable funds’ from depositors to borrower.

This point could not be more crucial for present purposes, even as it seems to be that which the untutored have most trouble in ‘getting their heads around.’ The lending transaction just described did not involve, nor did it have to involve, depositor money in any way. The bank did not ‘intermediate’ between depositor and borrower, nor did it make any use of deposited funds. It simply extended credit. That is something that it is (a) quite literally publicly licensed to do, and (b) both accommodated and protected by the central bank in so doing.³⁷ In so doing, moreover, it temporarily increased – for as long as the loan remains unextinguished – the aggregate money supply, i.e., the supply of finance capital.³⁸

<https://www.youtube.com/watch?v=CvRAqR2pAgw>. An abbreviated and likewise accessible description of how bank lending ‘works,’ though it overstates the reserve and capital requirements to which the bank likely is subject in the U.S., is John Carney, ‘Basics of Banking: Loans Create a Lot More than Deposits,’ CNBC, 26 February 2013, web-available at <http://www.cnbc.com/id/100497710>. See also John Carney, ‘What Really Constrains Bank Lending?,’ CNBC, 5 April 2012, web-available at <http://www.cnbc.com/id/46970418>.

³⁵ Id.

³⁶ Id.

³⁷ Banks must be chartered, and many more charter applications are denied than (always conditionally) granted. Federal Reserve member banks, in turn, which include all nationally chartered and many state chartered depository institutions, are Fed-backstopped as creditors as just described. More on central bank accommodation immediately below. More on bank licensure, protection, and additional forms of support further infra.

³⁸ Id.

B. Central Banks: Deposits Are Money

1. The Central Bank as ‘Accommodator’

As if to underscore this last point, the central bank or monetary authority, if it (a) maintains an overnight interbank lending rate target as most do, (b) administers a payments infrastructure on which privately drawn checks clear at par, as most do, or (c) both, will have to *accommodate* the act of money-creation undertaken by the privately owned lending bank. For if it does not, then (a) the lending bank will have to borrow from other banks to meet its reserve requirement, placing upward pressure on the interbank rate, (b) some checks drawn on the lending bank will fail to clear at the central bank, or (c) both.³⁹

So the central bank will accommodate the private bank’s loan by crediting that bank’s reserve account. In so doing, it will in effect publicly monetize the promissory note signed by the individual borrower to whom the bank lends in the first place, placing the full faith and credit of the United States behind the credit of the individual. All of this is understood in advance; it is all ‘part of the game’ – part of the arrangement between the central bank, its member banks, and the latter banks’ borrowers.⁴⁰ Hence it is not only the case that loans make private deposits rather than the other way round, but is also the case that loans even make central bank reserves themselves rather than the other way round.⁴¹ The ‘public’ central bank, operating in part through its ‘private’ member banks, is the way I all ‘spot one another credit’ as I jointly and severally better my material lives over time.

How is all of this possible, one might ask. And what limits, if any, are there on this form of spontaneous credit-extension, money-creation, or finance-capital-provision if the process per which it takes place is not tethered to deposited ‘loanable funds’? The answer is surprisingly simple, though not in the way some might expect.

³⁹ For more on these mechanics and what drives them, see, e.g., J. Benes & M. Kumhof, *The Chicago Plan Revisited*, IMF Working Paper No. 12/202 (2012); U. Bindseil, *The Operational Target of Monetary Policy and the Rise and Fall of the Reserve Position Doctrine*, ECB Working Paper No. 372 (2004); and P. Disyatat, *Monetary Policy Implementation: Misconceptions and Their Consequences*, BIS Working Paper No. 269 (2008).

⁴⁰ Id.

⁴¹ Id. See also S. Carpenter & S. Demiralp, *Money, Reserves, and the Transmission of Monetary Policy: Does the Money Multiplier Exist?*, 34 J. MACROECON. 59 (2012); and F. Kydland & E. Prescott, *Business Cycles: Real Facts and a Monetary Myth*, 14 FED. RES. BANK. OF MINNEAPOLIS Q. REV. 3 (1990).

The answer that will occur to some is that ‘fractional reserve banking’ has something to do with all of this, in a manner that gives rise to a ‘money multiplier.’⁴² Hence, the thought will run, assuming for simplicity’s sake a 10% reserve requirement, a bank will be able to loan out 90% of its deposits even as depositors remain able to spend up to 100% of those same deposits. A further 90% of the lent 90% will then be loanable by a next round of banks into which the first round of borrowers deposit their borrowings. Another 90% of *those* funds will then be loanable, and so on, up to the point where nine times the original deposited amount is lent out.⁴³

This ‘money multiplier’ effect already, of course, would give the lie to a crude version of the loanable funds model of banking per which financial intermediaries do nothing but channel loanable funds on a 1-1 basis to those who have need of them, economizing on creditor/debtor search costs, monitoring costs, and diversification costs in so doing.⁴⁴ As it happens, however, things are yet worse for the model.

The reason is four-fold: First, for most banks, reserve requirements are simply a liquidity-maintenance measure and do not kick in at all until very high deposit thresholds are reached. They have little to nothing to do with the lending-cum-money-creating process. This becomes clear through reflection on the fact that many financially well-developed jurisdictions – notably the UK and Canada – impose no reserve requirements at all, yet have private banks generating bank-money just as described up above.⁴⁵

Second, as noted above, central banks typically are constrained to accommodate heightened lending and money-creation by private banks in any event, which they do by simply crediting those banks’ reserve accounts by fiat. Violation of a reserve requirement, therefore, assuming there is one, might trigger a regulatory sanction but will not prevent money-creation.

Third, even where reserve requirements are in effect and thus crimp bank profits by requiring a low yield asset be held in some quantity, banks fund their activities out of much more

⁴² Id.

⁴³ This is the standard, and regrettably false, textbook explanation for how banks lever up ‘base money.’ See, e.g., Campbell, *supra* note 3.

⁴⁴ See, e.g., Franklin Allen, *Financial Intermediation* (2000) for an elegant exposition of this take on financial intermediation. The problem with most such accounts, though not Allen’s, is that they treat all intermediaries as if they were little more than mutual funds, ignoring the money-generating function of any such as are permitted to engage in fractional reserve banking and/or networked to the central bank and payments system.

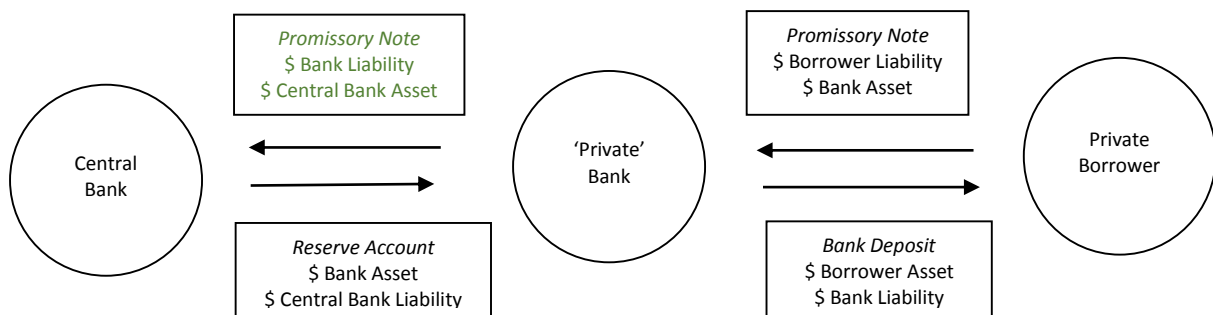
⁴⁵ See Bd. of Gov. of Fed. Res., Reserve Maintenance Manual, web-available at <http://www.federalreserve.gov/monetarypolicy/reservereq.htm>.

than deposit liabilities. And these additional sources of funding are subject to less onerous reserve-like requirements even than deposits.⁴⁶

Finally fourth, as I elaborate at greater length below in Part III, largely unregulated and yet still publicly enabled ‘shadow banking’ now replicates traditional banking in most essentials, and does so in measures that further amplify the money-creation in which garden variety depository institutions engage. These institutions, moreover, face little-to-nothing like reserve requirements – or even capital regulation – at all.⁴⁷ That has, in fact, in effect brought on *excess* publicly backed private money creation – the proximate source of the 2008 troubles – meaning that part of my task in Part V will be to afford the public, via the central bank, more control over the output of that public resource which is the endogenous money supply.

Figure 1 summarizes, pictorially, the relations among borrowers, private banks, and the central bank as described to this point. After a bit more elaboration on ‘shadow banking’ and bank holding companies in Part III, *Figure 2* will then round out and complete the picture.

*Figure 1: Borrower, Bank, Central Bank*⁴⁸



2. The Central Bank as Franchisor

Figure 1 and the text that it summarizes suggest something very important yet underappreciated about the banking system in any jurisdiction with an elastic currency

⁴⁶ See sources cited *supra*, note 21.

⁴⁷ More on the principal components of the shadow banking sector below.

⁴⁸ Green font in the box at upper left signifies that this is the point of money-creation, inasmuch as the central bank ‘accommodates’ rather than actually taking the original borrower’s promissory note as an asset or imposing a specific liability associated therewith upon the bank.

administered by a central bank or equivalent monetary authority constituted by a sovereign. It is that even what privately owned banks dispense is effectively an indefinitely extensible public resource – a resource on which they are licensed, moreover, to charge private rents. The banks are, in other words, best viewed as privileged outlets for something that is ultimately publicly produced and more or less freely extended to them – something that the banks in turn dispense for a profit. In the U.S., that something is the monetized full faith and credit of the United States.

The sense in which the banks are dispensing, by monetizing, the full faith and credit of the United States is discernible in the typical loan transaction as described just above. When the bank lends, it is not just jointly – with the borrower – creating a liability on the part of the borrower and an asset on behalf of itself. It is also taking on a liability of its own – the liability to pay either (a) on the draft that it conveys to the borrower once the loan papers are processed, or (b) on all drafts that the borrower draws on the deposit that the bank opens on behalf of the borrower once the loan papers are processed. *This liability is in turn taken on by the United States* – i.e., by the public, as represented by the federal government of the U.S. For the central bank ‘recognizes’ and ‘honors’ all privately undertaken commitments represented by the borrower’s new rights vis-à-vis the deposit his loan opens up.

All of this is pictorially discernable in *Figure 1* above in the way that a bank’s liability, upon extending a loan to a private party borrower, immediately becomes the central bank’s liability. Legally speaking, then, this public liability takes the form not only of explicit deposit insurance, which is probably that form most familiar to laypeople, but also of other guarantees and protections, some of them implicit, that the government offers depository institutions along with other systemically important financial institutions and market utilities to which I attend just below in Part III.

With respect to those ‘guarantees and protections,’ these are not limited to ‘bailouts’ of the kind that figured so prominently in media coverage of the 2008-09 financial dramas, although they certainly include those. Much more importantly, they include reserve-crediting in response to private loan-extensions themselves, as described above and picture in *Figure 1* – in effect publicly monetizing, into that ultimate safe asset and most liquid money form known as the Federal Reserve deposit, all legal loans that private member banks undertake to extend. This is by far the most important and yet, oddly, least known benefit that I confer upon banks – in

effect thereby conferring upon them the status of private franchisees of that public franchise which is money-production.

Further federal guarantees and protections that complement this one include limited licensure – i.e., protected oligopoly status – of depository institutions on the one hand, and a battery of special treatments offered by federal law to so-called ‘shadow banks’ and bank holding companies that functionally replicate or capitalize upon commercial bank activities on the other hand. It will be well to say more of these sectors now so as to round out the banking picture.

III. FROM ‘SUN’ AND ‘PLANETS’ TO ‘MOONS’: SHADOW BANKS AND BANK CONGLOMERATES

Many nonbank actors in the financial markets are apparently aware of the public franchise nature of ‘private’ bank-money creation as elaborated above. One can infer this from two salient developments in those markets over the course of the past several decades. The first is the development of so-called ‘shadow banks,’ which during the run-up to 2008 developed means of capitalizing on the advantages that chartered franchisee banks receive while avoiding the legal quid pro quos on which those benefits are conditioned when it is chartered banks that receive them. The second is the development and proliferation of financial conglomerates – holding companies – with banks at their centers, through which nonbank financial firms have found means of tapping into the public benefits that are conferred upon banks. These developments went underappreciated in the run-up to 2008.

In simultaneously overlooking the shadow banking sector and valorizing financial conglomeration during this period, my franchisor – in this case, Alan Greenspan’s Fed – effectively permitted a proliferation of new, ‘rogue’ franchisees that traded on the perceptions of ‘high quality’ that franchise arrangements aim to maintain. Yet it did not at the same time engage in that ‘quality control’ which franchisors must do if they are to maintain such perceptions in the long run. In effect, the Greenspan Fed acted as a natural gas utility company that responds to gas-siphoning on the part of unauthorized or questionable users simply by pumping more gas – as if maintaining a particular *psi* measure in the pipeline were the sole policy objective. The result, as Part IV documents, was both a lowering of quality and an

overdispensing and misallocation of ‘gas’ – credit-money – which ended, as gas leaks tend to do, in explosion.

On the way to that Part IV discussion, I aim in this Part to round out my map of the ‘pipeline.’ I complete, in other words, the picture commenced in Part II, so as to show just how public-credit-saturated the entire ‘private’ financial system, not just the banking subsystem thereof, actually is.

A. Shadow Banks: Other Promises Are Money Too

The federally facilitated, yet still under-regulated, ‘shadow banking’ sector is a critically important complement to the traditional banking sector where money-proliferation is concerned. The lending liabilities of this sector, even exclusive of derivative commitments, total to nearly 70% of traditional bank deposit liabilities.⁴⁹ In effect, this sector has come to constitute a sort of ‘gray market’ in the full faith and credit of the U.S., operating in parallel with the ‘white’ market described in Part II. The most influential subsectors of this sector are the following.

1. Repo Markets

I begin with the markets for sale and repurchase agreements – a.k.a. ‘repos’ – per which a borrowing party fleetingly ‘sells’ an asset to a lending party, while agreeing to repurchase the asset within a day or two for a slightly higher price.⁵⁰ The ‘haircut’ between selling and purchasing price serves as the (typically very low) borrowing charge. The initial selling price serves as the loan principal. And the sold and then repurchased asset serves as collateral. The assets in question typically are U.S. Treasury securities, other federal ‘Agency’ securities, or some species of asset-backed security (ABS) – e.g., a mortgage-backed – that has received an ‘investment grade’ rating from some federally accredited rating agency.⁵¹

⁴⁹ Shadow banking liabilities total at approximately \$7.3 trillion, while bank and credit union deposit liabilities come in at approximately \$10.7 trillion. As it happens, both figures are dwarfed by U.S. Treasury and Agency debt, which at \$19.7 trillion continue to constitute by far the largest single asset class in the global financial economy. See Bd. of Gov. of the Fed. Res., *Financial Accounts of the United States*, web-available at ...

⁵⁰ See generally Viral Acharya & Sabri Oncu, *The Repurchase Agreement (Repo) Market*, in *REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE* (Viral Acharya et al., eds. 2011), at 319.

⁵¹ *Id.*

The repo markets are probably the largest subsector of the shadow banking sector, accounting for some \$ 3.7 trillion in transaction volume.⁵² They are so large, and have grown so quickly in recent decades, that demand for more repo collateral than Treasuries and Agency securities sufficed to supply is thought to have been a significant driver of the rapid production of high-rated ABS from the 1990s onward.⁵³ Repo transactions replicate traditional banking activity both in their maturity transformation properties – low cost short borrowings fund higher yield longer investments – and in their government support, though not in their regulation.

Repo transactions also augment the credit-money supply in a manner reminiscent of that at work in the earlier-mentioned ‘money multiplier’ understanding of bank money-creation – save without any publicly imposed analogue to reserve requirements. This occurs through the practice of rehypothecation, per which a lender-cum-temporary-purchasor of an underlying repo security pledges it as collateral in borrowing of its own. In light of this bank-reminiscent attribute of repo transactions, per which credit-money can be indefinitely magnified, it is surprising that these practices went unregulated in the leadup to 2008. The lack of regulation is even more surprising in light of the critical role public support has played in underwriting the repo markets from their very beginning.

As for that underwriting, for one thing the U.S. Fed actually *invented* the repo as a means of financing First World War expenditures.⁵⁴ And U.S. Treasury securities, as supplemented by U.S. government-sanctioned (i.e., rated) securities, still constitute the underlying assets on which most repo transactions occur.⁵⁵ Federal debt, in other words, is by far and away that asset on which repo transactions most depend to occur. Private repo in effect ‘monetizes’ trillions of dollars of public debt, much as New York Fed open market operations do. Even the *private* debt that now *supplements* federal in collateralizing repos, moreover, is indirectly federally endorsed via the activities of rating agencies whose ratings receive, through the Securities Act, regulatory status.

⁵² See Bd. of Gov. of the Fed. Res., Financial Accounts of the United States, Table L. 207, line 1.

⁵³ See, e.g., Gary Gorton & Guillermo Ordonez, The Supply and Demand for Safe Assets, NBER Working Paper No. 18732 (Aug. 2013).

⁵⁴ Cite

⁵⁵ See, e.g., *id.* Also GARY GORTON, SLAPPED BY THE INVISIBLE HAND: THE PANIC OF 2007 (2010).

It also bears noting that the New York Fed acts as the largest *participant* in the repo markets to this day, thereby in effect declaring these markets safe. Two government-guaranteed clearing banks, moreover – BNY Mellon and JP Morgan Chase – serve as guarantor/clearing banks for the largest of the repo markets – the so-called ‘triparty’ market.⁵⁶ Finally, because repo transactions are exempt, under the ‘qualified financial contract’ provision, from the stay and clawback provisions of the U.S. Bankruptcy Code,⁵⁷ repo lenders are effectively guaranteed against counterparty credit risk. That renders repo loans functionally equivalent to informationally insensitive bank deposit liabilities.⁵⁸

Repo markets, then, represent yet another critical source of publicly facilitated, indefinitely extensible credit – credit which is, in effect, that of the U.S. itself in view both of the assets used in repo and of the market infrastructure over which repo transactions are conducted. And as noted before, through rehypothecation this debt is magnified ‘money-multiplier’-style save without any formal, required-reserve-reminiscent limitation.

2. Credit Derivatives Markets

Corresponding more or less to the ABS/repo pairing in constituting the shadow banking sector is the credit-derivative/clearing-house pairing. There are of course more financial derivative-types than it would make sense to catalogue here, with a notional value totaling well into the hundreds of trillions of dollars.⁵⁹ What is important for present purposes is that many of these – best known among them probably the credit default swaps (CDS) and collateralized debt obligations (CDOs) that received so much attention in 2008 and thereafter – are used either to construct synthetic loan transactions or, by enabling lenders to hedge credit risk, to increase leverage in already transpiring lending transactions, including by garden variety commercial banks.⁶⁰

⁵⁶ See Tracy Alloway & Michael MacKenzie, *New York Federal Reserve Takes on Key Role in Repo Market*, FINANCIAL TIMES, June 19, 2014, web-available at ... ; and Bruce Tuckman, *Systemic Risk and the Tri-Party Repo Clearing Banks*, CFS Policy Paper, Feb. 2, 2010, web-available at ...

⁵⁷ See 11 U.S.C. Secs. 363(b)(7), 546(e), and 559.

⁵⁸ See Gary Gorton & Andrew Metrick, *Securitized Banking and the Run on Repo*, 104 J. FIN. ECON. 425 (2012); also Gorton, *supra* note 40.

⁵⁹ Current estimates are ... See ...

⁶⁰ See generally Erik Gerding, *Credit Derivatives, Leverage, and Financial Regulation’s Missing Macroeconomic Dimension*, 8 BERKELEY BUS. L. J. 101 (2011); also GORTON, *supra* note 40.

The sense in which such transactions can increase the endogenously determined credit-money supply is readily appreciated by comparing a derivative to its insurance contract counterpart. For the former amounts to an indefinitely proliferable, secondary market tradable variation on – a derivative of – the latter. Consider, then, a fire insurance policy taken out on a house. Such a contract amounts to a bet entered into between insured and insurer – a bet that the former ‘wins’ in the event of fire, and that the latter ‘wins’ in the event that no fire occurs during the life of the policy. This transaction is presumably beneficial to insured and insurer alike, but is of negligible significance to the broader public. For neither party may sell the contract and no other person may become party to it, thanks to the ‘insurable interest’ doctrine long operative in the law of insurance.⁶¹

Now imagine a derivative contract whose ‘underlying’ is identical to that of the insurance policy – the house that might burn and might not burn. If I permit as many people as wish to do so to take either side of the fire ‘bet’ by purchasing or selling secondary-market-tradable contracts that replicate most of the terms of the original insurance contract, then things change dramatically. The contracts now become financial securities that are readily monetizable either through sale or through use as collateral in lending transactions. There is also no *ex ante* limit to their issuance – they are subject to no analogue of the insurable interest doctrine, and there is no reserve requirement or other form of ‘base money’ in connection with which they might be quantitatively restricted via some stipulated ‘multiplier.’ If, then, such contracts are in any way federally guaranteed or otherwise federally facilitated, they too can come to constitute a form of securitized, then monetized, full faith and credit of the U.S. – much as I just saw with rehypothecated repo. They can become something like money.

As it happens, credit derivatives are, and have long been, at least indirectly federally guaranteed. Prior to passage of the Dodd-Frank Act in 2010, most credit derivative transactions traded ‘over the counter’ (OTC) through large, federally backstopped Wall Street dealer banks. These banks often served as counterparties in the derivative transactions themselves.⁶² Since 2010, most of these transactions have been required to clear through regulatorily approved and federally-backstopped clearinghouses, which effectively assume the risk of failure on the part of

⁶¹ Explain and cite.

⁶² Id.

the parties to the transactions.⁶³ The dealer banks that constituted the OTC market prior to 2010, then, and the clearinghouses that underwrite the lion's share of the market post-2010, all have been implicitly guaranteed institutions considered by most to be 'too big to fail.'

The latter case is underscored, moreover, by (a) clearinghouse access to Fed emergency liquidity lending in the event of a crisis,⁶⁴ and (b) clearinghouse authority to call on their large, implicitly guaranteed member banks for additional capital in the event of financial distress.⁶⁵ It also bears noting that derivatives, like the repo collateral noted above, are exempt from the Bankruptcy Code stay and clawback provisions via the 'qualified financial contract' exemption,⁶⁶ while the assets that often collateralize swaps are themselves once again rated by government-sanctioned rating agencies. In these senses too, then, the derivatives markets look a good deal like the repo markets, and hence much like banks.

3. Money Markets

A final component of the shadow banking sector worth serious attention comprises the commercial paper and money market mutual fund markets. Much as the repo markets and the government-issued or -sanctioned securities traded thereon, and the derivatives markets and many of the credit derivatives traded thereon, jointly constitute one large subsector of the shadow banking sector, so do money market mutual funds (MMMFs) and the commercial paper (CP) primarily purchased thereby constitute another. Indeed there are nearly \$1 trillion in CP and \$ 2.6 trillion in MMMF shares outstanding.⁶⁷

Commercial paper is very short term debt issued by firms that the U.S. Securities and Exchange Commission (SEC) has effectively deemed high quality, 'investment grade' borrowers.⁶⁸ Both attributes render CP a very low-risk form of investment for purchasers, and in consequence a low-cost form of borrowing for issuers. For that very reason, the CP market is often referred to as a constituent part of the so-called 'money market' for all short term

⁶³ See [Dodd-Frank provision].

⁶⁴ See 12 U.S.C. Secs....

⁶⁵ See 12 U.S.C. Secs....

⁶⁶ See again 11 U.S.C. Secs. 363(b)(7), 546(e), and 559.

⁶⁷ See Bd. of Gov. of the Fed. Res., Financial Accounts of the United States, Tables L. 208, line 2 (CP) and L. 120, line 13 (MMMF).

⁶⁸ The deeming is done directly by federally recognized rating agencies, whose ratings carry the force of regulatory endorsement. See 17 U.S.C. Secs. ...

instruments – almost as if to verify by popular usage the proposition that those who deal in CP deal in a close money substitute.

Money market mutual funds, in turn, are open end investment companies that specialize in forming diversified portfolios of CP and other short term or safe investment securities – including, again, Treasuries – on behalf of investors. Special accounting rules permit MMMFs to price shares at precisely \$1 per, while other regulatory provisions permit them to offer checking services to account-holders.⁶⁹ That of course means that MMMFs effectively ‘monetize’ CP by enabling their shareholders to write checks out of shares held in CP portfolios.

These features combine to render MMMFs close bank substitutes in the eyes of borrowers and savers alike. Indeed this was part of the point of introducing these investment vehicles in the first place during the 1970s. That was of course a time when high consumer price inflation and tight interest rate limits to which banks were subject prompted some enterprising financial market participants to develop and then offer slightly higher-yield bank-deposit-like products.⁷⁰

As with the repo and credit derivatives markets, so with the CP markets and MMMF industry, government action does much to render them close bank substitutes which accordingly dispense what amounts to that public resource which is the full faith and credit of the U.S. For one thing, CP, just like repo and credit derivatives, is exempt from Bankruptcy clawback provisions per the ‘qualified financial contracts’ exemption,⁷¹ and is rated by federally sanctioned rating agencies.⁷² That renders it low-risk for the lender and effectively publicly endorsed for the borrower.

For another thing, the Fed stands ever-ready to ‘monetize’ CP at its discount window,⁷³ while federally insured banks for their part guarantee the credit-worthiness and liquidity of such CP as is asset-backed (so-called ‘asset-backed commercial paper,’ or ‘ABCP’).⁷⁴ Finally, as the

⁶⁹ See 17 U.S.C. Secs. ...

⁷⁰ An accessible history of these developments, written by the former president of the Investment Company Institute and a friend of the author’s, is MATTHEW FINK, *THE MUTUAL FUND REVOLUTION* (2010).

⁷¹ See 11 U.S.C. Sec. 546(e).

⁷² See 15 U.S.C. Secs. 78o-7 through 78o-9; and 17 C.F.R. Sec. 240.17g-1 through 240.17g-7.

⁷³ See Federal Reserve Collateral Guidelines, June 3, 2014, at 3, web-available at ...

⁷⁴ See Emma-Jane Flucher et al., Fitch Ratings, *The Difference Between Traditional ABCP Conduits and SIVs, ABCP/Europe Special Report*, (2008), at 2, web-available at ...

Federal Deposit Insurance Company's (FDIC's) *ad hoc* insuring of MMMF accounts as if they were bank accounts from 2008 to 2010 made plain, these institutions' near functional equivalence to commercial banks at least as savings vehicles and payments system components elicits federal backstopping as well.⁷⁵

While they do not create bank-money through lending or multiply leverage through rehypothecation or multiplication as ordinary banks, repo, and credit derivatives markets respectively do, then, they nevertheless constitute one more federally facilitated form of credit-monetization. In this sense they represent an attenuated form of money-generative banking.

B. Bank Conglomerates: From Rent-Seeking to Subsidy-Leaking

1. Bank Holding Companies

.....

2. Financial Holding Companies

.....

Figure 2 summarizes, in pictorial form, the multiplicity of ways in which the public effectively underwrites the putatively 'private' banking, shadow-banking, and broader financial sectors. All of these ways, combined with the earlier-portrayed Fed assumption and monetizing of loan-created 'private' bank liabilities, jointly add up to a system whereby private agents are purveying – and in most cases charging rents upon – that public resource which is the full faith and credit of the United States.

Figure 2: Public Underwriting of Private Finance

[Insert *Figure 2*]

What all of these subsystems jointly add up to is a financial system in which financial capital is both superabundant and in effect publicly provided, with actual 'intermediation' between private suppliers and various users of finance capital having very little to do with what

⁷⁵ See, e.g., ...

actually happens. By effectively guaranteeing, when not directly supplying, the assets and liabilities of both banks and shadow banks, the federal government effectively converts these to liabilities of its own. It converts ‘private’ liabilities into ‘public’ liabilities.

These liabilities the government in turn ‘monetizes’ by facilitating banks’ and shadow banks’ extending money loans that are the asset side counterparts to the mentioned federal liabilities. In effect, then, all of this investment that takes place through sunlight and shadow institutions amounts to a form of ‘shadow’ *public investment*. The returns on and allocation of the investment, however, are left mainly to private participants in the financial markets – to financiers. The returns, moreover, are often in the nature of oligopoly rents. For the government limits, through licensure and other requirements, the number of ‘authorized dealers’ in the public credit on the one hand, while allowing a good deal of consolidation and concentration on the other hand.⁷⁶

Nearly all that the government does by way of regulating this activity, when it effectively regulates at all, is to modulate the total quantum. This it does via fiscal policy, monetary policy, and leverage regulation in the forms of minimal capital and collateral requirements. There is some credit allocation, true, (a) in the forms of direct investment and procurement, and (b) in the favored treatment offered certain forms of debt issued by favored issuers – for example, agricultural and ‘blue chip’ firms, along with some ‘small businesses’ looked out for by the Small Business Administration (SBA), more on which below. But there could – and should – be much more along these lines. Indeed it is odd that there isn’t already, given (a) the public nature of the credit-resource, (b) the over-issuance of this public resource by private franchisee-issuers in recent decades, and (c) the relative sterility of those investments *made* with the over-issued resource.

In what follows I shall accordingly lay out a number of ways in which the public can reclaim its resource and redirect it in less sterile, more sustainable directions. But first I draw out the more salient consequences of its *not* doing so. At the present time, a bit more than six years

⁷⁶ For more on this public resource, private rents relation, as manifest not only in the banking but also in the broadcasting and energy sectors, see Robert Hockett & Saule Omarova, *Public Resources, Private Rents* (working paper, 2015).

after ‘the most significant financial crisis since the Great Depression,’ these consequences will look familiar; what is critical therefore is to grasp the sense in which they *are* consequences.

IV. WHEN FRANCHISORS FORGET THEIR ROLE: ‘FINANCIALIZATION’

The nature of a modern financial system as described in Parts II and III lends it the character of a mixed blessing. A system of this sort carries an immense capacity for good. Constraints that past generations thought themselves trapped by – the ‘loanable funds’ picture, for example, which leaves millions at the mercy of hundreds for funding – turn out to have no real purchase. I find that the reasonable prospect alone, of some bona fide projection’s materialization through productive activity, can be monetized in advance – monetized to finance its own realization. Each of us now can make real what I’d only imagined before, through a medium – the finance franchise – maintained by us all. This system is such that dreams themselves, at least when shared widely, can be made self-fulfilling.

Yet speculative manias and crashes, bank-runs and busts too are in the nature of self-fulfilling prophecy. And this hints that the same power I found in Parts II and III to inhere in a public-private franchise form of financial system can be as destructive as it is creative when not properly harnessed. It can project mere illusions of wealth quite as motivating as real prospects of wealth. In so doing it can induce forms of reliance that in the end prove quite fatal – even apart from the real opportunity costs they entail. In this Part, accordingly, I elaborate on those dangers, modeling and corroborating just how they occur. That sets the stage for proposals I make in Part V.

My thesis is that for a financial franchise arrangement such as ours to function sustainably, the franchisor must play a continuously active role in managing both the quantum and the allocation of finance capital in the economy. It must ensure both (a) that finance capital flows adequately toward ‘real’ development projects that collective action problems and associated challenges lead private financiers to underfund, and (b) that finance capital aggregates above this necessary threshold suffice solely to maintain necessary, not excess, liquidity in secondary markets. If the franchisor does not do these things, circumstances will regularly

emerge in which franchisees direct effectively overabundant capital in underproductive and even destructive – because destabilizing – directions.⁷⁷

Crucially, in my view, it will not be necessary for franchisees – or for anyone else – to be venal or irrational for these harms to occur. Differences in public and private investment horizons alone, combined with rationally interactive group dynamics over which individuals have no appreciable control, will suffice to underwrite processes pursuant to which even unobjectionable individual decisions aggregate into collectively calamitous outcomes. The franchise arrangement, in other words, absent proactive franchisor involvement, will underwrite classic collective action problems bearing recursive, self-exacerbating properties. It is precisely this passive-franchisor-rooted form of degeneration, I believe, that previous writers have sought to describe under the rubric of ‘financialization.’

Before proceeding I should emphasize two things I am *not* saying here. First, I am not saying that there is no role for private actors as creditors or investors in a properly functioning finance franchise. The whole point of speaking in terms of franchises is to emphasize that there are two modes, not one mode, of action involved in the arrangement – that of the franchisor and that of the franchisee. My claim is simply that there must indeed be both, not just one. In my view, private actors in the finance franchise serve primarily, though not uniquely, an informational role in the allocation of finance capital. Their willingness or unwillingness to put their own funds at risk in connection with particular projects serves as a datum – not the sole datum, but an important one – in determining where best to allocate capital. Franchisees should not, on the other hand, be mistaken for necessary sources of capital supply – that is the intermediated loanable funds myth, which yields nothing but mischief.

Second and complementarily, I am not saying that the franchisor – or ‘the government,’ ‘the public sector,’ the central bank, or what have you – is the sole entity capable of determining where best to allocate financial capital. That would be to contradict what I just said of the value of franchisees in the allocation process. Rather, I am saying that the franchisor as collective agent has one cluster of crucial capacities in making allocation decisions that the franchisees haven’t. That is the advantage offered by an indefinitely extended time horizon, along with a

⁷⁷ ‘Overabundant’ here in the sense of more than is necessary to afford secondary market liquidity.

capacity both to maintain, and to commit credibly to maintain, certain macro conditions⁷⁸ on which even disaggregated private actors' capacities to make rational longer term investment decisions depend. And this owes precisely to what I said earlier about financial markets' proneness to recursive collective action challenges.

In short, then, in my picture the franchisor maintains certain macro-conditions including the supply of finance capital, credibly commits to keep doing so, and acts in accordance with these commitments. It also makes and executes allocation decisions that either are (a) entailed by the aforementioned commitments, or (b) important for the polity as a whole but incapable of being executed by disaggregated individual actors. The franchisees, for their part, aid the franchisor in discharging these functions by in effect 'betting' on various alternative directions that what is always ultimately public investment might take. In so doing they play a Hayekian information-gathering and -aggregating function from which the franchisor benefits in determining where best to deploy capital.

This, I believe, is the best way to understand why it is that I allow nominally private banks and shadow banks both to dispense and to profit by dispensing what is at bottom a public resource. The dispensary role is a Hayekian role, and the profits earned therefrom are compensation for playing it. Obscurity about the nature of this arrangement, however, has at certain times fostered (a) self-misunderstanding and concomitant passivity on the part of the franchisor and (b) underperformance and overcompensation on the part of the franchisees. In the remainder of this Part I unpack, then corroborate these claims. In Part V I propose what to do about it.

A. Financialization? An Interpretation

The financial dramas of 2007-09 and their aftermath occasioned much soul-searching as to what might have 'gone wrong.' Some of the resultant conversation occurred under a rubric that had figured in pre-crisis discussion as well – that of 'financialization.'⁷⁹ Widespread use of this term signaled agreement both that something financial in character had gone wrong even before the 'financial crisis,' and that the something in question bore the structure of a *process* of

⁷⁸ Including credit aggregates, employment rates, and wealth distributions.

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some sort. Yet no consensus emerged over just what this process, hence what ‘financialization,’ might be. I hope here to provide a basis for future consensus.

1. Previous Accounts

Some have elaborated on ‘financialization’ by reference to the percentage of GDP attributable to the financial services industry, which has grown steadily from the late 1970s onward.⁸⁰ Others have spoken in terms of the percentage of political campaign donations or lobbying stemming from the same industry.⁸¹ Still others have suggested that financialization bears intellectual and wider cultural facets quite as important as its material aspects. Financialization, some of these writers suggest, is simply the broader, more general ideological phenomenon known as ‘neoliberalism,’ as manifest in financial theory and policy in particular.⁸²

All of these takes on ‘financialization’ have much to recommend them. The ‘revolution’ in financial theory that percolated through the 1960s and climaxed in the 1970s is plausibly viewed as the entry of Arrow-Debreu-Mackenzie, along with a good dose of Hayek, into the once merely vocationally oriented business schools.⁸³ In that sense, the ‘finance revolution’ in business and management schools can be viewed as a particular manifestation of – even as it is partly one impetus behind – a more general resurgence of market-valorizing ‘neoliberalism’ during the same era.⁸⁴

The successes enjoyed by market participants who made *use* of the insights of such as Markowitz, Sharpe, Lintner, Black, Scholes, Merton and others, in turn, doubtless both vindicated these theorists and encouraged yet more thought and action along similar lines.⁸⁵ This all might then have played some role in encouraging the political turn of the late 1970s and 1980s toward more market-encouraging, government-belittling public policy – including financial deregulation, trade liberalization, and regressive changes to tax codes.⁸⁶

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These changes would likely have enabled the ‘financial services’ sector to grow as a part of the macroeconomy, then as part of the political process. For they would tend to suppress both domestic manufacturing and incomes below the top of the income distribution, thereby raise demand for new consumer debt products both at and below the top of the distribution, and thereby heighten the perceived importance of financiers to everyone.⁸⁷ Insofar as financiers were able through debt products temporarily to produce perceptions of growing wealth, moreover, they might well have come to look more and more heroic to politicians and public alike in consequence.⁸⁸

2. A Fuller Account: Secondary Markets and Collective Action Problems

All of the above acknowledged, I nevertheless think that the connecting lines assumed in these pictures should be drawn together, drawn more clearly, and drawn more comprehensively. For each account captures something important, but no account captures things fully or, therefore, clearly. An adequate account will ‘take into account’ all relevant factors included in other, more partial accounts, and endeavor to integrate all of them into a unified causal structure. If causation runs in more than one direction – as I argue below that it does – that is all well and good, but some appreciable understanding of the dynamics involved, whatever their direction or directions, must be part of the account.

For reasons rooted in the above discussion, I think that the most useful working definition of ‘financialization’ will be couched in the terms of Part II and Part III, so as better to concentrate attention on the principal node through which I believe the process proceeds and can be reversed. I accordingly call ‘financialization’ that which occurs when the balance of initiative in the ‘financial franchise,’ as characterized above, shifts from franchisor to franchisees – usually through franchisor abdication. When the public whose full faith and credit is dispensed by financial institutions ceases, through its collective agents including the central bank, both to work to maintain material living standards below the top of the wealth distribution and to take a lead role in modulating and directing financial flows toward real development, ceding these roles to the institutions it has licensed and continues to protect, financialization is that which ensues.

⁸⁷ This particular linkage is one I suggest in my model below.

⁸⁸ Id. See also Kripner.

At the core of my account is the observation that at least two ‘primary’ markets and all ‘secondary’ markets in the finance space are rife with collective action problems – situations in which multiple individually rational decisions aggregate into collectively costly outcomes. Collective action problems require collective agents for their solution, and in the finance space what I have been calling the ‘franchisor’ just is the agent in question. Franchisor abdication is accordingly a recipe for the full flowering of all of the collective action challenges I have in mind.

As for the particular collective action challenges I have in mind, the two that afflict primary markets are as follows. First, in order for primary market investment in the production of consumer goods or services to be individually rational, there must be some reasonable prospect that income-derived consumer purchasing power will be maintained over some reasonable time horizon. No individual as distinguished from collective actor, however, can ensure this prospect. Hence some privately managed finance capital that could be productively employed in the primary markets is going to ‘search for yield’ in the secondary markets.

Second, in order for primary market investment in the production of public goods including many forms of infrastructure to be to be individually rational, there must be some means of converting some part of the value of the goods in question into individual remuneration. No individual as distinguished from collective actor, however, can ensure this prospect either; virtually by definition, things are quite the contrary. Hence yet more privately managed finance capital that could be productively employed in the primary markets is going to ‘search for yield’ in the secondary markets.

But the secondary markets, too, are rife with collective action problems, which claim are the source of their proneness to volatility. These problems are so many that their full enumeration is best left to the full elaboration of my model just below. Their common denominator, however, is captured partly by the word ‘collective,’ and partly by a phrase that I used in opening this Part – ‘self-fulfilling.’ Secondary market collective action problems are particularly apt to bear self-exacerbating features. The mere enumeration of some well-known terms of art reveals the ubiquity of what I accordingly call ‘recursive’ collective action problems in decentralized secondary financial markets: ‘bubble,’ ‘bust,’ ‘speculative mania,’ ‘bank run,’ ‘credit crunch,’ ‘firesale,’ etc.

In all of these cases, individual actors respond rationally to what they see others doing or anticipate others might do in contemplation of some future prospect, and in so doing actually bring on and perhaps worsen that future prospect. Collective agency is accordingly required to address these problems too, typically by modulating the availability of that finance capital which Parts II and III showed to be under the ultimate control of the ‘franchisor.’

Summing up, then, in order for investment in the ‘real,’ ‘primary’ markets to be adequate, and hence for privately managed capital not to flow destabilizingly toward secondary markets before primary markets are adequately covered, a collective agent must (a) actively maintain purchasing power among members of the collectivity, and (b) actively channel finance capital toward public goods provision. For secondary markets themselves not to succumb to recursive collective action problems, in turn, a collective agent will have (a) first to ensure that primary markets are covered as just described, and (b) then to ensure that quantum of remaining finance capital that finds its way into secondary markets is not nevertheless overabundant.

The collective agent of which I speak here is of course ‘the state,’ ‘the public,’ or whatever instrumentality has been instituted for whatever the relevant purpose. It is what I call ‘the franchisor,’ which operates through the central bank for purposes of dispensing finance capital as described above in both Parts II and III, and can act through sibling institutions I propose below for other purposes – in particular, the purposes of public investment and individual income-maintenance through capital-diffusion. Where necessary collective agency of the kinds just noted is lacking, I say there is ‘franchisor abdication.’ Financialization, on my reckoning, is accordingly the interacting of the collective action challenges just noted when the franchisor has abdicated some or all of its essential functions.

In what follows I model the financialization process in detail, highlighting the critical role played by franchisor absenteeism in so doing. I then corroborate the model’s presence and operation in two salient hyperfinancialized periods – that of the 1920s and that of the late 1990s and early 2000s. Corroborating the presence and operation of this model, as it happens, also further corroborates my characterization of the finance franchise above in Parts II and III. For as I shall see, the franchisor’s continued underwriting of that public resource which the franchisees over-dispensed and mis-allocated during these periods, coupled with its abdication of

its critical credit-modulatory and -allocative responsibilities, was crucial in making the 1929 and the 2008 calamities possible.

B. *Financialization: A Model*

Here, then, is my model of financialization as rooted in franchisor absenteeism in a bit more detail. Begin with a skewing distribution of income and wealth in the form of financial and other assets, pursuant to which a comparatively small percentage of a population – its class of *rentiers* – comes to hold a comparatively large percentage of income-yielding financial assets. This is not an implausible starting point; liberal and neoliberal economic policies of the sort operative in the U.S. during the 1920s and then during the 1980s and after reliably foment it, and I find it at the outset of all past financial crises of any magnitude, including the two worst in American history.⁸⁹ Now, because the returns to capital tend over time to exceed returns to labor, I can expect, absent some form of ongoing collective intervention in the name of redistribution or ‘predistribution,’⁹⁰ for any initial such skew to operate in a self-exacerbating manner over time.

Next, as proportional income and wealth thus continue to migrate toward the top of the distribution, beneficiaries of the skew do not consume in matching proportion to their increasing share of the national income. The average propensity to consume (APC) is diminishing in wealth.⁹¹ All of this means in turn that a growing share of income must find ‘investment’ outlets, since a growing share goes unconsumed. A problem, though, is that insofar as those under the top of the distribution lack or lose purchasing power, investment outlets in the ‘real’ economy come to look less and less promising. At least this is so unless (a) ‘the public’ intervenes either to correct the worsening maldistribution or engage in compensatory spending such as public infrastructure investment, or (b) those below the top are able to substitute borrowed funds for stagnating or declining relative earnings in making what purchases they can.

In order to earn returns on idle capital, then, wealthy *rentiers* in the absence of (a) turn increasingly toward (b). They turn to lending arrangements, generally one or more financial

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⁹⁰ Cite...

⁹¹ If I am discussing an ‘open economy,’ moreover, much the same occurs among nations running persistent current account surpluses with deficit nations, whose unbalanced trade relations themselves help to drive inequality within the deficit nations.

‘financial intermediaries’ – i.e., franchisees – removed, with those for whom real incomes have not grown like their own and who must accordingly borrow if they are to consume as large a portion of the national output as they have done in the past.⁹² The proportion of surplus devoted to debt-associated financial products accordingly grows as a percentage of aggregate investment.⁹³ The financial sector of the economy thus begins to attract more investment relative to the ‘real’ sectors of the economy: the makings of ‘financialization’ as traditionally understood fall into place as demand both for more borrowing and for more debt-associated investment vehicles picks up.

Over time, this demand coincidence at both ends of the income and wealth distribution – demand for borrowable funds below the top, demand for consumer-debt-associated financial assets at the top – feeds into both steadily more credit-issuance and its liability correlate, a steady accumulation of leverage.⁹⁴ First this occurs among those below the top, who borrow to maintain material living standards. Then it comes gradually to occur among secondary market participants at multiple levels of the distribution as well. For all investors, large and small, domestic and foreign, begin increasingly to resort to leverage to make *speculative* purchases of the ever-more popular, ever-more highly market-valued consumer- and mortgage-debt products themselves.⁹⁵ And for reasons laid out in Parts II and III above, the franchisor if not active will accommodate growth in these leverage aggregates and their debt-buildup correlates.

In effect, then, what happens is that more and more seek to ‘leg the spread’ between continued low borrowing costs and the high capital gains that purchase for resale of increasingly

⁹² Trade surplus nations act similarly by investing surpluses in trading partner currencies and consumer debt products that prop up trade partner currency values and borrowing capacities, enabling the same surplus nations to maintain export advantages.

⁹³ Both within the nation with a skewed distribution of wealth, and on the part of any nation with export advantages rooted in domestic labor exploitation, currency manipulation, or related practices.

⁹⁴ And, potentially, worldwide. See previous note.

⁹⁵ It is financially rational, after all, for investors to do that – there’s a spread between low borrowing costs and high capital appreciation rates to be ‘legged.’ See Hockett, ‘A Fixer-Upper for Finance,’ 87 *Wash. U. L. Rev.* 1 (2010), at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1367278; and Hockett, ‘Recursive Collective Action Problems,’ working paper, at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2239849. Also Alpert, Hockett, and Roubini, *supra* note 1; and Hockett & Dillon, *supra* note 2.

Asset price bubbles and busts, inflations and debt deflations, bank runs and bums’ rushes all are recursive collective action problems of the same type. So are bank runs, paradoxes of thrift, and layoff-led recessions. They are cases in which multiple individually rational decisions repeatedly aggregate into collectively calamitous outcomes. The only solution to such problems is coherent collective action directed at credit conditions – one example of which is plenary debt write-down of the sort that I urge below. Finally, note that associated derivative instruments, which lever up the gains to be had on the underlying mortgage- and consumer-debt-related instruments, grow in popularity as well for these reasons. *Idem*.

demanded financial assets now promises. Transaction volume in secondary financial markets comes to exceed primary market capitalization by a wider and wider margin. Thus commences that well-documented leverage-fueled ‘feedback’ dynamic which structurally characterizes all of the worst asset price bubbles and busts.⁹⁶ And thus grows that net leverage which leaves massive debt-overhang and resultant depression once the credit-fueled bubble has burst.⁹⁷

The problem, as I suggested above, is in the nature of a recursive collective action problem.⁹⁸ As in the case of any credit-fueled price-inflationary process, it is individually rational for parties to borrow low, purchase, then sell high, even if calamity looms indefinitely far ahead. No private individual can stop it, moreover, even if she sees where it’s ultimately leading; here best bet’s to play along with all others, until such time as things look set to turn. The self-reinforcing bubble-growth process accordingly continues for as long as cheap credit remains available. And cheap credit remains available for as long as the franchisor of the credit-money resource – in the U.S., as elaborated in Parts II and III, that is the central bank – allows.

Why might it allow? There are at least two reasons. One is that passivity itself is allowance, owing to the mechanics of Fed ‘accommodation’ as elaborated in Part II. The other is that the ‘wealth effect’ and new collateralized borrowing capacities brought on by credit-fueled asset price appreciation itself compensate for diminished real incomes in supporting consumer expenditure, which has policy salience for the Fed and the government more generally in light of my public commitment to encourage full employment through ‘growth.’ Policy-makers and regulators – in particular the Fed, which operates under an explicit macroeconomic growth- and employment-promoting statutory mandate⁹⁹ – accordingly find growth- and employment-related reasons to look favorably both upon credit-enhancing new debt and derivative products and upon attendant asset price rises. This is especially true of products associated with real estate and its

⁹⁶ See again sources cited supra, notes 1, 2, 5 and 7. Also Hockett, ‘It Takes a Village: Municipal Condemnation Proceedings and Public/Private Partnerships for Mortgage Loan Modification, Value Preservation, and Local Economic Recovery,’ 18 *Stanford J. L., Bus. & Fin.* 121 (2013), at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2038029; and Hockett, ‘Paying Paul and Robbing No One: An Eminent Domain Plan for Underwater Mortgage Loans That Can Benefit Everyone,’ 18 *Current Issues in Econ. & Fin.* ___ (Federal Reserve Bank of New York) (2013), at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2173358.

⁹⁷ The role of debt in protracting depression after the bust appears first to have been highlighted by Irving Fisher, ‘The Debt-Deflation Theory of Great Depressions,’ 1(4) *Econometrica* 337 (1933). See also Alpert, Hockett, & Roubini, supra note 1.

⁹⁸ See again Hockett, supra note ...

⁹⁹ Cite FRA

finance, since residential real estate is the highest-value form of asset-holding among those below the top of the income and wealth distribution.¹⁰⁰

In sync with the macroeconomic and regulatory processes of financialization just sketched, it is unsurprising to find associated political and cultural manifestations of the sort more often labeled indicia of ‘financialization.’¹⁰¹ The impressions of ‘something for nothing’ prosperity that booms convey while they last tend to bewitch both the public and its political representatives.¹⁰² People feel richer and richer as home prices and once-humble stock portfolios come for a time to look more and more valuable.¹⁰³ Feeling richer, they buy more as well – just as policy-makers have hoped – and in so doing lend a touch of self-fulfillment to the ‘prophecy’ that more borrowing will lead to more real growth.¹⁰⁴

People increasingly treat financiers as folk heroes and saviors as well, since they seem to be making it all happen.¹⁰⁵ Folk follow financial developments in the popular media too, since ‘I am all part of this’ for as long as it lasts.¹⁰⁶ ‘New era’ and ‘this time is different’ talk become common, as do proposals that more and more forms of risk-bearing – including the risk of underfunded retirement – be ‘privatized.’¹⁰⁷ Meanwhile, the fact that what financiers are purveying is a publicly provided, central-bank-administered resource goes forgotten.

Pictorially, then, things operate much as depicted in *Figure 3*. Single straight and right-angled arrows represent causal relations between factors. Pairs of opposed or curved shaded arrows represent mutual, ‘feedback’ causation between factors.

¹⁰⁰ The 1990s and early 2000s were rife with pronouncements by Fed Chairman Greenspan along these lines. See generally Hockett, sources cited supra, notes 1, 2, 7 and 8. Excellent accounts of the broader dynamic pursuant to which policy makers came increasingly to look favorably upon consumer debt and financialization as easy short-term fixes to longer-term distributional skewing are Phillips, *Bad Money: Reckless Finance, Failed Politics, and the Global Crisis of American Capitalism* (2009) and Krippner, *Capitalizing on Crisis: The Political Origins of the Rise of Finance* (2011). See also Johnson & Kwak, supra note 3.

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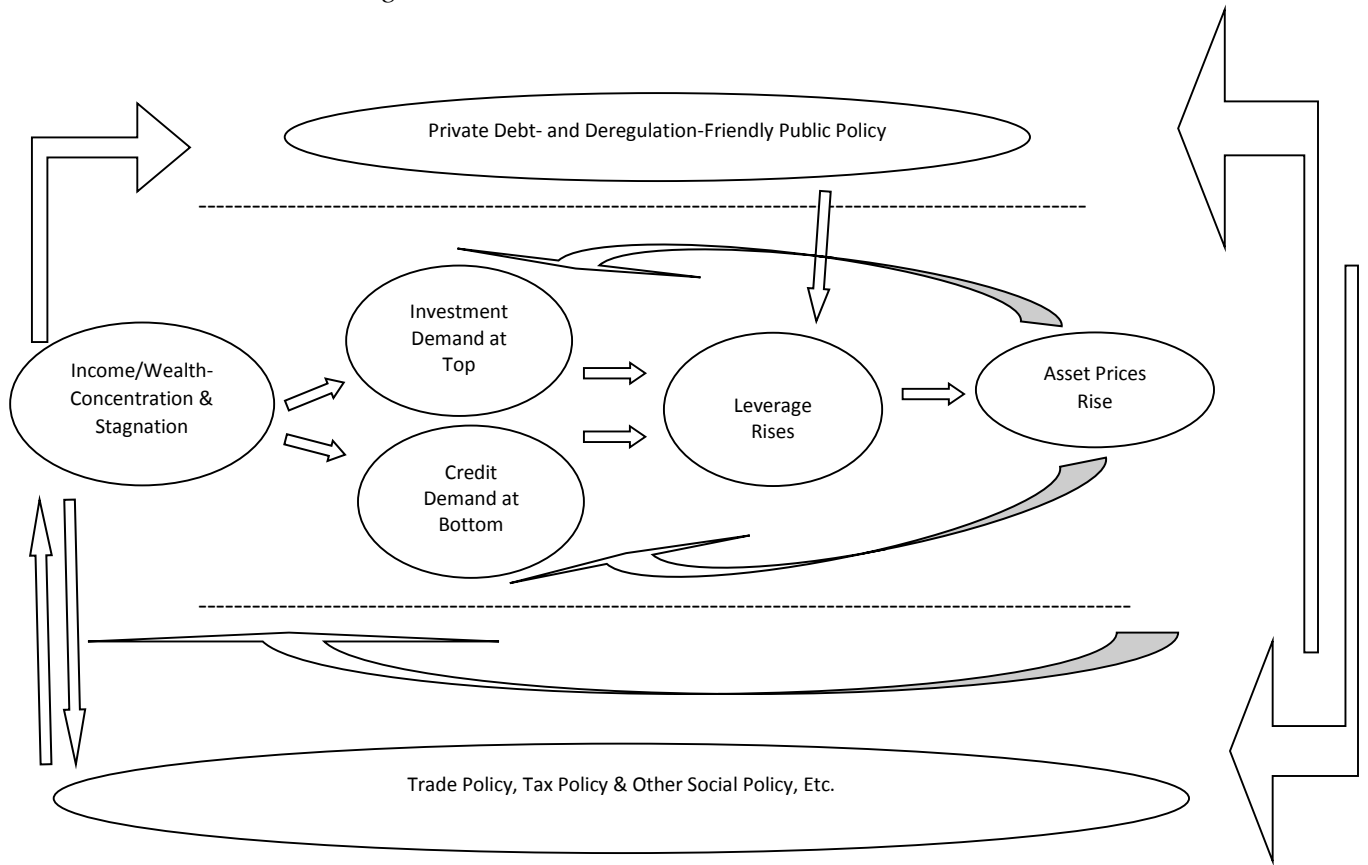
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Certainly in the late 90s and early 2000s, and now again! Cite.

Figure 3: The Financialization Mechanism



Others have written at length about factors outside of the two horizontal lines in the diagram, each of which I think important.¹⁰⁸ My focus is on factors between the lines. I'll now briefly corroborate the presence and operation of these components of the model in the run-ups to both the 1929 and the 2008 financial calamities and subsequent debt-deflations ('depressions'). I'll then show that neither my 'franchisor' – the Fed – nor any other public authority acted to rein in the money-creation in which my franchisees engaged, apparently for demand-maintenance reasons postulated in the model itself.

C. Financialization: The Model Corroborated

A good bit of available data enables us to corroborate the presence and operation of each element of my model. I won't do so in quite painstaking detail here, since that is done

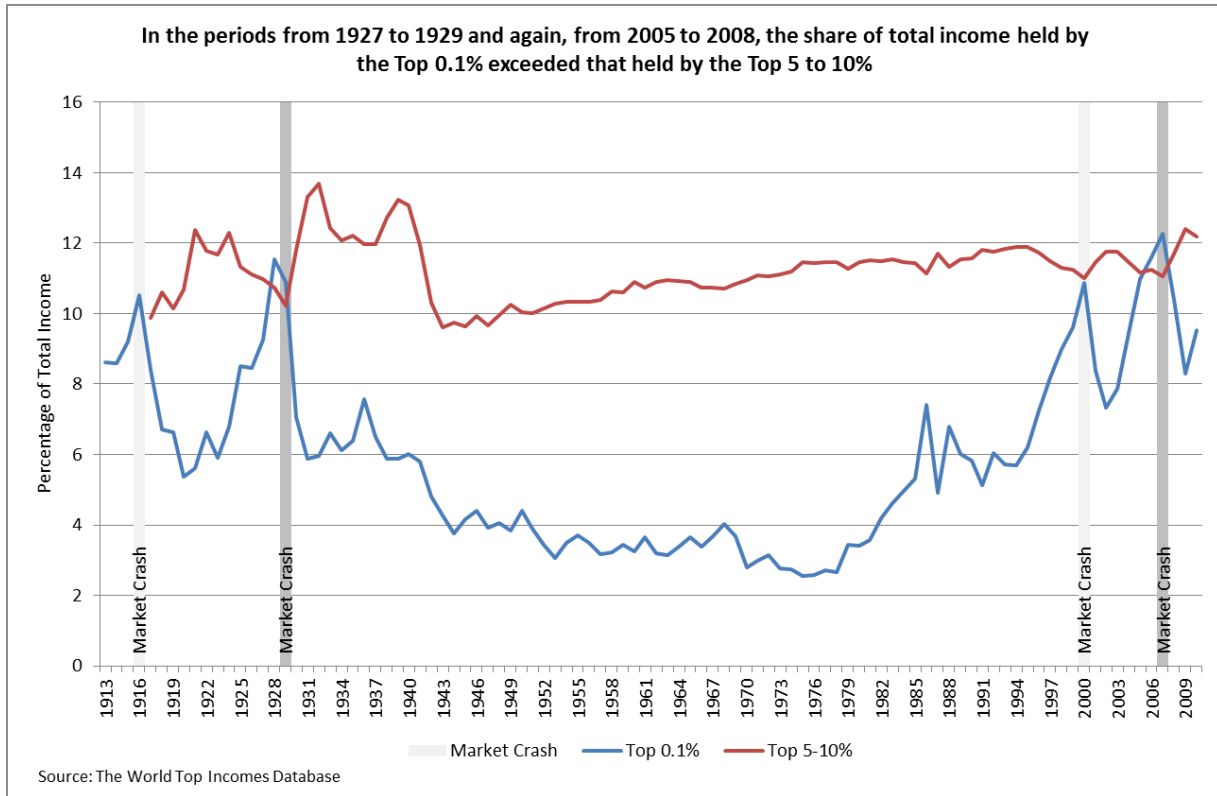
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elsewhere, but will instead provide just enough to make clear how well my model coheres with ‘facts on the ground.’ I start with broad correlations, then go more ‘granular.’

Begin then with income concentration and market volatility. *Figure 4* charts the share of aggregate U.S. income taken by the top 0.1% alongside the income shares taken by the top 5 to 10% over a lengthy stretch of American history. I see here that over the course of the past century, the share taken by the top 0.1% of Americans has only twice exceeded the share taken by the top 5-10% – first from 1927 to 1929, and then from 2005 to 2008. During these periods, Americans with the highest incomes grew their share of U.S. income while other wealthy individuals saw their income shares decline. These are also, of course, the two periods that culminated in ‘great’ bubbles, busts, and ensuing depressions.

The graph also captures two less dramatic instances where the shares of income held by each group approach similar proportions, though in this case reversing positions. These fall at about 1916 and 2000, again roughly coinciding with significant financial market episodes. It also bears noting that the ‘long boom’ following the Second World War, spanning nearly three decades of unusual prosperity and stability, corresponds with the period of greatest distance, in favor of the former, between incomes held by the top 5-10% of earners on the one hand, those held by the top 0.1% on the other hand.

Figure 4: Income Skewing and Financial Volatility



So much for broad, preliminary correlations. I can now go more ‘granular’ by bringing debt and investment patterns explicitly into the picture. These, I shall see, link up with wealth and income concentration in the ways that my model predicts, via the operation of the MPC as I’ve also predicted. I track remaining data over two periods in particular – that preceding the ‘Great Recession’ of 2008 onward, and that preceding the ‘Great Depression’ of 1929 onward.

1. Before the ‘Great’ Recession: 2008-

As suggested above, the marginal propensity to consume (MPC), defined as the increase in personal consumption that occurs with an increase in disposable income, plays an important role in my story. I claim that it mediates between (a) wealth and income concentration on the one hand, and (b) private debt buildup, asset price inflation, ultimate market crash and ensuing debt deflation on the other hand. This happens because the APC is negative in wealth and the MPC accordingly positive but less than unity: For any individual or cohort of individuals, more income translates into more consumer spending, but marginally less so with each added unit.

If my conjecture is correct, I should expect a shift in the distribution of aggregate income flow from lower to higher earners to issue in several additional developments. One would be greater demand for new speculative investment vehicles at the top of the distribution, since more wealth is looking for alternatives to consumption. A complementary development would be greater demand by those under the top of the distribution for mortgage and consumer credit. A third and again complementary development would be that the macroeconomy's aggregate propensity to consume lessens, raising a challenge to aggregate demand-maintenance economy-wide. That in turn would lead policy-makers to look more favorably upon certain ultimately destabilizing financial innovations that satisfy the aforementioned debt and investment demand, as well as upon keeping credit conditions loose.

That the MPC is as characterized here long has been documented through statistical analysis of U.S. time-series data.¹⁰⁹ These all suggest that those with lower incomes manifest a greater average propensity to consume than those with higher incomes. Pending data from the Consumer Expenditure Survey in the run-up to 2008 makes for a helpful illustration. *Figure 5* charts the percentage of total spending by average American households in several income categories over recent years, overlaid with the percentage of total income taken by the top 5%.

The income threshold for the top 5% of earners was \$147,637 in 2003 and \$151,309 in 2009, rendering it roughly equivalent to the '\$150,000 and over' income category.¹¹⁰ Between 2003 and 2007, the top 5% saw their share of the total income rise from 32.8 percent to 38.7 percent, a jump of nearly 6 percentage points. Over the same period, this group increased its percentage of aggregate spending by only 0.3 percentage points, from 22.4 percent to 22.7 percent. Even in 2006, the year that wealthy households accounted for the largest share of total expenditures, their increase from 2003 was less than 1 percentage point.

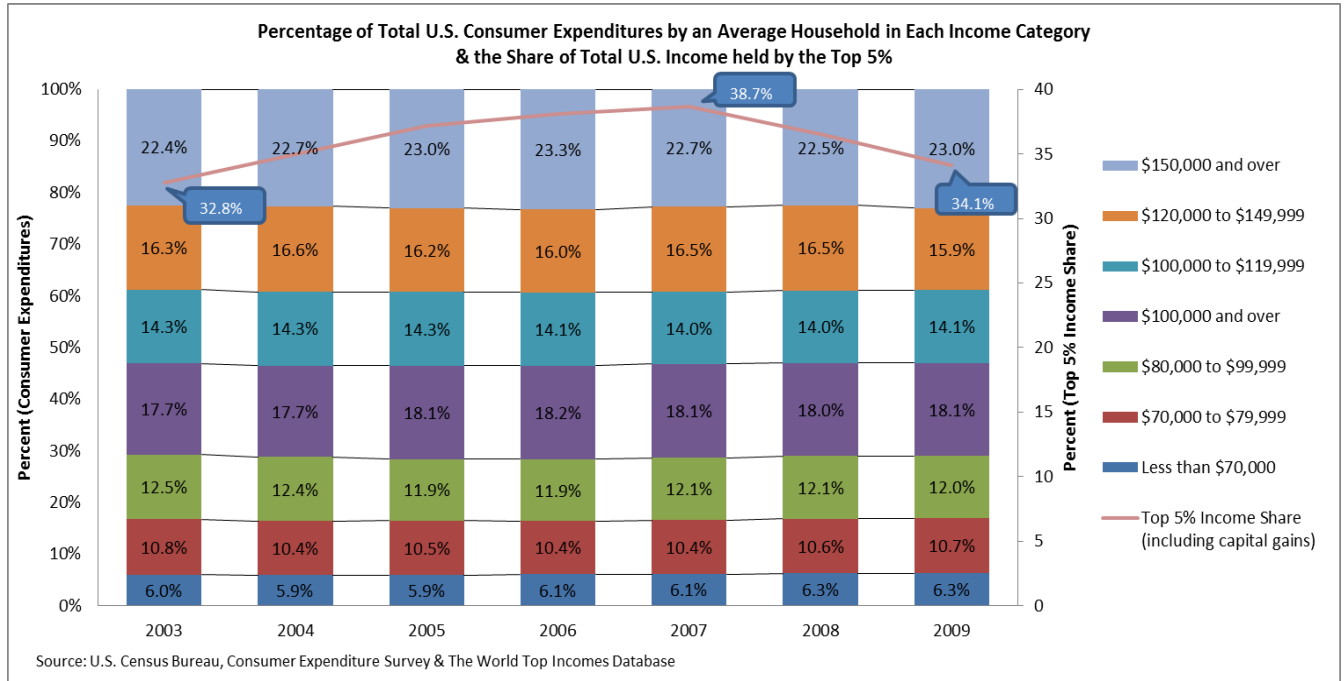
This discrepancy between proportional changes to income and spending is the diminishing APC in action. The particular 'action' seen here, moreover, closely precedes my second-worst episode of financial and subsequent macroeconomic distress in recorded history. While comparable data for the 'first-worst' such episode is unavailable, I'll see next that the data

¹⁰⁹ See, e.g., Emerson, 'Consumption-Savings Investigation: United States,' 11 (1) *J. for Econ. Educators* 1 (Summer 2011), available at < http://frank.mtsu.edu/~jee/2011/5_MS110_pp39to46.pdf>.

¹¹⁰ *World Top Incomes Database*, P95 income threshold including capital gains, United States, 2010 Real Dollars.

is more plentiful for both episodes – circa 1929 and circa 2008 – as I turn to private debt and speculative investment patterns.

Figure 5: Consumption Out of Incomes



The next step in corroborating the presence and operation of my mechanism linking wealth and income concentration to volatility, crisis and slump via private debt buildups is to show that the latter does indeed rise in response to the former. Once again I focus here on the run-ups and follow-ons to the nation’s worst episodes – those associated with the ‘Great Depression’ and ‘Great Recession,’ respectively.

To begin with the latter, *Figures 6 - 7* show private debt buildups in recent decades. As the share of income taken by those at the very top has concentrated, wages for the bottom 90% have stagnated. Yet aggregate consumption, notwithstanding the consequent hit taken by aggregate MPC, has retained a consistent trajectory.

The reason, as suggested by my model, is that the stand-in for arrested wages for 90% of Americans has been a steady increase in household debt.¹¹¹ From 1975 to 2007 I swapped a 380 percent increase in the share of income taken by the top 0.1% among us for a 288 percent

¹¹¹ Household debt includes consumer credit, home mortgages and other credit market instruments.

increase in inflation-adjusted household per capita debt.¹¹² This surge in household borrowing would likely be larger, moreover, were it not for two mitigating factors: an increase in female labor force participation and longer work hours.¹¹³

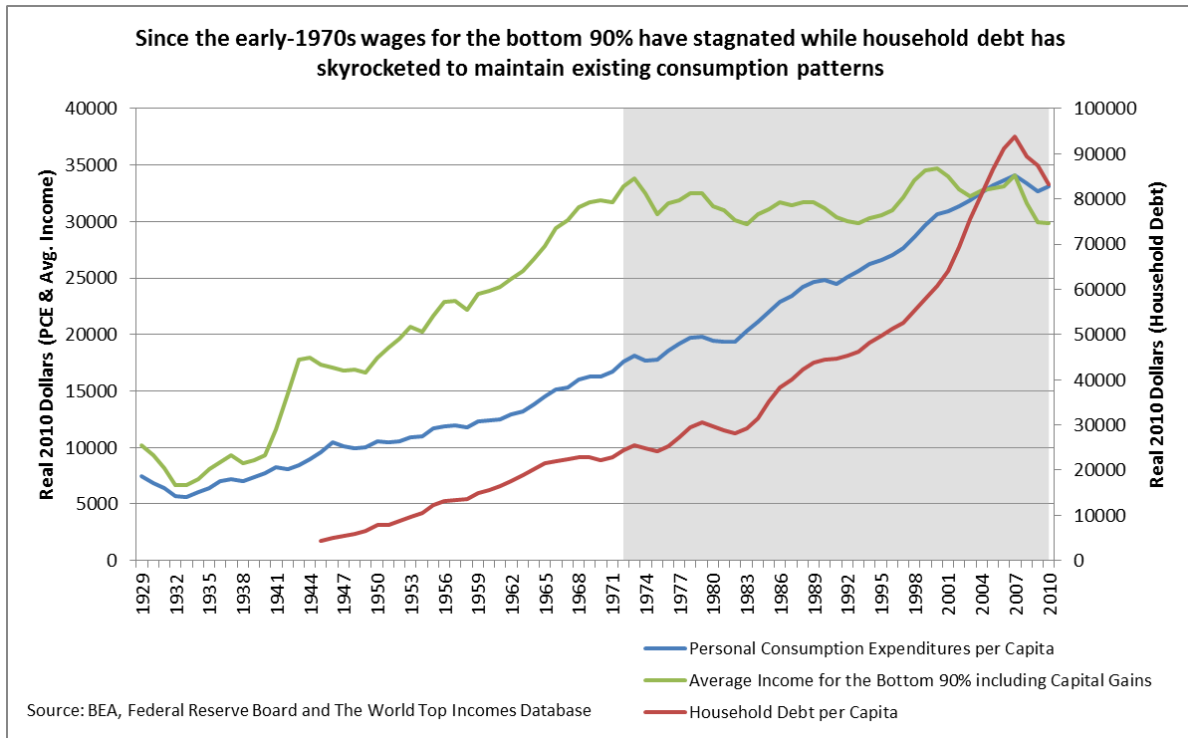
Figure 6 shows (a) the wage stagnation underway since the mid-1970s for the bottom 90% of Americans alongside (b) climbing household debt. The two trajectories close-in on the consumption line running between them, with household debt working to pick up the slack in real wages. Between 2001 and 2007 alone, moreover, the share of income gleaned by the bottom 90% slipped from 55.18 percent to 50.26 percent, while the debt-to-income (DTI) ratio for the same group climbed from 82.8 to 96.3 (not shown).¹¹⁴

¹¹² *World Top Incomes Database* and *Federal Reserve Board Flow of Funds Accounts*: Percentage change between the top 0.1% income share, including capital gains, from 1975 (2.56%) to 2007 (12.28%); percentage change between the total household debt per capita, inflation-adjusted, from 1975 (\$24,170) to 2007 (\$93,712). Note the consistency with findings reported in Alpert, Hockett, & Roubini (2011), *supra* note 1.

¹¹³ For more on this, see Reich, *supra* note 5.

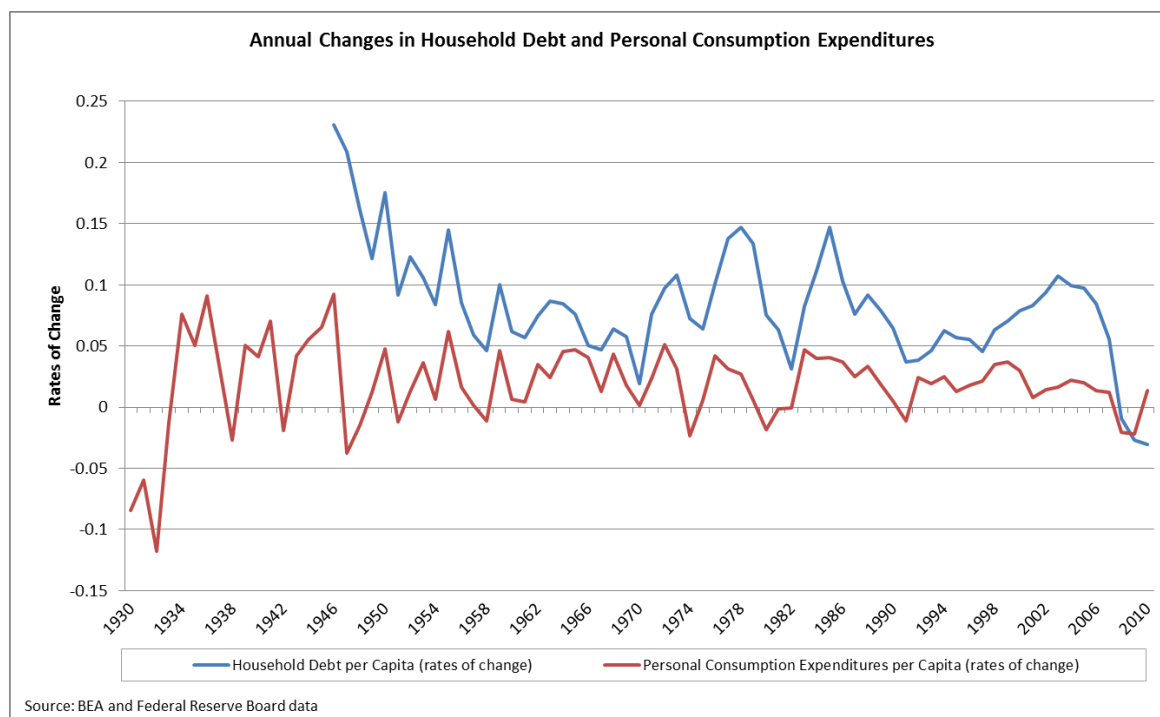
¹¹⁴ *World Top Incomes Database*: Bottom 90% income share includes capital gains and is calculated as the difference from the top 10%; *Federal Reserve Bulletin's* 'Changes in U.S. Family Finances from 2007 to 2010,' debt to income ratios calculated using aggregate measures from Table 17.

Figure 6: Income, Consumption, Per Capita Debt



Changes in household debt also have historically paralleled changes in spending, as shown in *Figure 7*. The relative similarity between crests and troughs of the indicators suggests that whether rising debt drives consumption, rising consumption drives debt, or both, the two measures tend to move synchronously.

Figure 7: Changes in Debt and Consumption



I can go more granular still in corroborating my model by disaggregating consumer debt numbers along income-group lines. According to the Survey of Consumer Finances, the lead-up to 2008 saw borrowing rates peak among families with above median incomes who were nevertheless not in the top income and wealth brackets. That is ‘the great middle class.’ By net worth, debt accumulation was highest among those in the third quartile, while, as in any given survey year, families in the lowest income, wealth, and education tiers were less likely to accumulate debt.^{115, 116}

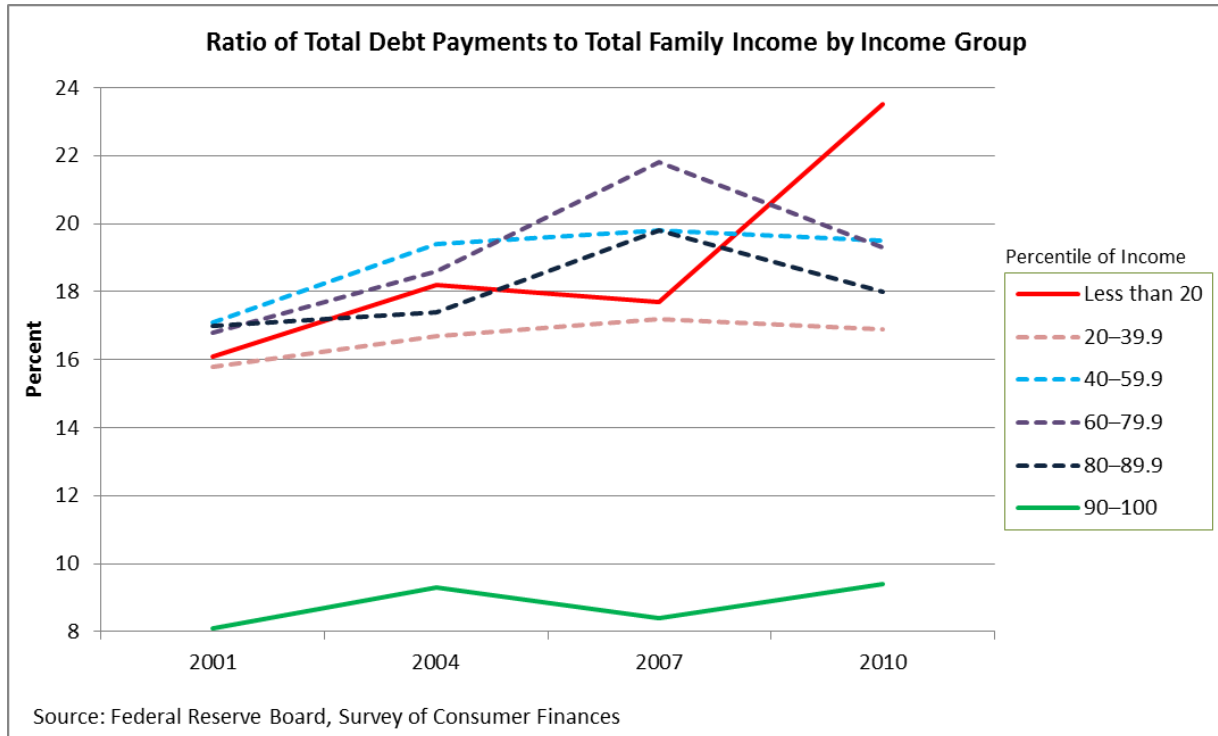
More graphics sharpen the picture yet further. *Figure 8* indicates, for example, that between 2004 and 2007 the debt payments to income (DTI) ratio – a common indicator of debt burden – rose for all families save those in the bottom 20 percent and the top 10 percent of the income distribution. As middle-income families took on more debt relative to income, the

¹¹⁵ Bricker et al., ‘Changes in U.S. Family Finances from 2007 to 2010: Evidence from the Survey of Consumer Finances,’ 98 (2) *Federal Reserve Bulletin* 2, 55 (June 2012), available at <http://federalreserve.gov/pubs/bulletin/2012/PDF/scf12.pdf>.

¹¹⁶ By far the greater part of family debt consists of home-secured debt and installment borrowing (consumer durables and education loans); see Bricker et al., *idem* at 65. Among lower income groups, education loans account for the largest percentage of installment borrowing, while among the top four quintiles, vehicle loans account for the largest percentage; see Bricker et al., *idem* at 66.

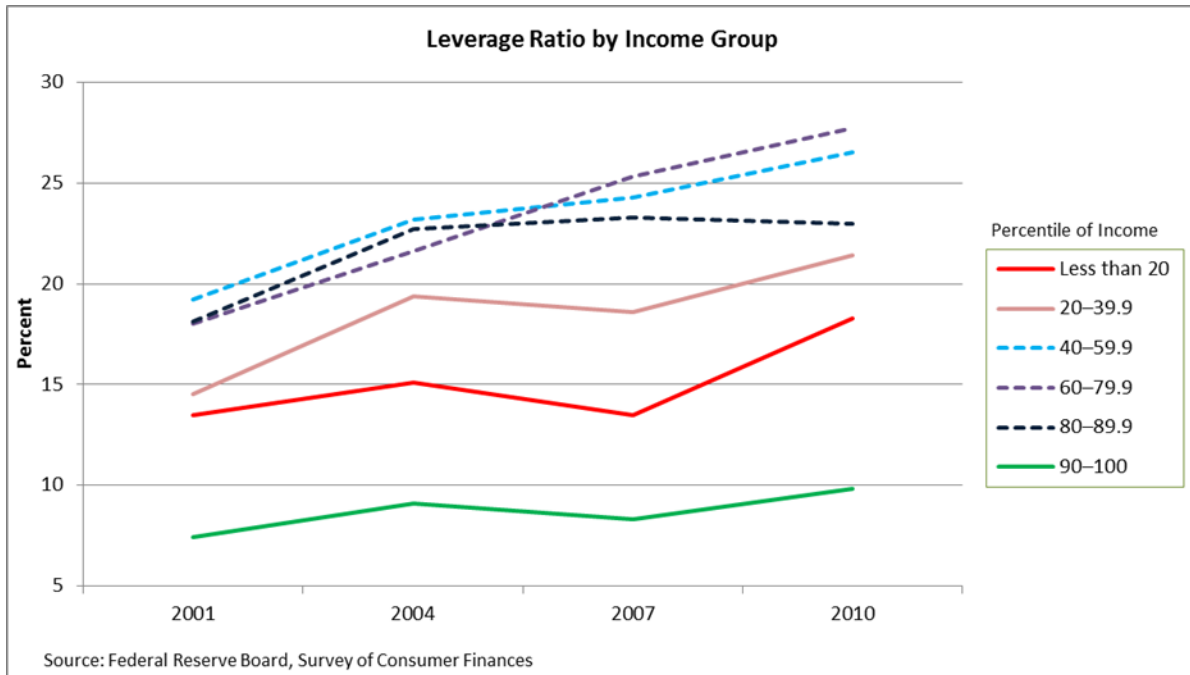
nation's lowest and highest earners reduced their debt burden. With the onset of crash and recession between 2007 and 2010, the trend then reversed itself, with the DTI ratio for those at the bottom skyrocketing while earners in the 60th to 90th percentile began to delever and thereby drive down debt payments in relation to income – a development which is consistent with the 'debt-deflation' part of my story to which I'll turn in due course.

Figure 8: Debt to Income Ratios by Income Group



Another way to measure household debt burdens is by reference to leverage ratios – the sum of the debts all families owe to the sum of their assets. Pre-recession leverage ratios tell a similar story to that told above, with middle income groups ratcheting up their leverage in the run-up to 2007, while those in the bottom 40% and top 10% reduced their leverage. That is the message of *Figure 9*.

Figure 9: Leverage Ratios by Income Group



Finally, to disaggregate along another dimension – that of what the debt finances rather than who incurs the debt – I see that mortgage debt in particular skyrocketed in the immediate run-up to my most recent bust and recession. *Figures 10 and 11* provide a telling snapshot, the first in nominal terms, the other in relation to GDP.

Figure 10: Growth in Mortgage Debt

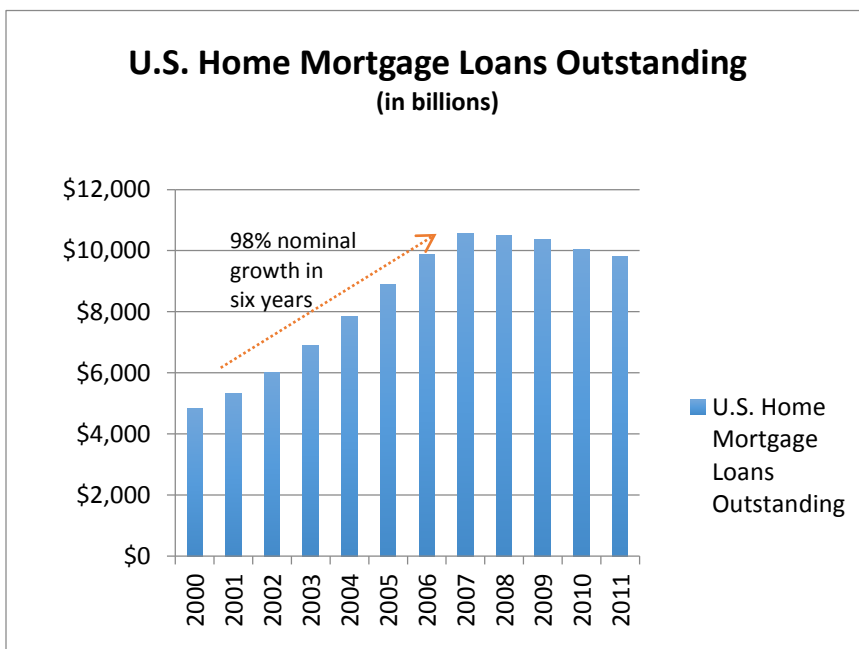
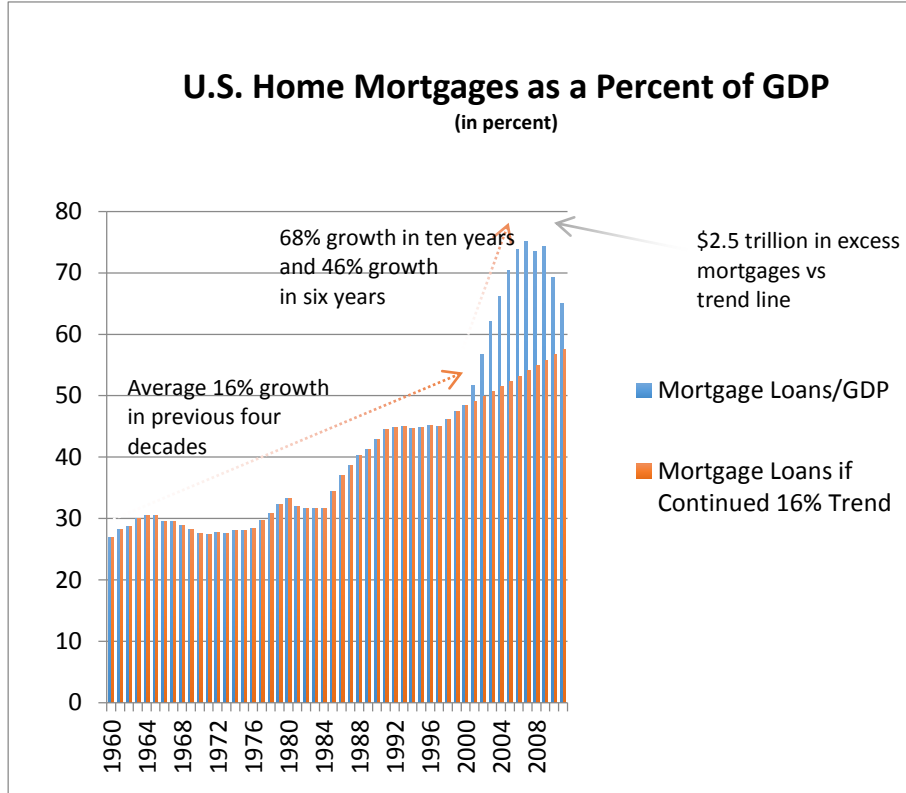


Figure 11: Mortgage Debt to GDP Ratios



In sum, then, the lead-up to the Great Recession saw the great majority of Americans pile on more debt, most of it in the form of consumer and mortgage loans. The only people who did not do so were my top and bottom earners. Those at the top were, in effect, the lenders while those in the great middle were their borrowers, while those at the bottom were less likely to purchase homes, hence less likely to assume debt. Since the collapse of 2007-09, however, those in the bottom quintile have joined those in the middle in answering for market fallout, with climbing DTI ratios reflecting their vulnerability to the ravages of slump.

2. Before the 'Great' Depression: 1929-

Turn now to the Great Depression era. While available data here is not as rich or abundant as that for the Great Recession era, what I have exhibits the same pattern as that characterizing the Great Recession. I find dramatic income concentration and stagnation, issuing in growing consumer and mortgage debt accumulation below the very top and above the very bottom of the distribution.

Figure 12, for example, reveals that between 1917 and 1922, average incomes for the bottom 90% largely tracked changes in average incomes for the top 0.1%. Incomes for the bottom 90% of Americans then abruptly flat-lined in 1923, while incomes for the top 0.1% continued their sharp upward trajectory. In fact, from 1923 to 1928 real average incomes for the bottom 90 percent of Americans actually *declined* by 4.24 percent, while real average incomes for the top 0.1% surged 116 percent over the same period.¹¹⁷

Figure 12: Income Inequality in Lead-Up to 1929 Crash

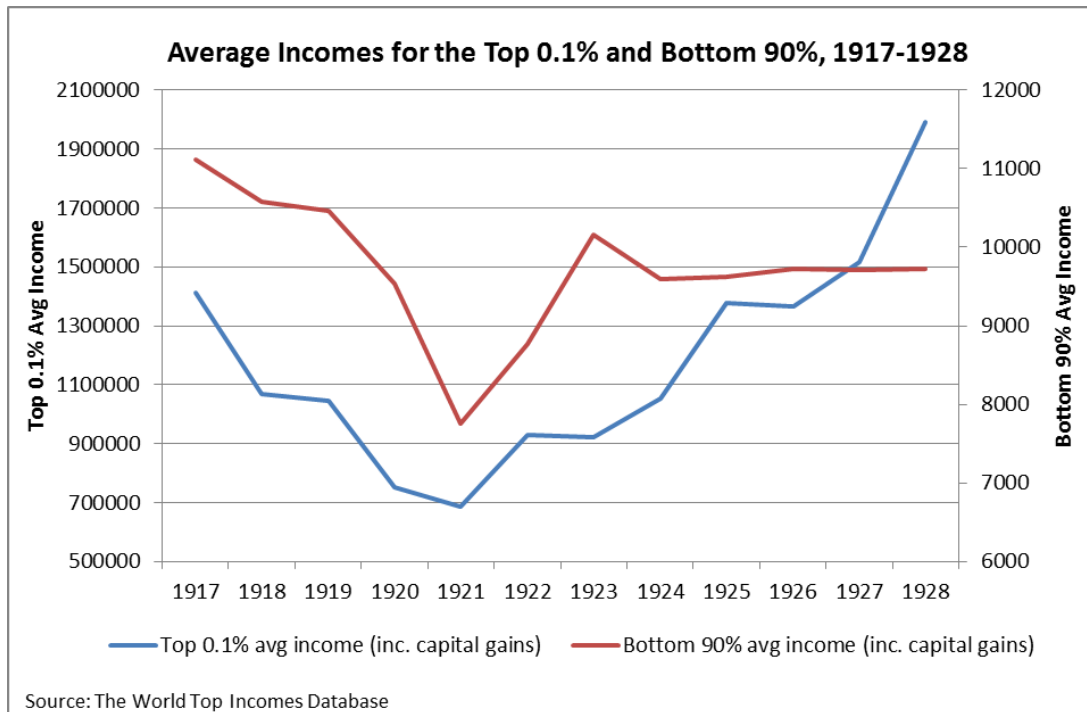
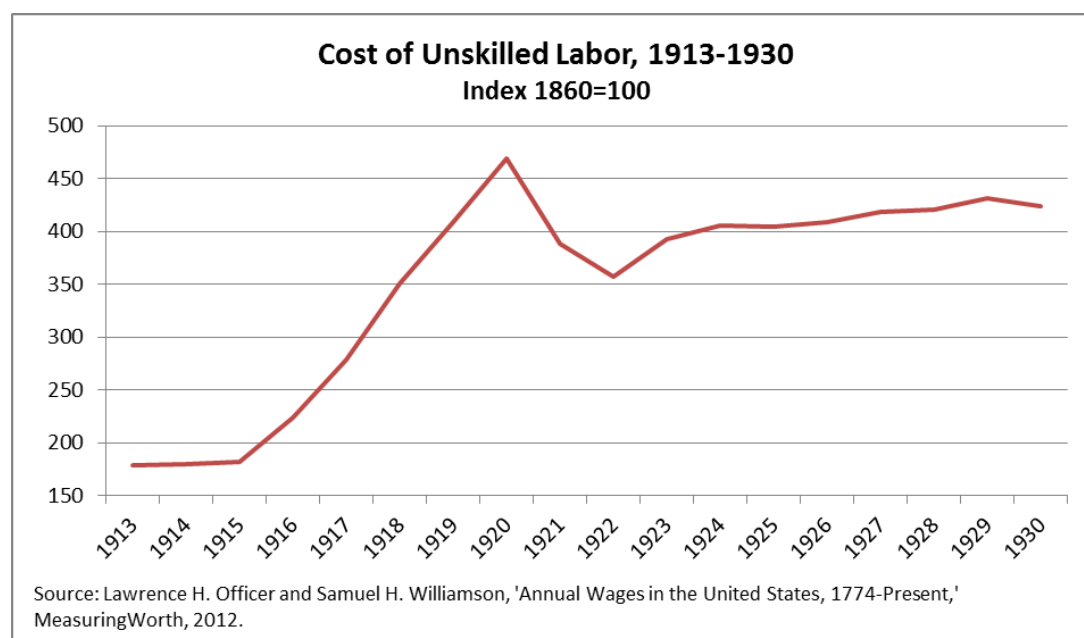


Figure 13 next suggests that the wages of unskilled labor fared little better, with the inflation-adjusted index for an average unskilled wage inching up only 4.74 percent between 1920 and 1928 after having climbed 29.7 percent over the seven years prior.¹¹⁸

¹¹⁷ Author analysis of the percentage changes in real average incomes data including capital gains. Source is Piketty & Saez, 'Income and Wage Inequality in the United States 1913-2002,' in Anthony Atkinson and Thomas Piketty (eds.), *Top Incomes over the Twentieth Century: A Contrast Between Continental European and English-Speaking Countries*, Chapter 5 (2007).

¹¹⁸ Author analysis of the average money wage of an unskilled laborer, adjusted for inflation and indexed, as the percentage change from 1913 (18.1) to 1920 (23.5) to 1928 (24.6). Source is Officer & Williamson, 'Annual Wages in the United States, 1774-Present,' *Measuring Worth* (2012).

Figure 13: Labor Compensation in Lead-Up to 1929 Crash



Not surprisingly, then, given what I saw above for the case of the mid 1970s through the early 2000s, debt escalation also took place in this period. First stoked by an explosion in post First World War production of mass-market consumer goods, millions of Americans turned to purchasing durables on innovative new time payment arrangements.¹¹⁹ Corresponding to latterday private label securitizations of mortgage debt and credit card receivables, the great financial innovation of the 1920s was the consumer installment plan. Emerging first in the form of auto loans, consumer installment plans eventually facilitated a remarkable 90 percent of major durable goods credit-purchases by the end of the decade.¹²⁰

Consumer debt as a percentage of personal income accordingly doubled from 4.5 percent in 1920 to more than 9 percent in 1929.¹²¹ A measure of individual and noncorporate debt from the U.S. Commerce Department also reveals that the ratio of individual debt to GDP rose from

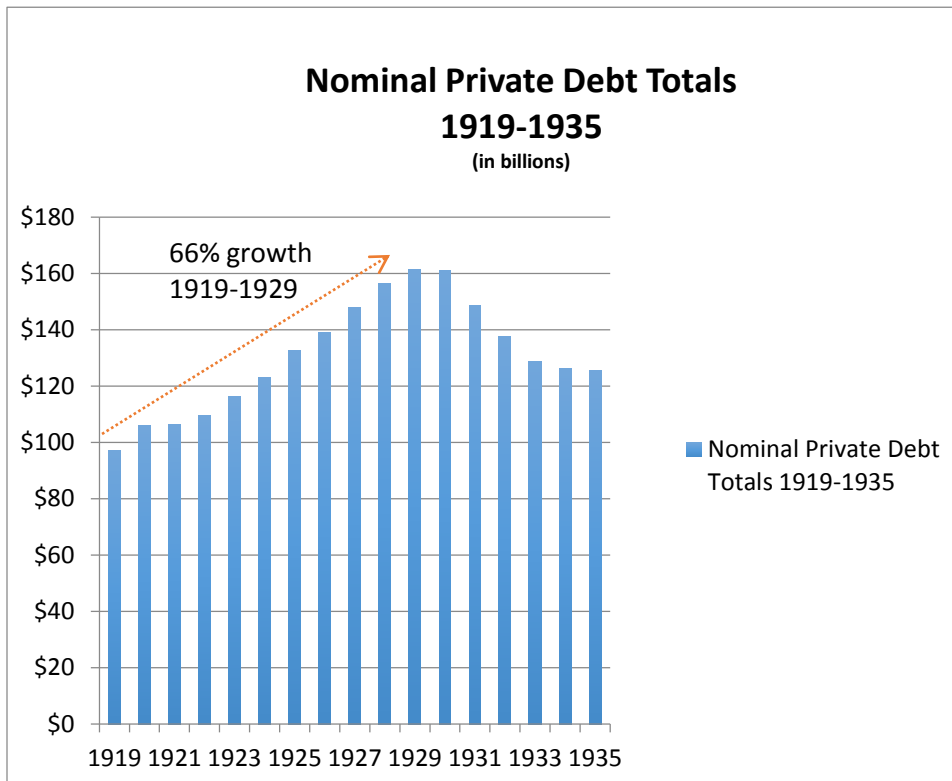
¹¹⁹ Lears, 'The American Way of Debt,' *New York Times*, Magazine, June 11, 2006, available at <http://www.nytimes.com/2006/06/11/magazine/11wwln_lede.html?pagewanted=all>. Also Hockett, 'A Fixer-Upper for Finance,' supra note 7.

¹²⁰ Murphy, 'The Advertising of Installment Plans,' *Essays in History*, Corcoran Department of History at the University of Virginia, at <http://etext.virginia.edu/journals/EH/EH37/Murphy.html>. Also Hockett, 'A Fixer-Upper for Finance,' supra note 7.

¹²¹ Eichengreen & Mitchener, 'The Great Depression as a credit boom gone wrong,' BIS Working Paper 137, Monetary and Economic Dept, September 2003, at 36. Also Hockett, 'Fixer-Upper,' supra note 4.

55 percent in 1920 to 97 percent in 1932.¹²² A similar trend occurred in respect of home mortgage lending, where ‘securitization, a reduction in lending standards, and weaker supervision’ drove a 1920s real estate boom that took off in 1921 and then began to backsliding in late 1926, doubtless feeding into the stock market volatility that then began to plague the late 1920s.¹²³ A simple graphic will once again sum up the trends. *Figure 14* shows nominal private debt totals in the years between the end of the First World War and the early years of the Great Depression.

Figure 14: Private Debt Growth in Lead-Up to 1929 Crash and After



¹²² Beim, ‘It’s All About Debt,’ *Forbes*, March 19, 2009, available at <http://www.forbes.com/2009/03/19/household-debt-gdp-markets-beim.html>.

¹²³ See Hockett, ‘A Fixer-Upper for Finance,’ supra note 7; also White, ‘Lessons from the Great American Real Estate Boom and Bust of the 1920s,’ NBER Working Paper 15573, December 2009, available at <http://www.clevelandfed.org/research/seminars/2010/white.pdf>; and ‘The Forgotten Real Estate Boom of the 1920s’ *Harvard Business School*, Historical Collections, Accessed June 18, 2012, at <http://www.library.hbs.edu/hc/crises/forgotten.html>. Also Hockett, ‘Bailouts, Buy-Ins, and Ballyhoo,’ infra note 94; and Robert Hockett, ‘A Jeffersonian Republic by Hamiltonian Means,’ infra note 116.

Complementing heightened demand for consumer and mortgage credit in my story, recall, is commensurate heightened investment demand that finds outlets in associated financial instruments, which grow increasingly ‘exotic,’ at an increasing rate over time. While data for the run-up to the Crash and Great Depression of the late 1920s and 1930s is hard to come by, demand for such products and associated innovation rates can be partly inferred from widespread recourse to exotic new forms of credit during the period, as documented above. The same style of inference is symmetrically warranted in the case of the years leading up to my most recent ‘Great’ Crash and Recession. Here, however, there is also hard data.

Figures 15 and 16 make for a nice snapshot. The first tracks U.S. issuance of several classes of asset-backed security (ABS), including mortgage-backed (MBS) and collateralized debt obligations (CDOs). The second disaggregates further and includes more classes of ABS.

Figure 15: ABS Issuance in Lead-Up to 2008 Crash

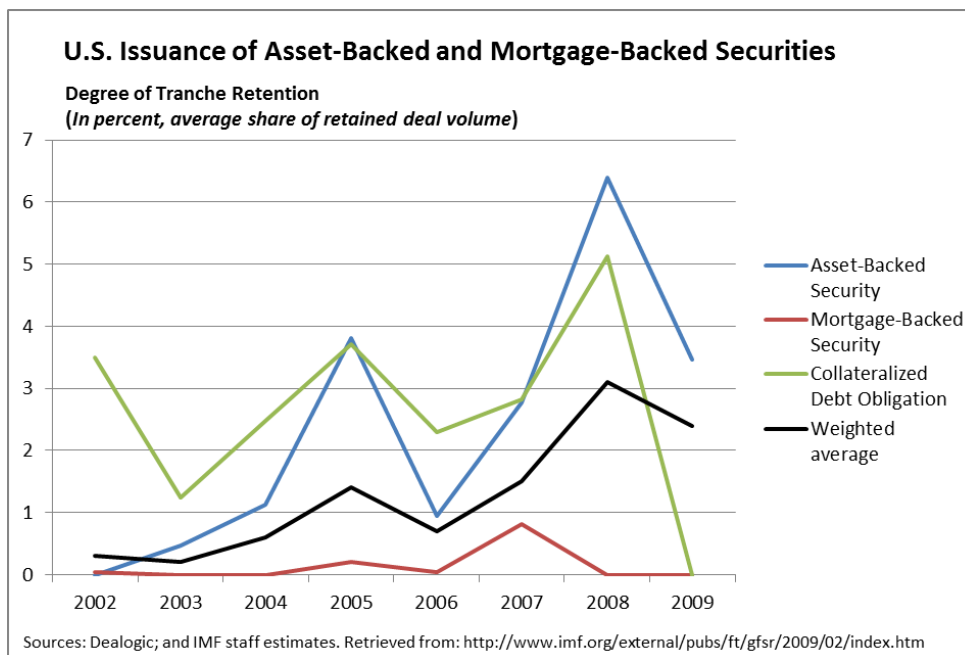
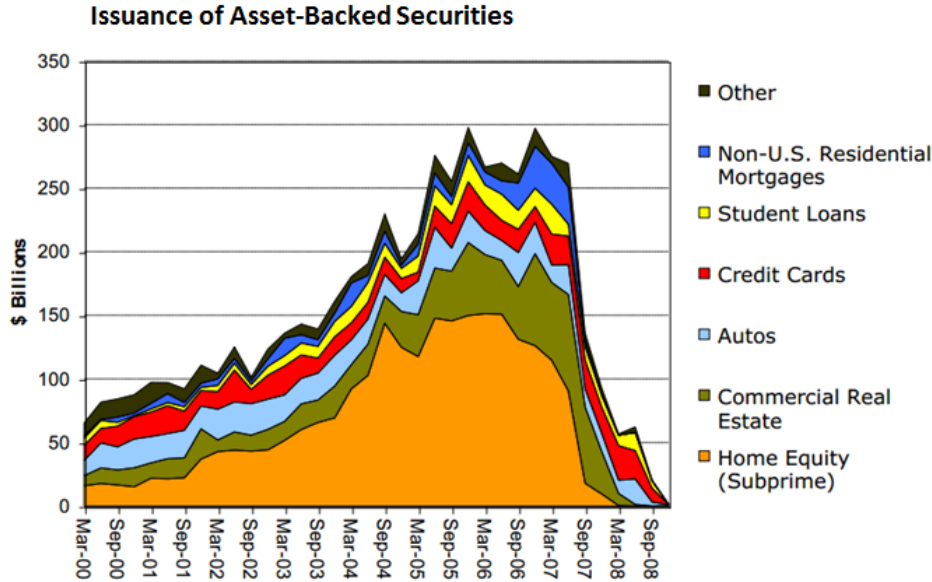


Figure 16: ABS Issuance by Category

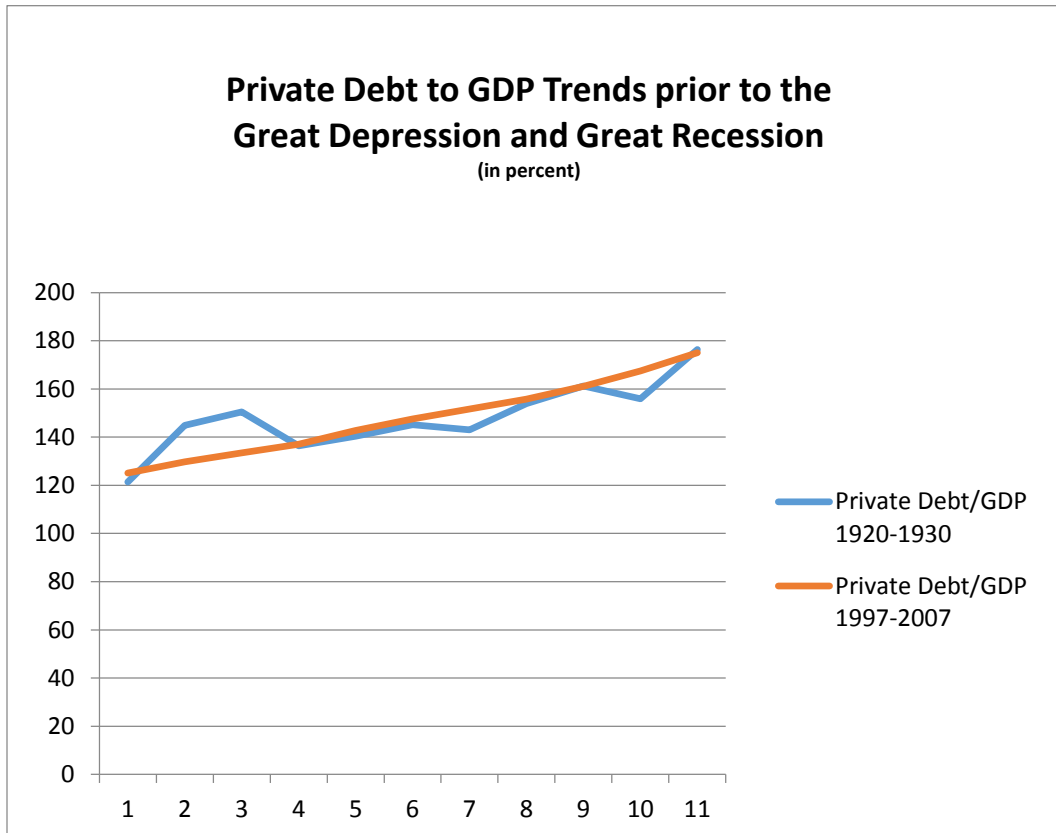


Note: From "The Shadow Banking System: Implications for Financial Regulation" by Tobias Adrian and Hyun Song Shin, July 2009, Federal Reserve Bank of New York, Staff Reports, no. 382. http://www.newyorkfed.org/research/staff_reports/sr382.pdf
 Reproduced with permission.

I can now sum up the foregoing with a few more figures and graphics. In light of the mechanism that my model postulates, one would expect to find several more developments in the lead-ups to ‘great’ crashes and slumps like those of the 1920s-30s and the 1990s-2000s. One would be rising private debt aggregates in relation to national income. Another would be widening spreads between asset prices on the one hand, and any ‘fundamentals’ that might show asset price rises to be anything other than artificially credit-driven on the other hand. Corresponding to that would be a growth in the size of secondary market trading volume in comparison to primary market capitalization. As it happens, I find all of these in the run-ups to 1929 and to 2008.

To begin with aggregate private-debt-to-GDP trends, *Figures 17-18* show precisely what my model would lead us to predict. *Figure 17* shows the trend lines prior to the Great Depression and Great Recession. The matchup is striking.

Figure 17: Private Debt Aggregates Compared

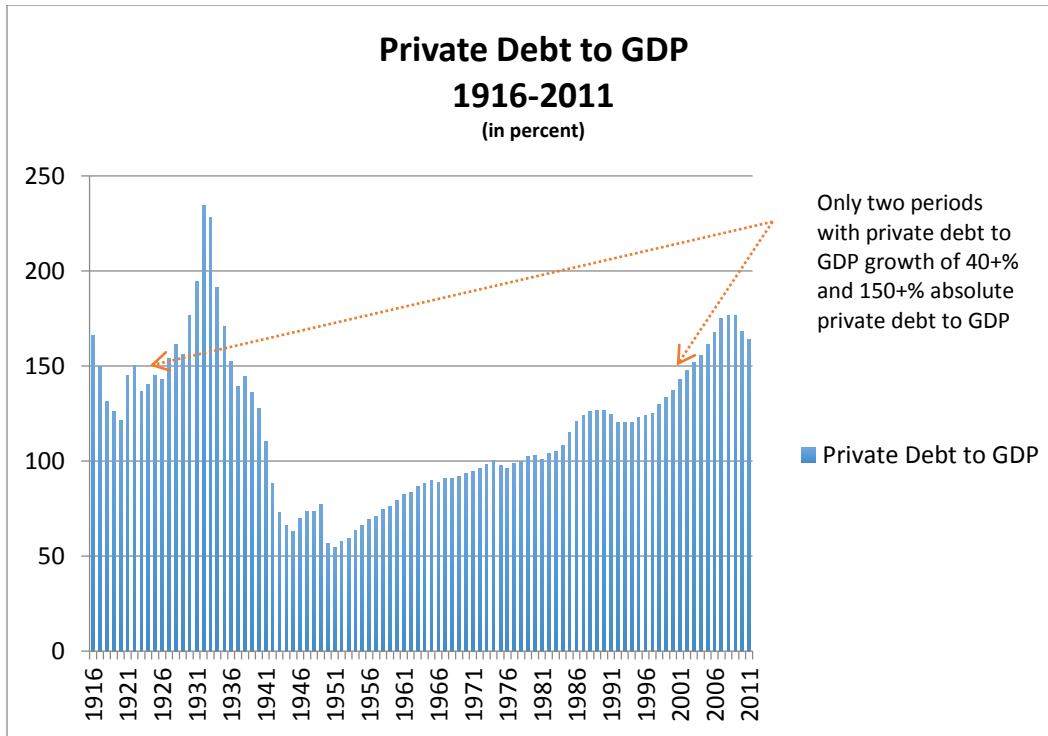


Widening the lens to embrace the entire period from 1916 to 2011 – all years for which data is available – I find the matchup more significant still. For now I find that there is only one other comparable period in which private debt-to-GDP growth was over 40 percent: the period immediately following the Second World War, which on reflection is hardly surprising. At this point the massive delevering of the Great Depression and War years had left private debt totals at a century-long low.

Meanwhile, pent-up demand now had new outlets in goods and appliances produced by factories that were rapidly shifting from wartime to peacetime production – and was boosted yet further, of course, by the Baby Boom. Loan growth, moreover, was facilitated by new federal programs like the GI Bill. So in fact there are only two periods where loan-to-GDP growth is this rapid and private debt to GDP is over 150 percent – again the 1920s and the 2000s.¹²⁴

¹²⁴ Of the two factors — growth rate of debt vs. the absolute level of debt — rapid growth appears to be the more important factor signaling a potential economic crisis. It is not hard to see why. Very rapid growth in debt is

Figure 18: Private Debt to GDP Ratios Compared



Turning next to spreads between asset prices and plausible underlying ‘fundamentals,’ I see that here too what my model would predict is borne out. *Figures 19 and 20* track housing and stock prices, respectively, in the lead-up to 2008, plotting each against plausible proxies for ‘fundamental,’ more sustainable value: building costs and comparable rents in the one case, price-to-earnings ratios in the other. In both cases, the spreads open dramatically over the decade or so leading up to the crash, suggesting that the already-tracked rises in private leverage alone fueled the price rises.

more likely associated with speculative bubble activity than with prudent investment activity. Even apart from that, it can readily result in less speculative but still significant overbuilding or overinvestment in some asset, whether housing, commercial office buildings, stocks and bonds, plants, or something else. After all, population growth was 16 percent compared to 45 percent private debt growth from 1920 to 1930, and 10 percent compared to 41 percent private loan growth from 1997 to 2007. See Clemons & Vague, *supra* note 1.

Figure 19: Home Costs and 'Fundamentals,' 1880-2015

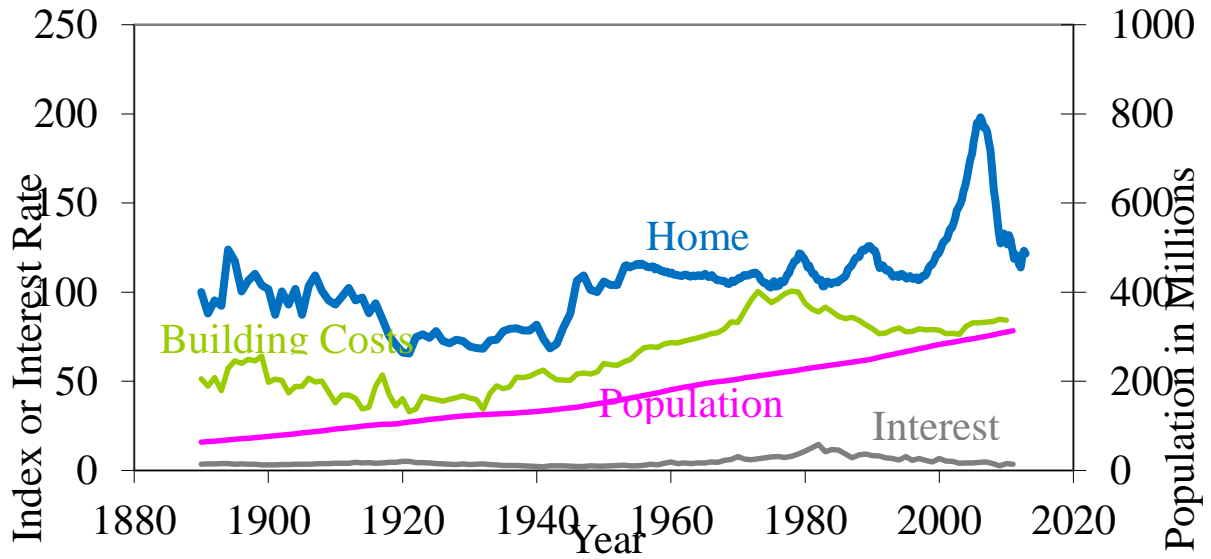
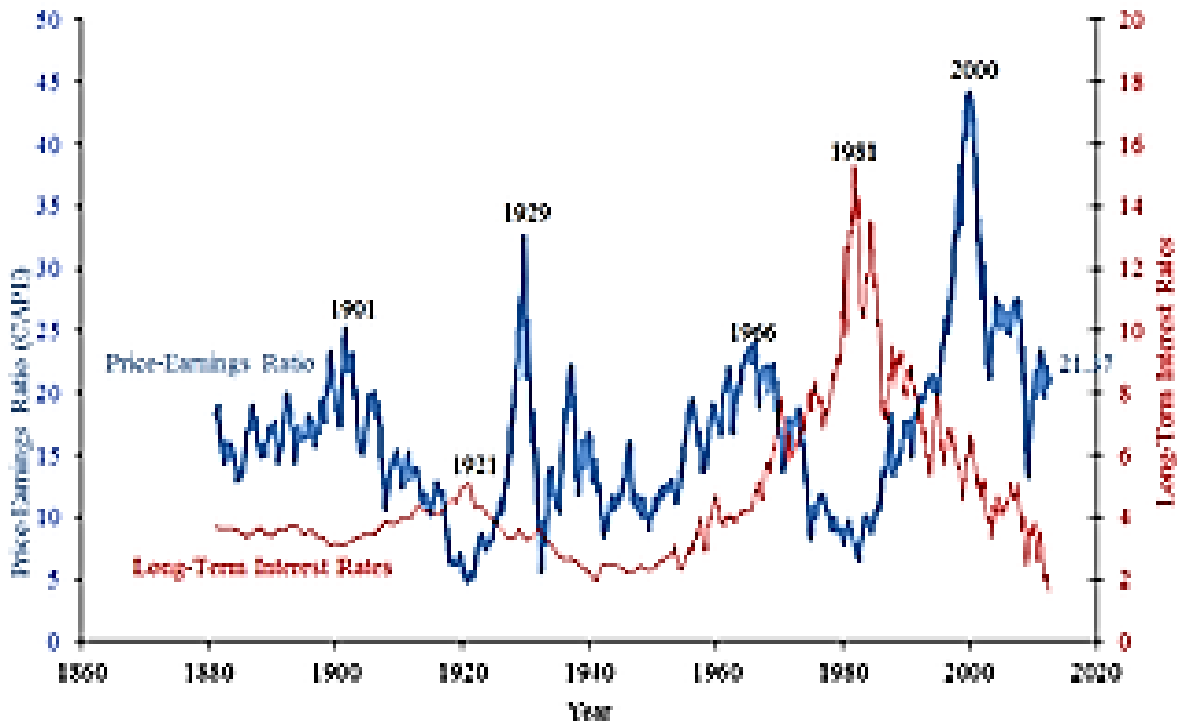


Figure 20: Stock Prices and P/E Ratios, 1860-20215



Graphing comparable trendlines for the lead-up to 1929 is somewhat more difficult owing to missing data for many parts of the nation, as well as to papering and collection problems that result in downward biases. What data I have, though, suggests things were much as they were in the lead-up to 2008. A study by Eugene White writing for the National Bureau

of Economic Research, for example, suggests that ‘securitization, a reduction in lending standards, and weaker supervision’ drove a 1920s real estate boom that took off in 1921 and then began to backslide around 1926.¹²⁵ Several other assessments likewise confirm a rapid rise in property values as well during the 1920s – particularly in New York, Florida, and several other localities across the country.¹²⁶

Comparing 1920 and 2000 as baseline years, one study of surges in new residential housing starts during the two periods, controlling for differences in population size, shows an escalation ‘of the same magnitude’ preceding both the Great Depression and Great Recession.¹²⁷ Another survey of several indices left over from the era suggests that real home prices rose anywhere from 20, to 38, to 54 percent depending on the index and region.¹²⁸

In Manhattan, home prices continued to rise until the third quarter of 1929, when they fell off a cliff, plunging 67 percent by the end of 1932.¹²⁹ The residential property foreclosures that first mounted in 1926 continued to climb steadily through the crash of 1929 and didn’t slow pace until 1933.¹³⁰ In the five years between 1928 and 1933, nationwide home prices fell nearly 26 percent.¹³¹ So marked was the adoption of debt and subsequent loss of assets that, quoting a 1932 *Harpers* article, Jackson Lears writes, ‘the middle-class homeowner no longer has

¹²⁵ See Hockett, ‘A Fixer-Upper for Finance,’ supra note 7; also White, ‘Lessons from the Great American Real Estate Boom and Bust of the 1920s,’ NBER Working Paper 15573, December 2009, available at <<http://www.clevelandfed.org/research/seminars/2010/white.pdf>>; and ‘The Forgotten Real Estate Boom of the 1920s’ *Harvard Business School*, Historical Collections, Accessed June 18, 2012, at <<http://www.library.hbs.edu/hc/crises/forgotten.html>>. Also Hockett, ‘Bailouts, Buy-Ins, and Ballyhoo,’ infra note 94; and Hockett, ‘A Jeffersonian Republic by Hamiltonian Means,’ infra note 116.

¹²⁶ ‘The Forgotten Real Estate Boom of the 1920s’, idem.; White, idem at 3; see also Nicholas & Scherbina, ‘Real Estate Prices during the Roaring Twenties and the Great Depression,’ *Harvard Business School*, March 21, 2001, available at < http://people.hbs.edu/tnicholas/Anna_tom.pdf>; Hockett, ‘A Fixer-Upper for Finance,’ supra note 7; Hockett, ‘Bailouts, Buy-Ins, and Ballyhoo,’ infra note 94; and Hockett, ‘Jeffersonian/Hamiltonian,’ infra note 116.

¹²⁷ White, supra note 33 at 6; Hockett, sources cited supra, notes 33, 34.

¹²⁸ White, supra note 33 at 8, 9; Hockett, sources cited supra, notes 33, 34.

¹²⁹ Nicholas & Scherbina, supra note 34; and Hockett, sources cited supra, notes 33, 34.

¹³⁰ ‘The Forgotten Real Estate Boom of the 1920s’, supra note 33; and Hockett, sources cited supra, notes 33, 34.

¹³¹ See Curnutte, ‘Home Value Declines Surpass Those of Great Depression,’ *Zillow*, January 11, 2011, available at <<http://www.zillow.com/blog/2011-01-11/home-value-declines-surpass-those-of-great-depression/>>.

possessions but only obligations.’¹³² That reads familiar: It’s more or less where I have been since 2009.

Intriguingly, in neither of the two periods that are my focus here were either the Fed or any other financial regulator macroprudentially reining-in credit- or bank-money creation by raising interest rates, imposing higher capital or margin requirements, or tightening collateral requirements. Indeed, as one of us has documented in detail elsewhere, the Fed in particular was actually *loosening* such restrictions during the periods in question. There are several possible reasons, any combination of which could have been operative.

One is the prospect that, per the terms of my model itself, the public agents in question reasonably viewed themselves as effectively bound to rely on cheap credit and attendant housing- and other forms of asset-inflation as substitutes for stagnant incomes in maintaining growth- and employment-underwriting aggregate demand. A second possibility is that regulators, in the grip of financialization’s epistemic or ideological effects, thought that ‘the market’ simply can’t get things fundamentally wrong – in effect epistemically abdicating the franchisor role. Finally, a third possibility is that Fed personnel and other financial regulators, still in the grip of the pre-2008 commonplace that regulators cannot accurately ‘time’ crashes in a manner that might enable them to ‘lean against the wind,’ simply thought it best just to allow matters to take their own course, then ‘clean’ after the crash with Bagehot-style liquidity-provision.

As I have jointly and severally written in other papers, there is very good reason to think that all three of these reasons were operative in Fed and other financial regulators’ policy decisions made during my most recent credit-fueled asset price bubble. Against that backdrop, what I propose next might be of particular interest. For the particular modes in which I propose to place the ‘franchisor’ back in the driver’s seat are responsive to all three considerations. More generally, these can be viewed as distinct collective responses, each carried out by a distinct collective agent, to distinct aspects of what has been one massive collective action problem. A quick reminder of the sense in which that is true will help set the stage for what follows.

¹³² See Lears, ‘The American Way of Debt,’ *New York Times Magazine*, June 11, 2006, available at http://www.nytimes.com/2006/06/11/magazine/11wwln_lede.html?pagewanted=all. Also Hockett, ‘A Fixer-Upper for Finance,’ *supra* note 7.

In all of the foregoing narrative, private actors were acting in individually rational manners to their environments. This was evident both in evolving patterns of credit and debt-associated asset demand as wealth concentrated more and more at the top of the distribution, and in subsequent patterns of purchase and sale as asset prices rose, then fell, in consequence – first offering capital gains and then threatening capital losses. It was likewise evident in the lack of investment in crumbling public infrastructure as an alternative source of wage- and salary-supporting growth as more and more remunerative private sector jobs left my shores, since public infrastructure tends not to lend itself to private remuneration. Finally, it was evident also in the fact that the underlying driver here – capital income’s tending to outpace labor income – is likewise nothing that individuals can change, but must instead formulate optimal individual responses to.

What is necessary, then, to counteract financialization are means of collective address in response to each of these collective action problems. That is the only way to ‘re-realize’ and ‘de-financialize’ my economy and society. It is also a way that is eminently feasible in light of the findings of Parts II and III above. Indeed, in the terms of that discussion, restoring the ‘franchisor’s’ active and indeed proactive role in running the franchise is not only feasible, it is essentially what it *means* to re-realize and de-financialize my economy and society.

V. RECLAIMING THE ROLE: HOW TO MANAGE – AND CONDUCT – MY FINANCE

The considerations of Part IV invite a question. What will it be to restore franchisor and franchisee to their proper places and thereby reverse ‘financialization’? In this Part I propose a practical reply to that question.

I portray a franchisor that acts deliberately and forthrightly in markets where it has more recently acted at best inadvertently or apologetically when it has acted at all. This franchisor will be mindful that it is itself the entity charged with ultimately dispensing, through conditionally licensed franchisees that it must control, a public resource. It will also be mindful that it must actively allocate this resource with a view to the long term health of a polity with an indefinitely extended time horizon, ‘health’ here unpacked in terms of continuous and widely spread improvements in material, political, and associated cultural living standards. Finally, the franchisor will likewise be mindful that its *not* acting deliberately in the manner described will

leave disaggregated franchisees and their *rentier* patrons effectively ‘at sea,’ confronted by recursive collective action challenges that render ‘financialization’ all but inevitable – ironically, via the medium of their own situation-relative rational decisions.

I believe that the best way for the franchisor to act in keeping with this general description is to pursue four broad programmatic agendas. The first two are flexible new forms of macroprudential stability-maintenance aimed at keeping in place certain preconditions of inclusive, sustainable, and continuous macroeconomic development. Because, as elaborated above, decentralized financial markets in particular are prone to financially mediated recursive collective action problems and associated dysfunctions, it is critical that some collective agent act in the name of us all to render no longer individually rational such actions as aggregate into collectively irrational outcomes.

Subpart A sketches two means by which my central bank and one other public ‘franchisor’ institution can do this. The first is to extend the familiar open market operations (OMO) in which the Federal Reserve Bank of New York’s (FRBNY’s) trading desk currently engages with a view to maintaining interest rate targets, into a broader set of ‘open financial asset market operations’ (OFAMO) aimed at countering destabilizing price swings in other systemically significant asset classes. The second is to place internal control of franchisee institutions directly in the hands of the franchisor – which is, after all, the residual risk-bearer relative to those institutions – upon the occurrence of certain triggering events that suggest such risks are poised to eventuate absent prompt preemptive action.

The second two programmatic agendas are partly about stability-maintenance like the first two, but also in part about more. First is a new means of supplying and maintaining public infrastructure, conceived broadly along lines that include more than just roads and bridges. Much infrastructure is in the nature of a nonexcludable, nonrivalrous public good – the sort of thing that is rationally underprovided by private market actors and hence best provided by a public market actor. Beyond these familiar forms, however, are new and in some cases disruptive infrastructures that offer much better prospects for all in the future, but which inertial forces prevent being realized absent well considered and concentrated collective action.

I accordingly propose a new Public Investment Authority (PIA), patterned partly after the New Deal Era Reconstruction Finance Corporation (RFC), which will function as a sort of

‘Public-Private Equity Fund’ in both maintaining and transforming critical infrastructure broadly conceived. In so doing it will productively redirect otherwise overly abundant, privately directed finance capital that would tend to fuel artificial financial asset price inflation, while using private investment decisions as clues as to what projects are likely most promising.

My other programmatic agenda responds to a long-troubling and still worsening trend. I refer to the fact that more and more of the national income continues to flow toward owners of financial capital as described above in defining ‘financialization,’ while fewer and fewer citizens hold sufficient such capital, as distinguished from ‘human capital,’ to derive appreciable incomes therefrom. While confiscation and redistribution through tax policy or other, more fundamental reforms have proved helpful in addressing this seemingly ubiquitous secular tendency in the past, this strategy is prone to resentment and controversy and thus tends to be politically unstable.

It turns out not to be difficult, however, through financial engineering to sidestep the ‘endowment effect’ that underwrites traditional objections to redistribution. One need only channel *future* wealth accumulation disproportionately toward those who are now underendowed. I accordingly also propose a new Public Capital Diffusion Authority (PCDA) that can commence the necessary process of rebalancing ordinary citizens’ income portfolios, thereby counteracting a deep rooted cause of ‘financialization,’ not to mention other dysfunctions. I then close with some parting thoughts about better regulating shadow banking and financial conglomerates, which I believe that my other proposals make easier.

A. Macroprudential Market-Moving & Contingent Public Governance: Necessary, not Sufficient

My first two proposals constitute straightforward extensions of practices already familiar to financial regulation. The first extends garden variety open market operations (OMO) from the maintenance of money rental (‘interest’) rates to other systemically significant prices. The second combines familiar ‘golden share’ mechanisms with ‘prompt corrective action,’ ‘capital directive,’ and other exigent regulatory measures in manners that ‘internalize’ public control of franchisee institutions when necessary. The latter proposal brings governance into sync with risk-bearing, as befits the franchisor’s status as ultimate risk-bearer where franchisee institutions are concerned. Both proposals, in turn, afford more flexibly responsive and minutely calibrated

modes of franchisor control of franchisee institutions and the markets that they affect than do current modes of regulation.

1. Flexible Macroprudential Regulation: Generalized Open Market Operations

I begin with broadening the scope of existing Fed open market operations. As noted above, my polity confers broad authority on the Fed to engage in a form of market-moving activity.¹³³ The Fed acts, through FRBNY, as a very large buyer and seller of certain securities with a view to moving or maintaining certain important prices – generally interest rates, but sometimes other prices as well. In effect, I confer on the Fed what antitrust lawyers would call ‘market-power,’ and I require that it exercise this power for purposes not permitted to mere private actors.

The reasons I demand this of the franchisor while prohibiting it to the franchisees are several. First, the prices in question bear special significance to the economy at large, not simply to one isolated and publicly unimportant market; they are what I call ‘systemically significant prices.’¹³⁴ Second, some dysfunction can characterize the market in question, such that private actors who interact in their individual capacities cannot be relied on collectively to generate prices that lie within a publicly desirable range. Finally third, it is I ourselves – the public – who are doing the market-moving here, and for public reasons. Any *rents* thereby derived will accordingly return to the public itself, just as do Fed profits now.

Current FRBNY open-market operations show these three factors at work. Here the price in question – the prevailing money rental, or ‘interest’ rate – is critically important economy-wide. Private actors, in turn, cannot be relied upon to keep that rate stably within an acceptable range – as those recursive collective action challenges known as credit-fueled asset price bubbles and busts of the sort discussed in Part IV all make plain.¹³⁵ Finally, the Fed turns over all profits generated through OMO to the public fisc – the U.S. Treasury.¹³⁶ Scarce wonder that this mode of franchisor action is not only tolerated, but embraced.

¹³³

¹³⁴ ...
Cite.

¹³⁵ See again *supra*, Part II; and Hockett, Recursive Collective Action Problems, *supra* note ...

¹³⁶ See again *supra*, Part II.

But now little reflection is necessary to see that there are at least three additional spheres within which OMO-like operations would make sense by the several criteria just elaborated. Those are prevailing wage and salary rates, commodity prices, and financial asset prices. I discuss all three in other work, but confine ourselves here to the last two since they are the most pertinent to my public-private financial franchise.¹³⁷ Consider, then, aggregate financial assets as tracked by any reasonably representative index such as the Case-Shiller, Dow Jones, S&P 500, or Wilshire 5000 indices. Consider as well such commodities as wheat, copper, or petroleum as these are tracked on indices of their own. The analogy of both to the credit/money markets with which traditional OMO are concerned looks clear enough.

First, it is well recognized that the ‘wealth effects’ wrought by these markets as tracked by their indices profoundly affect the macroeconomy, simultaneously tracking and driving both bubbles and busts in important sectors like housing or even economy-wide.¹³⁸ I saw as much in the data discussed in Part IV.¹³⁹ Second, again as with credit and money markets, so in the case of financial asset and commodity markets recursive collective action problems are pervasive.¹⁴⁰ A collective agent is accordingly called for to modulate price swings in these markets as much as in credit markets – an agent such as my ‘franchisor’ central bank is expressly assigned to be. Finally third, yet again as in the case of the credit and money markets, so here I would not trust a private agent to wield market-power in the requisite market-moving fashion.¹⁴¹ Only a public actor whose rents are returned to the public can be tolerated where this form of market moving is concerned.

In sum, then, the reasons that justify Fed market-moving OMO in the credit/money markets call out for similar action in financial asset markets and many commodity markets as

¹³⁷

¹³⁸ See, e.g., ...

¹³⁹ Indeed, as I saw there, these markets and indices interact with the credit markets themselves in as much as they determine the values of collateral which in turn determine credit availability. And this means that even monetary policy as presently pursued via OMO is difficult to effect absent simultaneous OMO-like action in these markets too.

¹⁴⁰ While prices rise in these markets on the strength of loose credit, it is individually rational for private actors to purchase more with a view to legging the spread between current prices and later prices. But everyone’s acting thus rationally drives aggregate prices yet higher and more out of line with anything like ‘fundamental’ or long-term sustainable value. Symmetrical remarks hold in the case of those market-wide ‘runs’ on and ‘firesales’ of these assets once credit runs dry, the proverbial ‘music’ stops, and investors now rush for the door to take profits.

¹⁴¹ Indeed just as with antitrust law in garden variety goods and services markets, so here with anti-manipulation law in financial asset and commodity markets, I penalize those who would seek rents via various forms of ‘cornering’ behavior. See, e.g., [34 Act 10(b), Rule 10b-5, etc.]

well. The same *methods* should work in these markets as well. Begin, then, by renaming current open market operations ‘open money market operations’ (‘OMMO’), so as to aid separate tracking of these operations on the one hand, and my new forms of open market operation on the other hand. Now designate operations in financial asset markets ‘open financial asset market operations’ (‘OFAMO’), and establish a mutual fund through which these operations are conducted.¹⁴² This fund will be the generic financial asset analogue to the accounts through which FRBNY conducts current OMO in U.S. Treasury securities.¹⁴³ Indeed it probably makes sense to charge FRBNY with the OFAMO task itself, since it involves OMO-like expertise and since most of the trading in other financial assets, like that in Treasuries, is done in lower Manhattan already.¹⁴⁴

Commodities are, strictly speaking, a bit different in this latter respect, most of them being traded in Chicago. Hence it might make sense to separate out OFAMO on the one hand, and some such program as ‘open commodity market operations’ (‘OCOMO’) on the other hand, placing these latter within the bailiwick of the Federal Reserve Bank of Chicago (‘Chicago Fed’). This possible bifurcation noted, I’ll now ignore it and proceed as if all were to be done in one place.

Call the mutual fund used for OFAMO ‘the OFAMO Fund.’ It will be employed much as are current FRBNY accounts used in purchasing and selling Treasuries. Upon opening, it will purchase large quantities of financial assets of all sorts, in proportions that replicate the market portfolio. It will open, in other words, as an index fund, perhaps simply replicating the S&P 500 or Wilshire 5000. The initial capitalization should be sufficient to impart to the Fed sufficient market power to ‘move’ either particular submarkets within the full portfolio or the full portfolio as a whole.

¹⁴² I have previously advocated something like this already for commodities, so as to mitigate some of the regressive features of Fed QE policies. See ... Roger Farmer has advocated Fed maintenance of a market-replicating mutual fund in order to maintain paper lalth levels so as in turn to maintain employment. See ... I am sympathetic to much of the spirit of Farmer’s proposal, but (a) think that use of the fund should be informed by estimates of ‘fundamental’ value that will then ground OFAMO in ways that do not seem to concern Farmer, as elaborated below; and (b) think my OFAMO plan warranted on grounds that do not depend on Farmer’s elaborate ‘search cost’ theory of unemployment. See again ... Because the latter is highly contestable and in any event unnecessary to justify my own OFAMO proposal, I think it better to take the tack I take here.

¹⁴³ See again supra, Part II, for reminder of how present day OMO proceeds. Also Hockett & Omarova, supra note ...

¹⁴⁴ Id.

Once the fund is established on this basis, the Federal Open Market Committee will begin conducting its current daily tracking of the nation’s financial markets with an additional end in view. While it presently does this pursuant to its de facto macroprudential oversight role, it will now do so additionally pursuant to a macroprudential intervention role – that is, a contingent buying and selling role.¹⁴⁵ If, for example, over a course of months or years it emerges that some particular asset class such as residential mortgage backed securities (‘RMBS’) or tech stocks appears to be rising in market value at rates inexplicable by reference to anything like ‘fundamental’ value, FOMC will begin instructing the FRBNY trading desk to sell quantities of these securities each day. Symmetrically, FOMC will instruct FRBNY to commence *purchasing* activity in respect of an asset class if it emerges that such assets are artificially *undervalued*.

At the same time that it is overseeing particular submarkets of the broader financial asset markets, the Fed and FOMC will also oversee those broader financial markets as wholes. If the stock market appears to be overheating, while the source of the overheating is not straightforwardly traceable to some well-defined submarket such as that for tech stocks during the late 1990s, then the FOMC will instruct the FRBNY trading desk to begin incrementally shrinking the OFAMO fund by selling off shares and replacing them with cash. It will perform the opposite operations whenever the market as a whole appears to be showing signs of undervaluation.

The Fed, FOMC, and FRBNY, then, will act with respect to financial assets across the board precisely as they have long acted with respect to Treasury securities in particular. As I have shown elsewhere,¹⁴⁶ moreover, not only is what I advocate here a straightforward extension of something already done, but there also is no non-silly argument against pursuing it. A regular Fed agenda of OFAMO is as justified and as practicable as is that of present-day OMO. And it can be done in the very same ways. In this sense it is an obvious way in which the ‘franchisor’ can reassert itself in a manner that counteracts the destabilizing impact of what occurs when it does *not* – financialization. *Figure 21* diagrams what the basic structure of my generalized system of Fed and CFTC open market operations might look like.

¹⁴⁵ I elaborate further on ‘macroprudential’ oversight and policy further below in this Subsection.

¹⁴⁶

Figure 21: Structure of the Generalized OMO Mechanism

[Insert *Figure 21*]

2. Flexible Macroprudential Regulation: Contingent Public Governance

As noted above, the financial franchisor is the residual risk-bearer where franchisee institutions are concerned. This is reflected in many of the backstopping arrangements elaborated above in Parts II and III, including but not limited to deposit insurance and other bailout forms. Now ordinarily with risk-bearing come governance rights – indeed ultimate control rights. Oddly, however, current governance arrangements where franchisee financial firms are concerned do not follow this pattern.

This would be perverse were it not for the highly exacting regulatory regimes to which I subject these institutions. As it happens, however, resort to external ‘command and control’ regulation in place of internal governance by the risk-bearing franchisor is in many ways suboptimal. Until actual insolvency occurs or is imminent, this mode of regulation is unwieldy and slow. It is desirable to enable the franchisor formally to exercise control ‘on a dime’ in some circumstances that fall short of imminent insolvency, as well as to have immediate access, at any moment, to relevant firm-internal data.

One conspicuous case in point would be that in which the financial economy was overheating ‘as a whole,’ with credit aggregates or some other macroprudentially significant indicator moving too quickly in manners that presage systemic trouble. In such cases the usual predicates for receivership or issuance of individualized PCAs or CDs will be lacking, and yet some single actor with control over multiple institutions will have to act quickly.

Another case in point might be a particular franchisee institution’s past habits of ‘pushing the envelope’ where regulatory compliance is concerned, such as might prompt the regulator to deem a regular presence and influence on firm governance prudent. In all such cases taking on the role of an actual internal decision-maker within the firm will offer important material and perceptual advantages that even the most responsive of external regulatory mechanisms will not.

I accordingly believe that a ‘golden share’ mechanism allowing for contingent public governance – a sort of ‘manager of last resort’ function – constitutes a fitting and critical tool

for my franchisor to have at its disposal. *Figure 22* diagrams what the basic structure of my contingent governance mechanism might look like.

Figure 22: Structure of the Golden Share Mechanism

[Insert *Figure 22*]

B. Public Investment & Capital Diffusion: Development Is Never Done, and Balanced Finance Means Balanced Ownership

It is not only classic collective action challenges of the sort noted in Subpart A that render certain individual decisions rational even when they aggregate into collectively problematic outcomes. It is also differences in time horizons, hence investment horizons, that I encounter between persons and polities. In this Subpart I accordingly sketch plans for modes of franchisor intervention that circumvent *both* kinds of challenge. On the one hand, these address familiar collective action challenges such as the ‘free rider’ problems that leave ‘public goods’ like infrastructure privately underprovided. On the other hand, they also effect and help underwrite credible public commitments to *maintain* such public goods – including now not only infrastructure but also consumer purchasing power and real investment – over the long term.

I start with a new Public Investment Authority that maintains and proactively improves – even transforms – public infrastructure over time. It does so in ways that both (a) channel privately controlled capital in productively ‘real’ rather merely bubble-inflationary directions, and (b) harness the Hayekian information-aggregation potential of multiple disaggregated private investors. I then turn to a Capital Diffusion Authority that counteracts financial capital’s secular tendency to skew up the distribution, thereby reversing the inequality dynamic that constitutes one root of ‘financialization’ as modeled in Part IV. In both cases I also capitalize on the advantages that diffuse private actors’ decisions can offer the public, while averting the disadvantages – particularly those of the collective action problem variety – occasioned by the same in the absence of coherent collective action.

1. A Public Investment Authority: Perpetual Polity, Perpetual Development

There has been much discussion of the nation’s crumbling infrastructure since 2008, both because of the costs it imposes and because repairing it offers a productive employment opportunity during times of continuing post-crisis slack. But there are additional justifications, sounding in the considerations offered in Parts II through IV above, to think seriously about the way I manage and fund infrastructure investment.

One such justification is that, for familiar reasons briefly reprised below, leaving this form of investment to private financiers alone is a recipe for underinvestment. Another is that infrastructure can be understood as comprising much more than roads, bridges, water treatment facilities, and the like. Infrastructure comprises many swathes of the material and cultural environments on the basis of which I live, produce, and reproduce. Some of this infrastructure must be carefully managed, maintained, and improved over time. Yet this is unlikely to happen absent coherent and concentrated collective action – the form of action that only a collective agent such as my ‘franchisor’ can properly perform.

I accordingly propose a new Public Investment Authority (PIA) charged with directing much more of that resource which is the monetizable full faith and credit of the United States toward the building, spreading, and maintaining of infrastructure in the broad sense I have in mind. This will serve not only to counteract the underprovision problems that plague all public goods, but also to absorb excess privately-purveyed credit-money that would otherwise artificially fuel asset price rises as modeled in Part IV. The structure of my PIA, moreover, enables us also to capitalize on the expertise and Hayekian information-conveying functions that private investors remain able to provide and perform even after ‘their’ capital is no longer necessary in a post-‘loanable funds’ world.

I do not write on an altogether clean slate. Several modest public infrastructure bank measures, most of them patterned after the model of Fannie Mae, Freddie Mac, and other government-sponsored enterprises (GSEs),¹⁴⁷ have been proposed in the U.S. in recent years. These include proposals offered, sporadically, by President Obama in the White House, Senators Dodd and Hagel in the U.S. Senate, and Representatives DeLauro, Ellison and Frank in the U.S.

¹⁴⁷ ...

House.¹⁴⁸ Other renditions, less wedded to the U.S. GSE model, have been not only proposed, but indeed instituted abroad.¹⁴⁹

The mentioned proposals tend to be advocated on grounds that are familiar to orthodox microeconomists. Private capital, advocates argue, will be insufficient to contemporary public infrastructure needs absent some form of public facilitation. Much public infrastructure either takes the form of a non-excludable good, meaning that private parties are not able fully to recoup their investments via privately assessed user fees,¹⁵⁰ or is better provided directly by governments or regulated monopolies than via competitive markets owing to ‘grid’ effects and/or increasing returns to scale.¹⁵¹ An air traffic control system, for example, is neither the sort of thing that it would be safe to have operating in parallel with other such systems, nor the sort of thing that could easily and safely exclude flyers who hadn’t helped pay for that system, absent

¹⁴⁸ See, e.g., White House Office of Management and Budget, Fiscal Year 2015 Budget Overview, web-available at <http://www.whitehouse.gov/omb/overview>; Joseph Iber, ‘Obama to Propose \$50B in Infrastructure Projects,’ Washington Times, September 6, 2010, web-available at <http://www.washingtontimes.com/news/2010/sep/6/obama-propose-50b-infrastructure-projects/>; S. 1926, National Infrastructure Bank Act of 2007, web-available at <http://thomas.loc.gov/cgi-bin/bdquery/z?d110:SN01926::>; and H.R. 3401, National Infrastructure Bank Act of 2007, web-available at <http://thomas.loc.gov/cgi-bin/bdquery/z?d110:HR03401:%7C/bss/110search.html>; and H.R. 3896, National Infrastructure Development Act of 2007, web-available at <http://thomas.loc.gov/cgi-bin/bdquery/D?d110:224:./temp/~bdPz9r::>.

¹⁴⁹ Thorough surveys, some of which draw helpful ‘how to’ and ‘how not to’ conclusions, include the World Bank’s recent overview, JEFFREY DELMON, PUBLIC-PRIVATE PARTNERSHIP PROJECTS IN INFRASTRUCTURE: AN ESSENTIAL GUIDE FOR POLICY MAKERS (2011); EDUARDO ENGEL ET AL., THE ECONOMICS OF PUBLIC-PRIVATE PARTNERSHIPS: A BASIC GUIDE (2014); E. R. YESCOMBE, PUBLIC-PRIVATE PARTNERSHIPS: PRINCIPLES OF POLICY AND FINANCE (2007); and DARRIN GRIMSEY & MERVYN K. LEWIS, PUBLIC PRIVATE PARTNERSHIPS: THE WORLDWIDE REVOLUTION IN INFRASTRUCTURE PROVISION AND PROJECT FINANCE (2007).

¹⁵⁰ Strictly speaking, a good is a ‘public’ good only when it is both non-excludable and non-rivalrous, while rivalrous non-excludable goods – e.g., fish stocks, timber, commons areas – are separately classified as ‘common pool’ resources. For present purposes it is non-excludability that matters most. As for user fees, by ‘privately’ assessed I mean fees that would be levied by a private builder or owner of the infrastructure in question, then passed along in the form of dividends, capital gains, or interest payments to owners of and/or other investors in the private firm in question.

¹⁵¹ Where an industry requires large up-front costs of production such that costs per unit of production steadily diminish as quantities produced increase, a single provider is, all else equal, more efficient than are multiple providers in aggregate; in such case the industry in question is said to lend itself to ‘natural monopoly.’ Closely related but analytically distinct is the phenomenon of a ‘grid’ technology such as a railroad, fiberoptic cable, or electrical poIrline network, which typically not only involves high upfront costs and consequent increasing returns to scale, but also threatens excessive and congestive physical capacity – e.g., multiple competing parallel highways or poIrlines – in the absence of monopoly. Formally, see William J. Baumol, *On the Proper Cost Tests for Natural Monopoly in a Multiproduct Industry*, 67 AM. ECON. REV. 809 (1977). See generally WILLIAM J. BAUMOL ET AL., *CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE* (1982).

significant government involvement.¹⁵² It accordingly both (a) amounts to a canonical ‘public good’ that is (b) most efficiently supplied by a canonical ‘natural monopoly.’¹⁵³

Like remarks hold of dams, levees, power grids, communications infrastructures, systems of roads, rail, bridges and so forth, systems of waste disposal, sewage and water supply, and many other utilities – even health insurance and other species of what used to be called, for very good reason, ‘social’ insurance.¹⁵⁴ With respect to other public goods that I want literally to be freely available to all, moreover – notably public schools, public libraries, daycare, courts of law, police and fire protection, even public space, parklands and other ‘commons’ in most jurisdictions – the inadequacy of markets alone as sources of provision is all the more obvious.

Most of these infrastructures are accordingly provided by public authorities. In most cases, however, the authorities in question are local, and must finance construction and provision through municipal bond issuances. Because each such issuance is comparatively small, in turn, markets are not able to aggregate as much information about their risk properties as they are in respect of securities issued in larger numbers. Secondary markets in such bonds are in consequence less than optimally liquid, meaning in turn that municipal capital costs in the primary markets are suboptimally high.

Current NIB proposals accordingly envisage what amounts to a federal secondary-market-making institution that stands in relation to local infrastructure bond issuances much as Fannie Mae was established to stand in relation to locally extended mortgage loans circa 1938 and after. The hope is thereby to lower the cost of credit in the primary bond markets.

While these NIB proposals are fine as far as they go, it is reasonable to hope for much more. For one thing, a truly national NIB should be as interested in projects of national or regional scope as in pooling the risks associated with portfolios of smaller, more localized projects. Call this a move outward along the ‘spatial’ dimension. For another thing, the nation could do with an NIB as interested in providing infrastructure that *leads or transforms* markets – for example, in transitioning to use of different sources of energy – as it is in merely providing

¹⁵² See supra, note 14, and sources cited therein.

¹⁵³ See supra, notes 7, 13, and 14, and sources cited therein.

¹⁵⁴ See again supra, note 13, and sources cited therein. See also Robert Hockett, *Making Sense of the Healthcare Reform Debate*, 53 CHALLENGE 28 (2010) (showing, inter alia, that canonical forms of social insurance constitute natural monopolies best publicly provided or tightly regulated).

infrastructure that markets currently require. Call this a move outward along the ‘temporal’ dimension.

If ‘development’ is a lifelong project on the part of any polity as it ought to be conceived,¹⁵⁵ then infrastructure and, reciprocally, any infrastructure *bank* should be understood more ambitiously in all of these senses as well. An NIB conceived along these lines would best be structured and financed differently than are the Fannie-inspired models embodied in current proposed legislation. Because its aims are potentially more ambitious, and because it is also meant partly to recruit private investors for Hayekian informational purposes, it should tap into additional and more ambitious sources of capital – mezzanine and even equity capital now – in addition to debt capital of the Fannie and Freddie variety. How might this be done?

The Public Investment Authority (again, ‘PIA,’ also ‘Bank’) I envisage would operate much like an investment manager running one or more private equity funds as managing partner.¹⁵⁶ The Bank as general partner would contribute capital of its own, but also raise further funds from limited partners in the private sector. It would manage the resultant pool of funds much as any private fund manager would do, assembling a portfolio of promising investment projects which, while involving some risk of not panning out in some cases, could be diversified as to lay-off risk.¹⁵⁷

As with many funds, so here the PIA might require that investors ‘park’ all or some part of their investment dollars with the fund over some interval.¹⁵⁸ Compensation to private investor participants could be much like that offered by any private equity fund, further sweetened by a government backstop – for example, a guarantee of principal or perhaps even of some minimum

¹⁵⁵ See *supra*, Part I.

¹⁵⁶ For more on how PE Funds operate, see, e.g., HARRY CENDROWSKI & LOUIS W. PETRO, *PRIVATE EQUITY: HISTORY, GOVERNANCE, AND OPERATIONS* (2012). A state of the art, systematic exposition of the history of, as well as the abuses rife in the currently under-regulated private equity industry, accompanied by illuminating discussion of the industry’s promise if properly regulated or utilized, is EILEEN APPELBAUM & ROSEMARY BATT, *PRIVATE EQUITY AT WORK: WHEN WALL STREET MANAGES MAIN STREET* (2014). More colloquial and cheerleading, but not without practical value for present purposes, is ROBERT A. FINKEL, *THE MASTERS OF PRIVATE EQUITY AND VENTURE CAPITAL: MANAGEMENT LESSONS FROM THE PIONEERS OF PRIVATE INVESTING* (2010); see in particular Chapter 5: Jeffrey Walker, ‘Beyond the Balance Sheet: Applying Private-Equity Techniques to Not-for-Profit Work,’ *id.* at 95.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

rate of return. In effect, investors would receive the equivalent of a bond plus a warrant.¹⁵⁹ The bond component would be the guarantee of principal and perhaps some minimal coupon.¹⁶⁰ As for the warrant component, the PIA might charge a standard management fee competitive with those associated with ordinary private equity funds – for example, 2% of (private) assets under management – then guarantee a specific share of profits.¹⁶¹

The principal reasons for offering these profits would be two in number, both understandable by reference to the discussion above in Parts II through IV. One would be to redirect otherwise inflationary ‘private’ capital from short term speculation in financial instruments toward real investment opportunities that collective action challenges currently prevent private entities from offering. The other would be to use investor preferences as signals concerning the likely future success of alternative prospective investments. In order to capitalize optimally on this Hayekian opportunity, the PIA will have to structure investment portfolios in manners that facilitate useful interpretation of investor preferences, of course. But this essentially combinatoric task is well within investment-managerial competence.

In the end, then, private investors in national and even global capital markets will be presented with a new investment opportunity that is bond-like in its guarantee of principal and possibly some modest rate of return, while offering carry-free and carry-involving equity bands entitling them to various after-fee profits. This could not but amount to an attractive new asset class available to current private equity and hedge fund investors, as well as to institutional investors like pensions, endowments, investment companies, and of course depository, insurance, and investment banking firms.¹⁶² In view of the difficulty in finding ‘yield’ on current investment opportunities in presently depressed, post-crisis global capital markets, this new asset class would seem likely to attract many investors.¹⁶³

¹⁵⁹ A ‘bond,’ for those uninitiated, is a financial instrument entitling its owner to a specified ‘principal’ amount at a specified date, and to specified regular payments – the bond’s ‘coupon’ – at specified intervals in the meanwhile. A ‘warrant,’ for its part, is a right to purchase a particular financial instrument at a specified price at some future point; the warrant is ‘in the money’ – i.e., worth exercising – any time that the referenced financial instrument’s price rises above that price specified in the warrant itself.

¹⁶⁰ See supra, note 50, for reminder of the meaning of ‘coupon’ in the present context.

¹⁶¹ See, e.g., CENDRWOSKI & PETRO, supra note 57, for more on typical compensation arrangements in PE firms.

¹⁶² To understand why, see, e.g., ... supra notes ...

¹⁶³ Id.

A PIA such as I envisage could function in an entrepreneurial manner, as one supposes befits an institution that includes equity and mezzanine capital as well as debt investors. If, for example, a national consensus were to emerge that I would be better off were hydrogen- or electrically-powered automobiles to displace petroleum-fueled ones, the PIA would be well suited to effecting such change. Similar remarks would hold were I to decide that the current distribution of Ricardian comparative advantage where global trade is concerned operates to my disadvantage,¹⁶⁴ hence that a national project of automating production and distributing ownership shares in the resultant ‘robots’ was in order.¹⁶⁵

Figure 23 diagrams what the basic structure of a PIA might look like.

Figure 23: Structure of the PIA

[Insert *Figure 23*]

There are many lines of possible development that a PIA might take. I trace more such in other work.¹⁶⁶

3. A Capital Diffusion Authority: From Here to Income-Compositional Symmetry

My final proposal is perhaps the most speculative. It also, however, is among the most potentially important and far-reaching. As noted above, returns to nonhuman capital seem in general to outpace returns to human capital in the long run, meaning that skewed distributions of the former are apt to be self-exacerbating over time. This in turn feeds into the dysfunctional dynamics of ‘financialization’ as modeled and empirically corroborated in Part IV.

In addition to all of this, it is increasingly suggested by many that the world might be in for a serious challenge even where long term employment maintenance is concerned. The

¹⁶⁴ If foreign labor is cheaper than American labor, for example, such as tends to move manufacturing capacity overseas, the U.S. might see fit through its NIB to subsidize the wholesale adoption of robotic and 3D printing technology throughout the economy, while requiring recipient firms to issue new shares in themselves to the citizenry in return. See, e.g., For more on Ricardian comparative advantage and associated premises that figure into orthodox trade theory, see, e.g., ANDREA MANESCHI, *COMPARATIVE ADVANTAGE IN INTERNATIONAL TRADE: A HISTORICAL PERSPECTIVE* (1998). The *locus classicus* is of course DAVID RICARDO, *THE PRINCIPLES OF POLITICAL ECONOMY AND TAXATION* (1817).

¹⁶⁵ Id. See also *infra*, next Subsection.

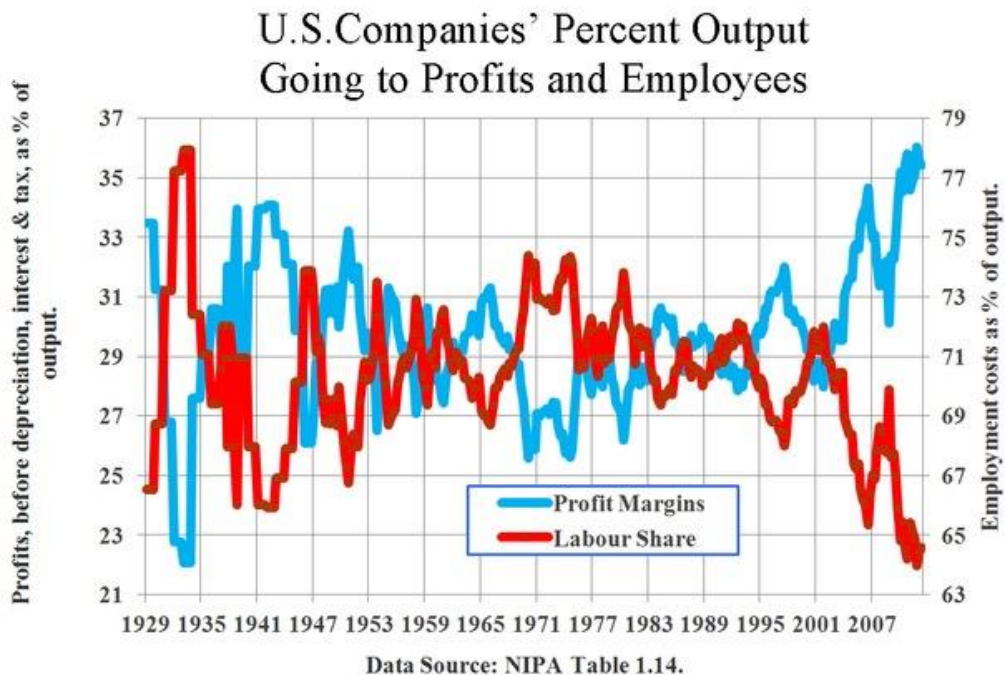
¹⁶⁶

principal reason now given sounds in automation rates. Productive capacity appears at present to be entering on a third or fourth ‘revolution,’ pursuant to which fewer and fewer actual human beings will be necessary to satisfy global demand for goods and many services. This would ultimately mean that effective global demand would itself be undermined over time – unless those who were rendered redundant by the robots, so to speak, were to own them. Only that way would global absorptive capacity be able to keep pace with productive capacity, and thereby maintain that productive capacity itself.

Though this might sound fanciful to some at this juncture, some numbers bear out the potential for real difficulty here. One such number is the rate at which robotics and other ‘smart machines’ account for value added in the production process. *Figure 24* shows the trend over the past several decades.

[Insert *Figure 24*]

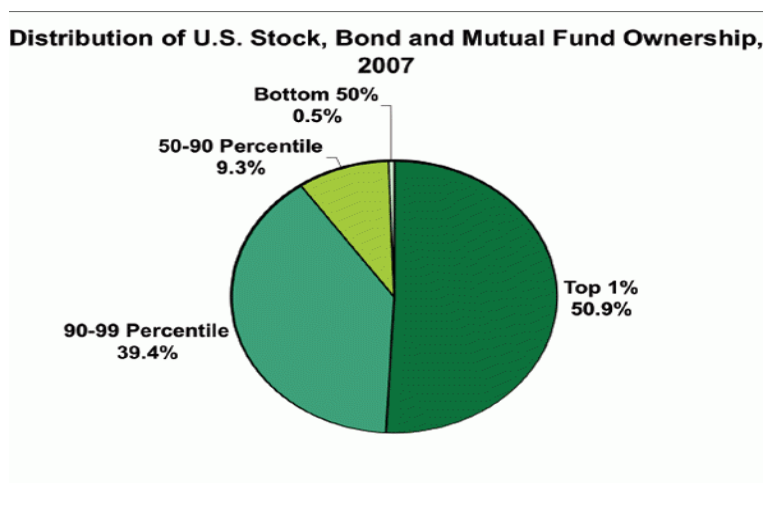
A related such number, from the income rather than output side of the ledger, is the portion of national income claimed by capital (in the form of corporate profits) as distinguished from labor where the proceeds of enterprise are concerned. *Figure 25* shows that trend over the same period, as tracked by the U.S. Department of Commerce.



If these trends continue, their interaction with the distributional and MPC phenomena that figured in my model at Part IV bids fair to grow significant. For if capital ownership (a) accounts for growing portions of value-added and income, and (b) is itself highly concentrated and growing more so, then the diminishing APC highlighted in Part IV will result in absorptive capacity's fall increasingly short of productive capacity.¹⁶⁷ There will be, in other words, a long term tendency for macroeconomies not only to suffer 'secular stagnation,' but also to fall into the pattern modeled above in *Figure 3*, with each iteration worse than its predecessor in the sequence.

Is capital ownership concentrated, then? The answer is yes, and it has long been growing steadily more so over time. This can be inferred from data already provided above in Part IV, as well as independently demonstrated via additional data. Part IV showed the steady concentration of wealth accumulation and income flows toward the top of the distribution in recent decades. *Figure 25* for its part shows that the portion of national income claimed by capital rather than labor has itself steadily grown. These two propositions cannot both be true unless capital ownership itself is concentrated. I can also demonstrate more directly that capital ownership is densely concentrated and growing more so, courtesy of *Business Insider* and Edward Wolff.

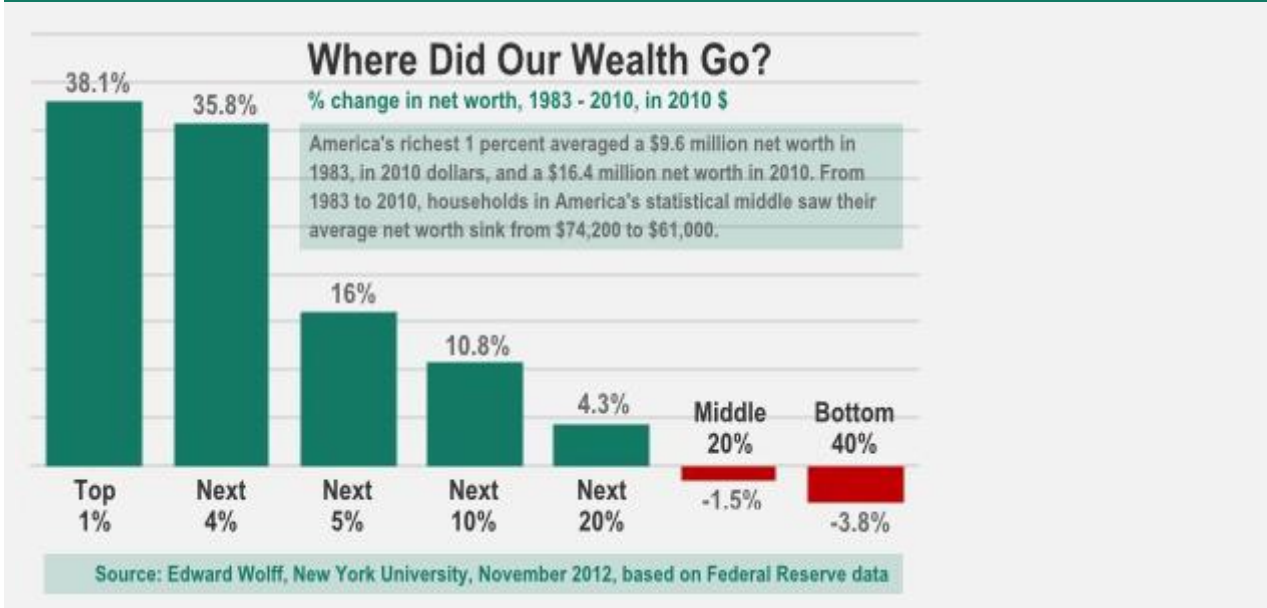
Figure 26: Corporate Wealth Distribution, 2007



¹⁶⁷ See Hockett, sources cited supra, note 116. Also Hockett, 'Just Insurance Through Global Macro-Hedging,' 25 *University of Pennsylvania Journal of Int'l Economic Law* 107 (2004), at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=933131.

Figure 27: New Worth Distribution, 1983-2010

INEQUALITY BY THE NUMBERS



If these trends continue, and there is no reason at this point to think they will not, then I am faced with a long term challenge of considerable magnitude. There will be no obvious way to maintain aggregate demand sufficient to underwrite full employment other than these: first, continued and steadily increased reliance on destabilizing consumer and mortgage debt as modeled above in Part IV; or second, massive confiscation and redistribution of wealth in manners that tend to be politically difficult.¹⁶⁸ Are I doomed, then, to serial financial catastrophe, political catastrophe, or both?

Perhaps not. For notice that the second sentence of the previous paragraph spoke of ‘obvious’ means. There is at least one *non-obvious* means of addressing the problem that avoids the difficulties just characterized. The key, as one of us has urged in a series of papers published just prior to the crash of 2008,¹⁶⁹ is to notice that human beings experience, as a matter of behavioral psychology, rechannelings of future income flows very differently from the way they experience redistributions of present wealth accumulations. Moreover, insofar as ‘rechanneling’

¹⁶⁸ Idem.

¹⁶⁹ Hockett, sources cited supra, notes 116, 119, 127.

of the mentioned type can be conditioned upon perceivedly meritorious behavior or deserving status of some kind, it will be more psychologically and politically acceptable still.¹⁷⁰

The first of these tendencies has a name; psychologists call it ‘the endowment effect.’ The second tendency is at least as important but, perhaps because so familiar and taken for granted, has not yet been christened. I’ll call it the ‘the merit effect.’ And now here is the two-sided rub: First, ‘rechanneling,’ of the sort that avoids offending the endowment effect, is precisely what *finance* is (at least partly) about. It is about engineering future income flows. And second, one can design rechanneling arrangements that associate redirected flows directly with perceived grounds for deservingness of those flows.

A more or less familiar case in point is the levered Employee Stock Ownership Plan (ESOP), which receives favorable treatment in the Employee Retirement Income Security Act (ERISA) and the regulatory apparatus through which that Act is administered.¹⁷¹ As most who are familiar with ESOPs recognize, they amount to a means by which firms are tax-incented to distribute new equity shares to employees, in order that the latter will enjoy not only labor, but also capital incomes.¹⁷² Here is how it works.

An employing firm adopts an ESOP as a sponsored ERISA plan.¹⁷³ Like other ERISA plans, the ESOP takes the legal form of a trust.¹⁷⁴ Partly in exchange for a promissory note, the trust borrows funds from a bank or other commercial lender. It uses the funds to purchase stock issued by the sponsoring/employing firm at fair market value.¹⁷⁵ The loan proceeds accordingly pass through the ESOP to the sponsoring/employing firm itself – they finance it – and the stock is then held in trust on behalf of the employees. The firm guarantees repayment of the loan by

¹⁷⁰ Idem.

¹⁷¹

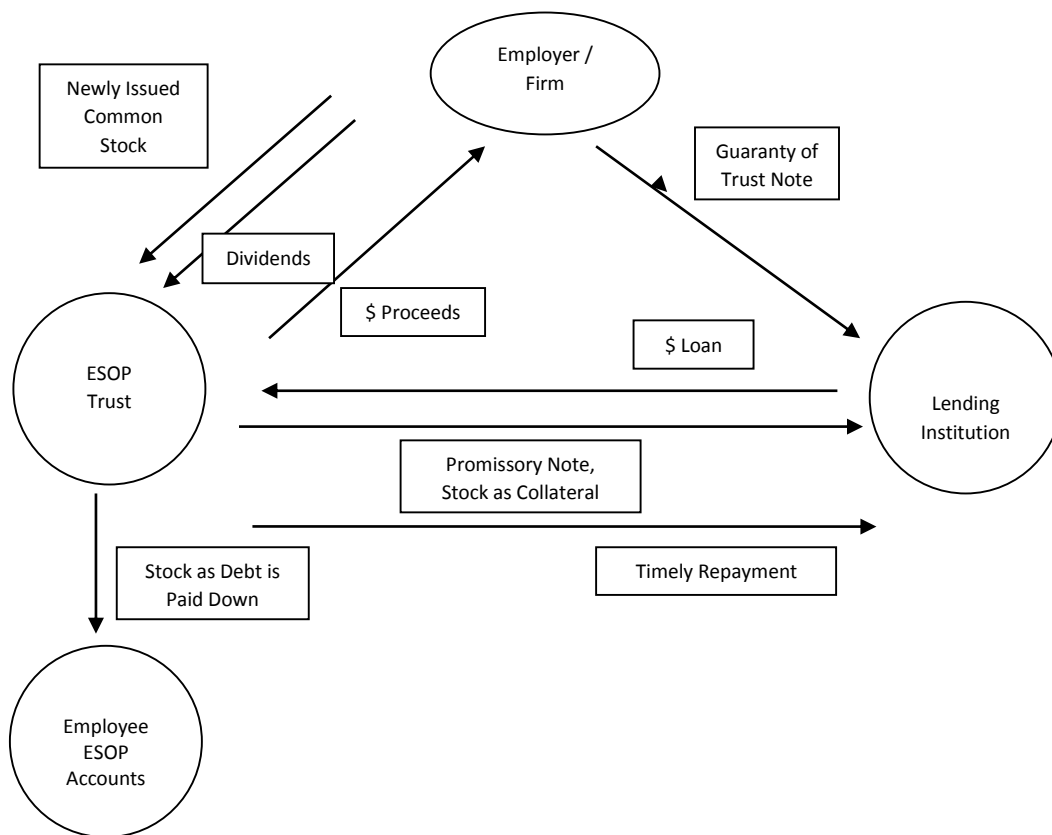
¹⁷² Idem.

¹⁷³ ERISA § 407(d)(6).

¹⁷⁴ ERISA §§ 404(a)(1), 403(a). The idea, of course, is both to insulate funds earmarked for employees from the other financial operations of the firm, and to afford the employee beneficiaries the benefit of fiduciary obligations owed them by the plan’s trustee. It is regrettably not clear, however, that the trust protections offered employees by pension trusts are as fulsome as those offered beneficiaries of other trusts. *See, e.g., In re WorldCom, Inc.*, 263 F.Supp.2d 745 (S.D.N.Y. 2003) (finding that ERISA defines “fiduciaries,” “fiduciary functions” and “fiduciary duties” more narrowly than does common law trust doctrine). *See also* note 87, *supra*.

¹⁷⁵ Because the shares are purchased at fair market value, the purchase is sometimes misleadingly described by ESOP-proponents as an equity-injection. What actually happens is publicly subsidized debt finance accompanied by a stock giveaway.

the ESOP to the lender, and the stock held in the ESOP is itself pledged as security. Over time, the sponsoring/employing firm makes regular cash contributions to the ESOP. In this case the contributions are used by the ESOP to amortize the loan originally used to purchase the sponsoring/employing firm's shares.¹⁷⁶ As the loan is thus paid down, stock held by the trust is released from its loan-securing role to individual accounts maintained severally on behalf of the employee/beneficiaries.¹⁷⁷ The proportions in which it is released to those accounts track the beneficiaries' labor-patronage of the sponsoring firm (their wages or salaries). Diagrammatically, things are as depicted in *Figure 28*:



¹⁷⁶ So the sponsoring/employing firm is, in effect, both borrowing and paying back on behalf of employees for the purchase of its own stock – it gives out partial ownership of itself as an employee benefit. There's the dilution (of previous owners), more on which presently.

¹⁷⁷ Typically the shares become saleable or redeemable only upon retirement or exit of the firm, and typically the firm buys them back. There are voting restrictions (even to the vanishing point) as well, as I'll see presently. That is all significant when it comes to the question of just what "owning" should mean here; but this isn't my question in this Article. See Hockett, *Whose Ownership?*, *supra* headnote, for more on that question.

This financing arrangement, which one of us has discussed extensively in aforementioned writings, is obviously such that existing shareholders are either (a) diluted – in that future flows are now shared with more shareholders, who have not capitalized the firm save through labor inputs – or (b) compensated by favorable tax treatment of ESOP-sponsoring firms’ debt. In either case, a ‘giveaway’ to labor is tolerated, either by existing shareholders or by the public at large who compensate the latter via the Internal Revenue Code. *Why* is this tolerated?

The answer harks back to the observations I made just above. First, the ‘giveaway’ simply redirects future flows rather than taking and transferring what is already accumulated, thereby respecting the ‘endowment effect.’ And second, the ‘giveaway’ is correlated to perceivedly deserving behavior – labor for the firm – thereby appealing to the ‘merit effect.’ This, it would seem, is the key to the ESOP’s success.¹⁷⁸

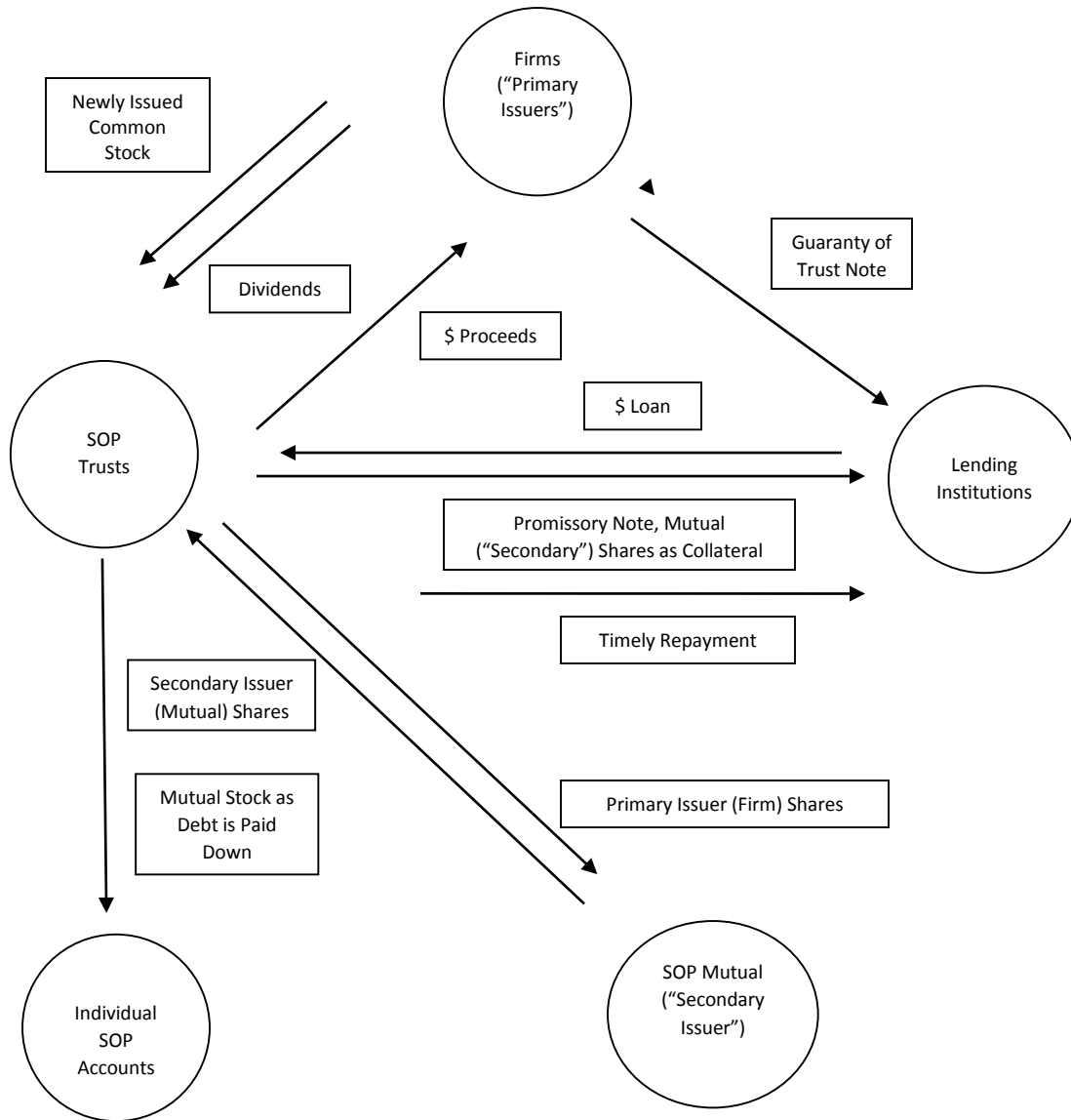
What is the relevance of that here? Very simple. As one of us has shown at length in the aforementioned pre-2008 papers, it is easy to construct multiple variations on the basic ESOP structure, all of which possess the future-flow-redirecting, endowment-effect-respecting feature of the same, and each of which appeals to the merit effect by conditioning the benefit on one or another ground of perceived desert. Loyal or otherwise regular patronage is one such ground. Being a customer of a ‘natural monopoly’ is another. Being ‘outsourced’ is another and being a veteran yet another. And there are still more.¹⁷⁹ Structurally speaking all are as pictured above in *Figure x*, with only the terms in the ovals changing from SOP-type to SOP-type.

Through a multitude of such ‘SOPs,’ all of which can be layered atop one another as distinct engines of capital-spreading to any given beneficiary, I can in time direct more and more capital ownership to those who at present rely solely upon labor incomes alone. Moreover, in each of these cases, the SOP in question avoids sourcing labor income and capital income in the same *situs* as the ESOP does, thereby avoiding the non-diversification of income risk that plagues ESOPs themselves. It is even possible to design ‘SOP exchanges’ and ‘SOP mutual funds’ to diversify beneficiaries further, as represented in *Figure 29*.

¹⁷⁸ So is it argued in Hockett, sources cited *supra*, notes 116, 119, 127.

¹⁷⁹ See again Hockett, sources cited *supra*, notes 116, 119, 127, especially ‘What Kinds of Stock Ownership Plans?’, *supra* note 116, and ‘Insource the Shareholding of Outsourced Employees,’ *supra* note 119.

Figure 29: Structure of SOP with SOP Mutual Arrangement



The key, then, is to make a coherent national project of this. The best way to do so, I believe, is to establish a federal authority whose responsibility it will be to begin making use of the structures diagramed above in a coherent and systematic way. Call it the Capital Diffusion Authority, or CDA. The aim of the CDA in respect of citizens would be much like that of a firm-founder wishing to facilitate a buyout of her firm by its employees as she prepares to retire. It would be to increase citizen ownership stakes in firms economy-wide, beginning with firms to which they bear merit-salient patronage relations, then radiating outward from there.

The longer term goal should to bring each citizen's income composition as regards capital and labor into rough proportional alignment with that of the economy as a whole. One of us elsewhere has dubbed this the 'income-compositional symmetry' principle, but I could just as well call it the 'microcosm' principle. The idea is for each citizen's portfolio of income sources as between capital and labor to mirror that of the nation's economy as a whole, in order that no citizen in the long run tend as a matter of structural trends 'automatically' to become relatively richer or poorer in comparison to her fellows.

The CDA would be endowed with authority to lend on favorable terms to finance SOP transactions, in a manner that renders them as attractive, if not more so, as the tax code under ERISA currently does ESOPs. It should also – ideally in coordination with the Social Security Administration (SSA), which already has an infrastructure in place for the purpose – manage individual SOP accounts for each citizen. Equity shares could steadily accumulate in these accounts through various SOP transactions with the many firms to which each citizen bears ongoing, merit-implicating patronage relations. The SSA can then administer these accounts in the capacity of a fiduciary, both managing the accounts on the one hand, and advising account holders on the other in cases where diversification appears suboptimal.

In effect, what I would have here is something akin to a TIAA CREF account for every American citizen, administered by SSA in coordination with the CDA. Diagrammatically, CDA and its operations, as coordinated with the new SSA function, would look more or less as depicted in *Figure 30*.

[Insert *Figure 30*]

All of this is admittedly a long term project, with many design considerations in need of further specification as conducted in the mentioned pre-2008 papers. But then the problem to which this all is addressed is quite long term as well. I have not yet arrived at the point where robotics replace literally hundreds of millions of laborers. If I continue approaching that state as rapidly as I appear to be doing, however, something like what I suggest here might be one means of addressing the problem that this will constitute. It will be the most direct means of assuring that, as the composition of productive capacity and income shifts steadily from greater labor-intensity to greater capital-intensity, the composition of absorptive capacity – of purchasing

power – shifts likewise, and that aggregate demand sufficient to underwrite sustained, stable, non-crisis-struck prosperity is accordingly maintained.

C. And What of the Shadows? A Closing Note on 'Wildcat' Currencies, Endogenous Money, & Regulatory Arbitrage

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V. CONCLUSION: FINANCE WITHOUT 'FINANCIERS'

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