THE TRANSFORMATION OF FINANCIAL REGULATION: PRIVATE RISK AND PUBLIC PURPOSES

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Abstract

Have we learned the lessons of the 2008 financial crisis? In the wake of that disaster, a wave of regulatory measures promised a change of course; indeed, a veritable reversal of the massive deregulation of the preceding decades, now universally acknowledged to have been dangerously misguided. This Article argues, however, that the current regulatory landscape shares more with the intellectual and institutional foundations that sustained financial deregulation from the 1970s onward than with the premise of the regulatory architecture that deregulation tore down, namely, that of the New Deal era. The dominant regulatory framework today is premised on a "market failure" analysis, which centers on the adjustment of risk incentives, and proceeds predominantly through the imposition of capital ratio (leverage) requirements. Far from a reversal, this approach reflects and reinforces the profound intellectual transformation that, beginning in the 1970s, consciously and successfully demolished the regulatory paradigm of the New Deal, a paradigm that was premised not on private risk incentives, but on ensuring the proper functioning of the banking system in directing credit toward productive growth. Establishing a micro-economic conception of finance, the new paradigm displaced the concern for macroeconomic public purposes, setting up a presumption against regulation and, simultaneously, devising a regulatory rationale centered on private risk incentives.

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This Article aims to situate and assess central contemporary measures and proposals by tracing this historical transformation and by articulating the defining features of these opposing paradigms. Focusing on the intellectual history of capital ratio requirements, it illustrates how a group of Chicago economists applied the "modern theory of finance" to the problem of bank instability, and appropriated this old regulatory vehicle to recast its rationale in terms of risk incentives; how this move sustained the new imperative to "deepen" markets; how, with the global Basel Capital Accords, capital ratios came to center stage as a response to the banking failures of the 1980s, crystallizing into an idea of "excessive risk;" and how, to this day, the paradigm of private risk incentives constrains even accounts that emphasize "systemic risk" and "macroprudential regulation." Relying on this historical analysis, the Article then considers the extent and limitations of the regulation of derivatives under Dodd-Frank, the debate on a Financial Transactions Tax, and the idea of financial stability as a public good. Critical approaches to the phenomenon of financialization, as well as ambitious proposals framed under the banner of "finance as servant," signal a possible revival of the public purposes paradigm, recalling, and possibly transcending, the New Deal emphasis on productive growth, with a path to public deliberation on sustainable and equitable credit policies. To fully realize their potential requires firmly delineating their premises from those still prevailing today.

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I. Introduction

The post-2008 global discourse on financial regulation is generally understood to depart sharply from the deregulatory attitude that prevailed before the crisis, implying a pendulum swing back to New Deal era reforms.[1] Lying beneath the surface of this discourse, however, is a rarely acknowledged contrast between two paradigms of financial regulation that offer disparate—indeed, competing—answers to the questions of "why," "what," and "how" to regulate banking and finance. Understanding these differences carries important consequences for the scope and reach of any renewed regulatory project, and for assessing claims that today's reforms have learned the lessons of yesterday's failures. To fully perceive the polarity between these approaches, an intellectual and institutional history is required; one that traces when and

[1] *See e.g.*, Jihad Dagher, *Regulatory Cycles: Revisiting the Political Economy of Financial Crises* 42-43 (Int'l Monetary Fund, Working Paper No. 008, 2018) (discussing regulation as cyclical and speaking of a "regulatory pendulum").

how we have come to look at banking regulation as a matter of managing private risk.

The dominant rationale for banking regulation today is a widely recognized market failure: private financial actors do not, left to themselves, internalize the enormous and contagious externalities that bank failures can cause. In order to secure financial stability, we aim to adjust their risk incentives, specifically through the imposition of *capital ratio* (leverage) requirements. By requiring that a portion of the liabilities on the balance sheet of financial institutions is made up of the shareholders' own equity, these secure the proverbial "skin in the game," and reduce the distorted propensity toward excessive risk.[2] Post-2008, the global reach of this form of regulation was reinforced by the third iteration of the Basel Capital Accords, which instituted increased and refined capital ratios "to address the market failures revealed by the crisis."[3]

This microeconomic justification, and its attendant regulatory vehicle of capital requirements, is so prevalent today that leading economists find it "perhaps banal" to articulate.[4] Most regulatory discourse does not challenge this regulatory framework and its rationale but rather takes place within it.[5] Debates revolve, then, on how much

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[2] This explanation is ubiquitous in banking literature. *See e.g.,* MARKUS BRUNNERMEIER, ANDREW CROCKET, CHARLES GOODHART, AVINASH D. PERSUAD & HYUN SHIN, THE FUNDAMENTAL PRINCIPLES OF FINANCIAL REGULATION, 1-12 (Geneva Reports on the World Economy, 11th ed. 2009) at xv ("[T]he reason why we try to prevent banking crises is that the costs to society are invariably enormous and exceed the private cost to individual financial institutions. We regulate in order to internalize these externalities. The main tool which regulators use to do so, is capital adequacy requirements."); *see also* HOWELL JACKSON & EDWARD SYMONS, REGULATION OF FINANCIAL INSTITUTIONS 5-6 (1999) ("[T]he principal justification for regulation in the field concerns the tendency of financial intermediaries to take excessive risks, if not severely restrained by governmental controls."). For a detailed account *see* DANIEL K. TARULLO, BANKING ON BASEL 15-44 (2008) (reviewing the contemporary and evolving rationale for imposing capital ratio requirements on banks). Discussed *infra* Part II.A.

[3] BASEL COMMITTEE ON BANKING SUPERVISION, BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS 2 (Bank for Int'l Settlements 2011).

[4] *See* BRUNNERMEIER ET AL., *supra* note 2, at xv.

[5] *See* Edward L. Rubin*, Deregulation, Reregulation, and the Myth of the Market,* 45 WASH. & LEE L. REV. 1249, 1264 (1988) (speaking of a

and what kind of capital requirements are least costly and most effective.[6] So natural and invisible has this orientation become, that it is commonly assumed to have been part of the original New Deal rationale for regulating banks.[7]

But a historical study reveals this framework to be entirely alien to New Deal banking reforms, both in design and in underlying rationale. As will be shown, the regulatory paradigm of that era was grounded not in the microeconomic incentives of individuals and firms, nor in an analysis of private risk calculations, but in the irreducibly social and macroeconomic purposes or functions of banks in a dynamic economy.[8] On this view—as obvious to New Dealers as it is marginal today—the key is that banks play a crucial role in directing the surplus of economic activity back into productive investments, by taking deposits and by making loans (incidentally, also creating an elastic money supply).[9] The regulation of banks is here understood as intertwined with issues of monetary, fiscal, and industrial policy. When banks funnel funds to speculative, non-productive activity, this spells

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"deregulatory and reregulatory discourse" in which both parts share in the underlying vision of the social world premised on a "natural market image").

[6] Admati and Hellwig have persistently argued, against objections from bankers and their allies, that even extensive capital ratios are not socially costly. *See e.g.,* Anat R. Admati, Peter M. Demarzo, Martin F. Hellwig & Paul Pfleiderer, *Fallacies, Irrelevant Facts, and Myths in Discussion of Capital Regulation: Why Bank Equity is Not Socially Expensive* 6 (Rock Ctr. For Corp. Governance at Stanford U., Working Paper No. 161, 2013), at 3.

[7] *See e.g.,* Paul Krugman, *Idiot Proofing Financial Regulation,* N.Y. TIMES, (March 29, 2010, 1:36 PM) http://krugman.blogs.nytimes.com/2010/03/29/idiot-proofing-financial-regulation/ ("The New Deal system of financial regulation really had two main parts: deposit insurance and bank capital requirements. The first ruled out bank runs; the second reduced the incentive for banks to take advantage of guarantees to gamble with other peoples' money.").

[8] *Infra* part III.

[9] A steady and elastic supply of liquidity has historically been integral to any account of banks. For a thoroughly documented legal history of this monetary perspective *see* Lev Menand, *Why Supervise Banks? The Foundations of the American Monetary Settlement*, 74 VAND. L. REV. 951, 977-78 (2021) (highlighting banks' public—or "sovereign"—function of money creation and drawing the implications for justifying extensive administrative supervision grounded in the "outsourcing" of government). The account offered here focuses not on the monetary dimension but on the Keynesian role of credit in spurring growth by channeling investments to productive activity.

trouble for the real economy even before banks fail—and utter disaster once they do.[10]

The cornerstone of New Deal reforms were the Glass-Steagall provisions of the Banking Act of 1933.[11] Rather than imposing capital ratios designed to affect incentives, they separated between different kinds of financial institutions by setting up qualitative, substantive distinctions between kinds of assets (loans, investments) that banks should or should not buy, or the activities (lending versus speculating) they should or should not engage in.[12] The closest measure to capital ratios which was set up by New Deal legislation were the margin restrictions on stock trading of the Securities Exchange Act of 1934. Even here, however, a close reading of the historical materials reveals that the central policy problem was conceived as one of excessive *speculation*—which drew credit away from worthy projects—rather than excessive "risk" in its contemporary sense of an abstract calculation that may or may not be distorted.[13] The economic theory that sustained this outlook was decidedly Keynesian.[14]

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[10] Discussed *infra* notes 125-128 and accompanying text.

[11] *See generally* Howard H. Preston, *The Banking Act of 1933*, 23 AM. ECON. REV. 585, 605 (1933); Edwin Perkins, *The Divorce of Commercial and Investment Banking: A History*, 88 BANKING L. J. 483, 483 (1971); Joan Legraw & Stacey Davidson, *Glass-Steagall and the "Subtle Hazards" of Judicial Activism*, 24 NEW ENG. L. REV. 225, 227 (1989-1990).

[12] Perkins, *supra* note 11, decries the sidelining of this aspect of the 1933 Act by financial historians like Arthur Schlesinger as well as Milton Friedman and Anna Schwartz; *id* at 484. This was to change in the ensuing decades, when much attention turned to the interpretation, relaxation, and repeal of the Glass-Steagall provisions. Post 2008, historical accounts of the New Deal reforms often count the separation of banks from securities dealing as a central feature thereof. *See e.g.*, Menand, *supra* note 9, at 1004.

[13] Thomas Gale Moore, *Stock Market Margin Requirements*, 74 J. POL. ECON., 158, 159 (Apr. 1966) (explaining how the legislature instituted margin requirements to "reduce 'excessive' credit in the stock market and leave more for productive uses. . .").

[14] *See generally* JOHN MAYNARD KEYNES, THE GENERAL THEORY OF EMPLOYMENT, INTEREST AND MONEY 3-4 (1936) ("A monetary economy [is] essentially one in which changing views about the future are capable of influencing the quantity of employment and not merely its direction. But our method of analysing the economic behaviour of the present under the influence of changing ideas about the future is one which depends on the interaction of supply and demand, and is in this way linked up with our fundamental theory of value.").

An updated revival of this intellectual framework has been gaining momentum in critical and heterodox circles, especially following the 2008 crisis, under the conceptual umbrella of a critique of *financialization*.[15] This broad term refers, in the first place, to the exponential rise over the past four decades (especially in the United States) of the share of total profits from financial activity relative to commerce and goods production.[16] Critical political economists and sociologists also use the term to denote and critique the economic and political power that financial institutions increasingly wield.[17] As a matter of financial regulation, this concept underwrites an approach that rejects the assumption of market efficiency *ab initio*, and underscores ambitious proposals to embed financial markets within the real economy and imbue economic analysis with a conscious deliberation on social purposes.

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[15] For a thorough analysis of the meanings of the term and the proportions of this phenomenon *see* Greta R. Krippner, *The Financialization of the American Economy*, SOCIO. ECON. REV. 173, 173-77 (2005) [hereinafter Krippner, *Financialization*]; for a global account, key statistical data and distributive effects of financialization, *see* GERALD EPSTEIN, FINANCIALIZATION AND THE WORLD ECONOMY 3 (2006) (speaking also of "very low" research on the topic at the time). For a comprehensive critique of broader historical and political implications post-2008, *see* GRETA KRIPPNER, CAPITALIZING ON CRISIS: THE POLITICAL ORIGINS OF THE RISE OF FINANCE (2011). The crisis has spurred fast growing interest in this framework of analysis; *see* Gerald Epstein, *Financialization: There's Something Happening Here* 394 (Pol. Econ. Rsch. Inst. Working Paper No. 394, 2015) (2015) (speaking of the "vast and rapidly expanding literature" on financialization). For the lack of regulatory concern with the problem of financialization, *see* Timo Walter & Leon Wansleben, *How central bankers learned to love financialization: The Fed, the Bank, and the enlisting of unfettered markets in the conduct of monetary policy*, 18 SOCIO. ECON. REV. 625, 646-47 (2020).

[16] *See* Krippner, *Financialization*, *supra* note 15, at 174 (defining financialization "as a pattern of accumulation in which profits accrue primarily through financial channels rather than through trade and commodity production.").

[17] *See id.* at 181 (noting "one would expect that social actors occupying strategic positions vis-à-vis privileged sites of accumulation would accrue political and economic power."); Walter & Wansleben, *supra* note 15, at 672 (announcing "this study [aims] to move beyond analytic grids centered on free-market ideology and the power of sectorial interests, to look more closely at the concrete processes of 'organizing' [that] have reconfigured structural relations between policy and market domains.").

What we find, then, today are two competing paradigms, the one still dominant, the other possibly re-emerging: the first is grounded in a microeconomic analysis of private risks and market failure, the second in a macroeconomic analysis of public purposes and the proper uses of credit expansion.[18] These paradigms approach very differently not only the underlying rationale for regulating finance and the correspondingly appropriate instruments of regulation, but also, more fundamentally, what banks and financial institutions simply *are* and what they are supposed to do.[19]

This Article aims both to articulate these two paradigms analytically, and to trace historically how the one emerged to replace the other, namely, how the emphasis on private risk incentives displaced both the New Deal regulatory architecture and its supporting intellectual apparatus. It recounts how, step by step, the intellectual project of deregulation brought about a profound transformation in how we understand banking and risk, to the point that contemporary efforts to reverse deregulation often remain imperceptibly committed to microeconomic and market-oriented premises, even when they speak of "systemic risk" and "macroprudential" regulation. Finally, it proposes a way forward for a revived public purposes paradigm, by reconstructing a number of ambitious regulatory proposals along two variants of this paradigm—a modest one that reintroduces limits on speculation, and a bolder one that re-imagines the social purposes of credit beyond "growth." In its orienting aims, this Article joins others in the vein of "law and political economy" in calling for a deliberation on the purposes, character, and tools of financial policy, unencumbered by the neoclassical microeconomic premises of the neoliberal era.[20]

The Article's central illustration of the "great transformation"[21] in banking regulation is the history of one key regulatory institution, that

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[18] *See* THOMAS S. KUHN, THE STRUCTURE OF SCIENTIFIC REVOLUTIONS (1969). The significance of Kuhn's framework of paradigm shifts is discussed *infra* Part II.

[19] *See* Rubin*, supra* note 5, at 1264.

[20] *See* Robert Hockett & Saule Omarova, *The Finance Franchise*, 102 CORNELL L. REV. 1143 (2017) (exposing the fallacy of scarce capital implied in the notion of credit intermediation from available "savings" to "investments," speaking instead of credit generation); Rohan Gray, *Administering Money: Coinage, Debt Crises, and the Future of Fiscal Policy,* 109 KY. L. J. 229 (2020); Menand *supra* note 9, at 962.

[21] A term borrowed of course from the classic work of political economy KARL POLANYI, THE GREAT TRANSFORMATION: THE POLITICAL AND

of capital ratio requirements, and of their evolving justification and design. Although capital requirements existed in various forms since at least the early twentieth century, they only received the now-familiar risk-adjusting justification in the late 1970s, and only rose to prominence in the regulatory toolkit in the following decades, in tandem with the tidal wave of *deregulation*, before finally reaching their global apogee with the first Basel Capital Accords of 1988.[22] Before this "neoliberal" period, capital ratios were a relatively insignificant aspect of banking regulation and supervision, and were seen rather straightforwardly as providing a cushion to prevent insolvency, not as a mechanism to discourage risk-taking.[23] Indeed, in this preceding "New Deal" era a notion prevailed that would be almost unthinkable today: that capital ratios served to *encourage* risk-taking by banks, providing a buffer that freed them to make less conservative investment choices.[24]

Previous accounts of the rise of capital requirements in the 1980s have interpreted it variably as a *response* to deregulation or as a *residual* form of regulation that survived when other forms were dismantled.[25] What these accounts miss, however, is how capital ratio requirements, justified through an analysis of private risk incentives,

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ECONOMIC ORIGINS OF OUR TIME, 233-34 (Beacon Press, 2nd ed. 2001) (accounting for the rise of "market society"); transposed twice over into American legal history, first in MORTON J. HORWITZ, THE TRANSFORMATION OF AMERICAN LAW 1780-1860 99-101 (1977) (identifying the shifts in private law that shaped American industrial capitalism in the nineteenth century); then in MORTON J. HORWITZ, THE TRANSFORMATION OF AMERICAN LAW, 1870-1960: THE CRISIS OF LEGAL ORTHODOXY 3-7 (Oxford Univ. Press 1994) (tracing the displacement of classical legal thought by legal realism and progressive jurisprudence).

[22] TARULLO, *supra* note 2, at 16.

[23] DAVID DURAND, BANK STOCK PRICES AND THE BANK CAPITAL PROBLEM x (1957); discussed *infra* Part III.A.

[24] DURAND, *supra* note 23. Discussed at length *infra* Part II.C. "Almost" since nothing is unthinkable; indeed a version of this older idea was again floated, against orthodoxy as late as 1999. *See* Jürg Blum, *Do Capital Adequacy Requirements Reduce Risks in Banking?*, 23 J. BANKING & FIN. 755, 761 n. 5 (1999).

[25] *See, e.g.*, TARULLO, *supra* note 2, at 8 ("The symbiotic effects of the evolution of the financial service industry and the relaxation of many restrictions on bank activities have placed capital regulation at the center of bank regulation"); JACKSON & SYMONS, *supra* note 2, at 184 (arguing that capital regulation has remained popular as a policy tool due to the loss of confidence in other forms of regulation). *See infra* notes 121-123 and accompanying text.

were consciously developed as part and parcel of the project of deregulation and its intellectual overhaul of the New Deal regulatory framework. As such, they reflected—and, thereafter, reinforced—the ascendant microeconomic understanding of banks, which consciously foreclosed from the regulatory horizon the myriad of public and macroeconomic questions regarding the purposes of credit.

The contemporary justification of capital ratios is traceable to a seminal 1978 article by Fischer Black, Merton Miller and Richard Posner, which placed capital requirements front and center.[26] Applying, for the first time, the "modern theory of finance"[27] to the issues facing financial regulation, this group of Chicago economists conceptualized all financial activity as a perfect market, where loans and other financial instruments compete and where actors rationally calculate risk and return. Their first proposal was to free—or deepen—these markets as much as possible.[28] Accepting that some regulation was nevertheless considered necessary, their second proposal was to make capital requirements the regulatory tool of choice.[29] Their reason was precisely the claim that, by affecting the banks' risk incentives, capital requirements would reduce risk-taking while avoiding heavy-handed intervention.[30]

In the ensuing decades, as deregulation accelerated while financial instability mounted, capital requirements came to be seen everywhere as an instrument for reducing risk-incentives, and were elevated to the central tool in the new financial-regulatory apparatus.[31] Correspondingly, financial regulation as a whole was gradually understood through the rationale of correcting "excessive" risk-taking.[32] While for some economists it was a matter of common sense that risk-taking tended to be excessive rather than perfectly efficient, others

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[26] Fischer Black, Merton Miller & Richard Posner, *An Approach to the Regulation of Bank Holding Companies*, 51 J. BUS. 379, 380 (1978). Discussed at length *infra*, Part IV.B.

[27] *See id.*

[28] *See id.*, at 380, 383 ("[W]arning" of the "perverse effects of public regulation of business.").

[29] *See id.* ("[E]quity capital requirements for banks should play an important role in an optimal program for banking regulation. . .").

[30] *See id.*at 388.

[31] TARULLO, *supra* note 2, at 35 ("While the efficiency gains from the deregulatory steps promised to be substantial, the potential gap in prudential regulation was worrisome to some regulators and members of Congress. Capital regulation was the most obvious candidate to fill that gap.").

[32] *See supra* note 2; *infra* Part II.A; Part IV.

increasingly theorized explicit sources of this market failure, stemming either from moral hazard caused by deposit insurance and "too big to fail" bailouts,[33] or from market imperfections: information costs and asymmetries, transaction costs and agency problems, all exacerbated by negative externalities.[34] This analysis was a natural extension of the 1978 framework, which proved broad enough to provide the theoretical infrastructure for *both* "market fundamentalism" and "market failure" approaches.[35]

Although we may register a recent shift back toward "regulation," and away from "deregulation," such a simple contrast obscures as much as it reveals.[36] The market failure revolution that displaced the New Deal approach was a much deeper transformation of regulatory sensibilities than is conveyed by notions of "more" versus "less" regulation. It did away with the myriad of concerns previously thought to attend the system of credit, streamlining various public policy concerns into the much narrower issue of excessive risk-taking in bank asset choices. An entirely new generation of academic and policy discussion was formed that ignored—indeed sidelined—those broader preoccupations altogether and thus continues to be cramped by, and indeed reinforces, deregulatory assumptions and horizons that stem

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[33] *See e.g.,* William A. Lovett, *Moral Hazard, Bank Supervision, and Risk-Based Capital Requirements,* OHIO ST. L. J. 1365, 1365 (1989) (discussing at length the "moral hazard" problem, presenting it as hardly new and referring to the then-current editions of key textbooks on banking and finance).

[34] *See* BANK FOR INTERNATIONAL SETTLEMENTS, 59TH ANNUAL REPORT 92 (1989); JACKSON AND SYMONS, *supra* note 2.

[35] This combination of what appears like two sides within one framework accounts for the "poverty of ideas" described by Lothian and Unger. Tamara Lothian & Roberto Mangabeira Unger, *Crisis, Slump, Superstition and Recovery*, *in* LAW AND THE WEALTH OF NATIONS: FINANCE, PROSPERITY, AND DEMOCRACY 337, 339 (Columbia Univ. Press 2017) ("Nothing astonishes more in the present debate about recovery from the slump that followed the crisis of 2007-2009 in the richer economies than the poverty of the ideas informing the discussion . . . . On one side, we hear the argument for fiscal and monetary stimulus: the more the better . . . . The chief opposing conception is a market fundamentalism, the major premise of which is that a market economy has, despite minor variations, a single natural and necessary institutional form.").

[36] *See generally* Leaders' Statement, G20 Pittsburgh Summit Sept. 24-25, 2009, https://www.oecd.org/g20/summits/pittsburgh/G20-Pittsburgh-Leaders-Declaration.pdf (discussing recent global efforts to increase financial regulation through stronger capital standards and an improved derivatives market).

from the Chicago project to "encase"[37] financial markets. These assumptions have become deeply lodged within financial theory and policy. In particular, the suspicion that regulation is *distortive* continues to hold sway, undergirding the opposition to any measures that target particular kinds of financial activity as undesirable or excessive in volume.[38]

Academic work on financial regulation, especially prolific and programmatic since 2008, has generally failed to identify the transformation treated in this Article.[39] Even ambitious attempts to revise the theory of financial regulation often miss the larger polarity of regulatory paradigms, take for granted the market failure rationale and frequently rely on capital requirements as a natural response to risk, rather than a contingent framing of problems and solutions.[40] While prominent

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[37] *See* QUINN SLOBODIAN, GLOBALISTS: THE END OF EMPIRE AND THE BIRTH OF NEOLIBERALISM 2 (2018) ("I show that the neoliberal project focused on designing institutions—not to liberate markets but to encase them, to inoculate capitalism against the threat of democracy, to create a framework to contain often-irrational human behavior, and to reorder the world after empire as a space of competing states in which borders fulfill a necessary function.").

[38] Contrast the statement by Robert Jenkins of the Bank of England who speaks of the fallacy that regulation is always suboptimal, with the European Commission, whose impact assessment of a proposed financial transactions tax foresees a negative impact on GDP, based on notions of the cost of capital that assume the pre-tax situation to be efficient. *Compare* Robert Jenkins, Member of the Fin. Pol'y Comm., Bank of Eng., A Debate Framed by Fallacies, Speech at the Bank of England (Sep. 25, 2012)); *with* EUR. COMM'N, COM (2011) 594 FINAL PROPOSAL FOR A COUNCIL DIRECTIVE ON A COMMON SYS. OF FIN. TRANSACTIONS TAX AND AMENDING DIRECTIVE 2008/7/EC 4 (2011).

[39] Notable exceptions and precursors that have articulated certain aspects of this account are Harry McVea, *Financial Services Regulation under the Financial Services Authority: A Reassertion of the Market Failure Thesis?* 64(2) CAMBRIDGE. L. J. 413, 414 (2005) (identifying the significance of the "market failure paradigm" in the UK, without, however, providing a historical account of its emergence, or considering its connection to particular regulatory tools); Menand, *supra* note 9, at 958 (historically situating and reclaiming bank *supervision* by Federal agencies, as distinct from the content of substantive regulation).

[40] *See, e.g.*, Steven L. Schwarcz, *Regulating Derivatives: A Fundamental Rethinking*, 70 DUKE L.J. 545, 576 (2020) [hereinafter Schwarcz, *Regulating Derivatives*] ("[T]he essential purpose of financial regulation is to correct

advocates of new policy proposals often provide historical pointers, they tend to assume progress, and present changing regulations as simply functionally responsive, reflecting changing needs and theoretical advances, not contestable ideological outlooks and commitments that may be revised, reversed, or revisited.[41] Moreover, even very critical work fails clearly to identify the bases upon which it diverges from accepted premises, and, partly as a result, remains largely excluded from policy circles.[42]

This Article responds to these limits of current debate on three levels. Firstly, it offers an *analytical framework* for identifying largely unexamined premises in the pre-2008 discourse of financial regulation, and for evaluating current regulatory proposals in terms of their relation to these premises. Secondly, it provides a *historical account* of the central legal-institutional policy tools deployed in financial regulation, one that pinpoints the particular, contingent contours of the current paradigm of financial regulation. Tracing the concrete history of capital requirements highlights how surface continuities in a specific regulatory institution can mask significant changes in underlying substantive theoretical and policy commitments. Conversely, it examines how particular institutional policy tools may serve to enshrine certain theoretical models, extending their influence on ways of thinking going beyond their original regulatory scope. Finally, in a *programmatic* vein, the Article sets forth the constructive outline of an alternative theoretical and policy framework to support gradual, yet transformative changes to the financial landscape.

Parts II through IV of the Article are theoretical and historical. Part II provides a preliminary framework for contrasting the two paradigms, as a hypothesis to both orient and be revised by the historical inquiry to follow. Part III traces the history of capital ratio regulations from their early twentieth century origins to the eve of neoliberalism, revealing key ruptures and continuities in the perceived purposes, scope,

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market failures"); Admati et al., *supra* note 6, at 3 (accepting the shared premise that "since highly leveraged banks are subject to distortions in their lending decisions, better capitalized banks . . . will have less incentive to take on excessive risks.").

[41] *See, e.g.,* Lothian & Unger, *supra* note 35 at 337.

[42] *See, e.g.*, *id.* at 338; Robert Pollin, *Tools for a New Economy: Proposals for a Financial Regulatory System*, Jan/Feb BOS. REV. 10, 10 (2009); Robert Pollin & Dean Baker, *Public Investment, Industrial Policy and U.S. Economic Renewal* 2-3 (Pol. Econ. Rsch. Institute Ctr. For Econ. And Pol'y Rsch., Working Paper No. 211, 2009). For further discussion, *see* discussion *infra* Part V.B.

and tools for overseeing financial markets. It demonstrates that the historical aim and rationale for capital requirements were markedly different from—and, in some respects diametrically opposed to—the contemporary aim of reducing risk incentives. Special attention is devoted to the New Deal: both to showing why capital requirements were not a central part of that great regulatory wave, and to sketching the alternative macro-purposive approaches to financial regulation that prevailed at the time.

Part IV turns to the intellectual transformation wrought by the rise of the market failure paradigm from the ashes of the New Deal. It first historically situates the unique moment at which Black, Miller, and Posner wrote: the early phase of deregulation in the financial sector, marked by an emerging set of new ideological and legal-institutional dimensions.[43] It then discusses these economists' (re-)conceptualization of the problem of banking regulation within the formal model of markets and risk behavior, and traces the increased influence of this model on the institutions and theory of the ensuing decades that saw the rise of capital requirements to global prominence.

Parts V and VI of the Article apply these historical and theoretical insights to developments today. Part V assesses the post-2008 regulatory landscape and the ongoing influence of the market failure paradigm. It considers the significance of the notions of "systemic risk" and "macroprudential regulation" and how these seemingly broader lenses remain funneled into the microeconomic vessel of capital ratio regulation. It also briefly turns to the regulation of derivatives trading under the Dodd-Frank Act. In both areas of regulatory discourse, it finds a measure of ambivalence, or half-heartedness: a lack of explicit endorsement of a coherent public purposes approach which in turn truncates both the analysis and the response.[44] The suspicion that regulation is *distortive* continues to hold sway, undergirding the opposition to measures that seek to prohibit or reduce some forms of financial activity.[45] Finally, Part VI reconstructs in full

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[43] *See* Black, Miller & Posner, *supra* note 26, at 382 ("The social costs of regulation are high. Among additional reasons for this, the legalistic form in which regulation is cast creates opportunities for delay and evasion through heavy expenditures on legal and related services.").

[44] *See, infra* Part V.A.1; V.B.3.

[45] Contrast the statement by Robert Jenkins of the Bank of England who speaks of the fallacy that regulation is always suboptimal, with the European Commission, whose impact assessment of a proposed financial transactions

the public purposes paradigm, elaborating two distinct variants in ascending order of transformative ambition.

II. Two Paradigms of Financial Regulation

Discussions of the way forward for global financial regulation often stress the need to rethink the assumptions that had characterized the deregulatory era up to the 2008 crisis, with many speaking of a desired—or impending—paradigm shift.[46] But while we may easily register, at a general level, a turn toward more rather than less regulation, more refined analyses are needed to assess what has changed in the conception of regulation itself: its analytical premises, fundamental objectives, and policy framework. We then find that scholars and policy-makers today emphasize the turn from micro-prudential to macro-prudential regulation and, relatedly, a newly established focus on the previously underestimated and under-theorized notion of *systemic* risk.[47] How can we determine whether these amount to a paradigm shift in the approach to regulation, as opposed to another round of improvement on existing tools?

As we examine the panoply of legislative and academic proposals post-crisis for signs of a paradigm shift, one cause for pause is the recurring emphasis on the leverage of financial institutions and, correspondingly, on capital ratio requirements as a central regulatory

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tax foresees a negative impact on GDP, based on notions of the cost of capital that assume the pre-tax situation to be efficient. *See* Jenkins, *supra* note 38; EUR. COMM'N, *supra* note 37, at 5.

[46] *See, e.g.,* TARULLO, *supra* note 2, at 258 (noting the tension between the need to continue to regulate and the need to more fully develop alternative paradigms); CHARLES GOODHART, *How Should We Regulate the Financial Sector?*, *in* THE FUTURE OF FINANCE: LSE REPORT 165, 174-75 (2010) (arguing for a "fundamental change in the way that we all, but especially regulators and supervisors, think about the purposes and operation of financial regulation); BRUNNERMEIER, *supra* note 2, at 1 (calling for "a restatement of the basic objectives of financial regulation," and possibly a restructuring of current regulation).

[47] *See, e.g.,* Viral V. Acharya, *A Theory of Systemic Risk and Design of Prudential Bank Regulation*, 5 J. OF FIN. STABILITY 224, 225 (2009); BRUNNERMEIER ET AL., *supra* note 2, at xii; Steven Schwarcz, *Systemic Risk*, 97 GEO. L. J. 193, 193 (2008) [hereinafter Schwarcz, *Systemic Risk*]; Hal Scott, *The Reduction of Systemic Risk in the United States Financial System*, 33 HARV. J. L. & PUB. POL'Y 671, 697 (2010).

tool.[48] Capital ratio regulation is nothing new, going back at least as far as the early twentieth century.[49] Moreover, capital ratio regulation rose to global prominence in the height of the deregulatory era, with the signing of the Basel Capital Accords in the late 1980s.[50] Can recent regulatory proposals that focus on this same instrument fulfill the promise of a fundamental shift?

The answer to these two sets of questions issues in the following theses. First, the current discourse displays not a paradigm shift but rather a polarity between two paradigms of financial regulation: a dominant one based on the microeconomic notion of market failure and private risk incentives, and a possibly re-emerging one, grounded in the macroeconomic, or public, or social, purposes of finance. Second, recognizing this polarity and understanding its intellectual history will allow us to situate the emerging notions of systemic risk and macro-prudential regulation within their appropriate analytical frameworks as well as to design a clearer and, potentially, more ambitious regulatory program. Third, the regulation of capital ratios, specifically, is the key tool of regulatory policy through which to uncover and examine the defining differences between these two paradigms, both in their historical development and in their contemporary significance. This legal-institutional lens also provides insight into the ruptures and continuities of the current moment with respect to the New Deal.

This Part offers a first rough outline of the two paradigms at the heart of the argument—a "market failure" paradigm, and a "public purposes" paradigm—which compete to define the regulatory agenda of today. By paradigm of regulation, I intend something quite simple: a set of related commitments and assumptions on "why," "what" and

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[48] Key proposals include: Admati et al., *supra* note 6; ADAIR TURNER, *What do Banks do? Why do Credit Booms and Busts Occur and What can Public Policy Do about it? In* THE FUTURE OF FINANCE: THE LSE REPORT 1, 106 (2010) ("Regulatory measures are being put in place to block off last time's risk strategies, including through re-calibrated leverage and capital ratios."); GOODHART, *supra* note 46, at 174-75 (2010) (finding, nevertheless, that "[i]n a comparison of failing and more successful banks over the course of the recent crisis… capital ratios, in the immediately preceding period before the crisis event, did not show any significant difference! This suggests. . . putting much more weight on liquidity ratios, and perhaps slightly less on capital ratios, might be sensible.").

[49] The history of this institution is recounted *infra* Part III. *See generally* Joseph G. Haubrich, *A Brief History of Bank Capital Requirements in the U.S.,* Fed. Rsrv. Bank of Cleveland Econ. Comment., 1, 3 (2020).

[50] *See* TARULLO, *supra* note 2, at 19-21.

"how" to regulate. In other words, a regulatory paradigm is made up of interrelated positive analytical elements (methodological and substantive assumptions and models or pictures of the social, economic, and financial world), prescriptive elements (the purposes of policy, resting ultimately on some normative commitments or values), and legal-institutional elements (views of the available repertory of regulatory tools and of the appropriate options among them).[51] It is along these three dimensions that relatively coherent frameworks of thought congeal and perceptions form, within which disparate views of problems and solutions are implicitly or explicitly couched.[52]

The two opposing conceptions that will now be presented are juxtaposed along all three dimensions. Characterizing them briefly will serve as a guide and tentative hypothesis for the historical inquiry that follows. From the historical account, the picture that will emerge is of a fundamental shift, which began in the late 1970s, from a "public purposes" to a "market failure" outlook of regulation; an intellectual and ideological transformation so thorough, that it entirely displaced the previous way of looking at the financial universe. Considering this transformation as a paradigm shift adds, therefore, an interpretive edge to our analysis of the present. Namely, rather than seeing current regulatory proposals as solutions to a given set of pre-defined problems, it frames these proposals as interventions that either reinforce or challenge a dominant "market failure" framework. The fate of such proposals can then be understood as bound up with the ability (or inability) of the market failure paradigm to accommodate challenges to its premises,[53] following the pattern of scientific revolutions: a series of

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[51] D.T. Llewellyn notes that the "nature, role and form" of financial regulation has seen significant historical variation. This is roughly equivalent to "what, why and how." D.T. LLEWELLYN, THE REGULATION AND SUPERVISION OF FINANCIAL INSTITUTIONS 9 (1986), cited in McVea, *supra* note 39, at 414.

[52] *See* KUHN, *supra* note 18, at 10 ("Normal science means research firmly based upon one or more scientific achievements, achievements that some particular scientific community acknowledges for a time as supplying the foundations for its further practice. These achievements must be sufficiently unprecedented to attract an enduring group of adherents away from competing modes of scientific activity. Simultaneously, it was sufficiently open-ended to leave all sorts of problems for the redefined group of practitioners to resolve. Achievements that share these two characteristics I shall henceforth refer to as 'paradigms.'").

[53] *See* Discussion *infra* Part III.

incremental exceptions and modifications to a dominant paradigm that might eventually pile up to tilt the scale and topple it.[54]

A. The Market Failure Paradigm: Private Risk

In the decades leading up to the 2008 crisis, and still commonly since, financial regulation has been perceived within a market failure paradigm. Within this conception, the main rationale for regulation is that banks tend to take *excessive risk*: bank failure carries very costly negative externalities, but banks tend not to internalize these costs, while fully internalizing the potentially high gains from risky activity. The solution to market failure is, chiefly, the imposition of capital requirements on banks, thereby reducing risk-taking by ensuring that shareholders have more "skin in the game."[55]

In their *Fundamental Principles of Financial Regulation*, a group of globally prominent scholars and bankers provide a crisp articulation of this framework, indicating also its pervasiveness:

> It is perhaps banal by now to point out that the reason why we try to prevent banking crises is that the costs to society are invariably enormous and exceed the private cost to individual financial institutions. We regulate in order to internalize these externalities. The main tool which regulators use to do so, is capital adequacy requirements . . . .[56]

Textbook accounts of banking regulation often explain why banks fail to internalize these externalities through normal market mechanisms and tend, therefore, to take too much risk. They identify market imperfections that keep bank depositors from exercising market discipline on the banks. In particular, information gaps, costs, and asymmetries, as well as incentive problems, prevent bank depositors from obtaining perfect information about the riskiness of bank assets

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[54] *See generally* KUHN, *supra* note 18.
[55] *See* BRUNNERMEIER ET AL., *supra* note 2, at 3 ("Such a minimum level of capital does not provide any protection for the shareholders and bank officers, rather the reverse as it is an intentional hostage, giving them necessary 'skin in the game'.").
[56] *Id.* at xv.

and from monitoring bank management closely.[57] The tendency to excessive risk-taking is significantly exacerbated by a widely perceived moral hazard problem: deposit insurance and other government guarantees desensitize depositors to the risk of bank failure—leaving the bankers even more prone to prefer higher-risk assets.[58]

Thus, the market failure paradigm as described here also encompasses grounds for excessive risk for which the government, rather than the market, is the source. Furthermore, the basis for all market-failure analysis is a "market" model, with its implicit notion of equilibrium, in which any failure to equilibrate has to be identified and explained. This sets up a presumptive baseline of efficient markets efficiently clearing, which unites both deregulation and (re)regulation within a single paradigm.[59] The default commitment is in favor of *deepening* the marketization of financial activity by removing regulatory encumbrances (deregulation), and this default is overcome only when regulation can be justified based on identifiable externalities and other factors that explain why risk-taking would be "excessive."[60]

The prescriptive gist of the market failure paradigm commences, then, with a suspicion of regulation. The role of government is, first, to facilitate and deepen financial markets. Then, if regulation is deemed necessary, it should *mimic* the market and fill in the gaps of market imperfections without intervening in the asset choices that banks make.[61] Capital ratio requirements feature centrally in this paradigm, precisely because they are expected to reduce risk incentives while not restricting or intervening in particular asset choices that banks may make.

From this affinity between the market failure regulatory paradigm and the theoretical baseline for deregulation, we might already hypothesize that it is a product of the 1980s. In the preceding decades,

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[57] FREDERIC S. MISHKIN & APOSTOLOS SERLETIS, THE ECONOMICS OF MONEY, BANKING & FINANCIAL MARKETS 32 (7th ed. 2010); JACKSON & SYMONS, *supra* note 2, at 5-6; LLEWELLYN, *supra* note 51.

[58] BRUNNERMEIER ET AL., *supra* note 2, at 180 ("Such 100% deposit insurance, up to a now more elevated ceiling, creates moral hazard, both amongst depositors, and also amongst banks, so long as the premium paid by each bank is not accurately and immediately adjusted in alignment with such a bank's riskiness.").

[59] *See* Rubin, *supra* note 5.

[60] *Id.* at 1257 ("[I]mplicit in this market vision is the idea that regulation is an unnatural act that should only be undertaken for a specified and carefully articulated reason.").

[61] *See e.g.* TARULLO, *supra* note 2, at 25.

when banks were still heavily regulated, we would expect to find a regulatory framework with a different understanding of the issues, one that did not take the idea of rational markets as a baseline, and for which capital requirements could not offer an adequate solution. This hypothesis is supported, at least as far as capital ratio requirements are concerned, by the rise of this regulatory instrument concurrently with the precipitous decline of most other regulatory constraints on financial markets.[62] As Daniel Tarullo observes:

> There has been a secular shift in the nature of bank regulation over the past quarter century in the United States and, to a lesser degree, other financial centers. The symbiotic effects of the evolution of the financial services industry and the relaxation of many restrictions on bank activities have placed capital regulation at the center of bank regulation.[63]

While the "evolution of the financial services industry" is in natural symbiosis with the "relaxation of many restrictions", the crux of what we are about to explore is how both of these phenomena were symbiotic with the rise of capital ratio requirements as the regulatory tool of choice.[64] In particular, the risk-incentives function attributed to capital requirements, which are then seen to correct "excessive" risk-taking, highlights an central feature of the market failure paradigm, which is the single-minded focus on abstract "risk." Within this paradigm, both financial market behavior and financial regulation are modeled to revolve around a concept of risk that enfolds two important ideas. First, this view assumes that bank managers and shareholders optimize by making rational risk-return decisions as market actors, and are not otherwise particularly concerned with how their institutions fare. Second, this view assigns to the regulator a task having nothing to do with any particular use(s) of credit in the economy, but rather pertaining only to levels of undifferentiated risk. That is, there can only be more or less risk, but no question is asked as to the *kind* of risk, or the *purpose* for which risk is taken. Capital ratio requirements presents themselves, therefore, as a key lens by which to trace the history of the changing approaches to regulation.

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[62] *Id.*
[63] *Id.* at 8.
[64] Especially *infra*, Part IV.

B. The Public Purposes Paradigm

An alternative starting point to seeing finance purely in terms of a market of private calculations is to conceive it as a system that serves certain social and economic purposes, and to view regulation as a quintessentially public instrument, designed to ensure that financial markets in fact fulfill these purposes. As we will see in the historical account that follows, this outlook was characteristic of New Deal regulation of banking and finance.[65] But to understand its potential significance today, a public purposes paradigm should be conceived in broader terms than the particularities of that period, and its premises and tools should be reconstructed to form a coherent framework, indeed a competing framework, to the market failure paradigm.

At the outset, notions like "systemic risk" and "macro-prudential" regulation cannot suffice, in and of themselves, to offer an alternative.[66] Proposals that center on these notions have to be considered closely to determine whether they are, in principle, foreign to the market failure outlook, or an extension thereof.[67] But some regulatory proposals today clearly sit uncomfortably within the dominant paradigm, and reflect a concern with the public purposes of finance, not with corrections of market failure. The "Volcker Rule"—a prohibition on proprietary trading[68]—is clearly not a market-mimicking solution focusing on risk-incentives. Similarly, proposals for a tax on financial transactions inhibit trading rather than facilitate it.[69] Advocates for reinstating the sharp Glass-Steagall division between deposit-taking banks and other financial institutions cannot easily defend it within the commitment to economic efficiency via markets.[70] These developments signal a disquiet with how financial and banking activity has come to be carried out and organized, a sense that finance is no longer fulfilling its purpose, and that this skewed path that finance has taken has something

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[65] *Infra* III.B.

[66] *See* BRUNNERMEIER, *supra* note 2, at 2, 34 (discussing systemic risk and macro-prudential regulation within a market failure premise).

[67] *Infra* Part IV.

[68] *See* Scott, *supra* note 47, at 676-77.

[69] *See, e.g.,* Stiglitz, *infra* note 412, at 12 (arguing for a turnover tax that would discourage short-term trading).

[70] Legraw & Davidson, *supra* note 11 (describing how Glass-Steagall was seen to hinder competition).

to do with the 2008 crisis.[71] Such proposals are indeed met with objections couched in terms of market efficiency charging that such regulatory interventions would be *distortive*.[72]

When contrasted with the market failure paradigm, which offers a neatly-packaged model with a clear focus on one kind of regulatory instrument, proposals such as these may appear as a disconnected collection of populist, pragmatic, or ad hoc solutions lacking an organizing thread. To the contrary, this work will argue that they should be understood within a coherent alternative paradigm. The fundamental starting point of this paradigm is that financial regulation should, first and foremost, ensure the *proper functioning* of the financial sector. What is the function and purpose of credit and finance? Posing this question is itself essential. At the outset, the answer is that the function of finance is the facilitation and encouragement of productive expansion—that is, *growth*.[73] This point of departure may be a valid endpoint too, or it can open up to a more refined set of social and economic agenda.[74]

Given the current emphasis on risk as the central concept of finance and financial regulation, it is common to conceive the function of finance, too, in these terms, and assert that the 2008 crisis occurred because "the financial system failed to perform its function as a reducer and distributor of risk."[75] This risk-centered conception sees financial stability as the ultimate good of financial regulation. By contrast, the

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[71] Some of the reactions to financial turmoil focus on bankers' greed, echoing a long history of populist suspicion against banking. *See* BRAY HAMMOND, BANKS AND POLITICS IN AMERICA FROM THE REVOLUTION TO THE CIVIL WAR 54 (1957). But this reaction does not capture the distinct critique, that finance is not fulfilling its function.

[72] *See* Jenkins, *supra* note 38.

[73] *See* Lothian & Unger, *supra* note 35, at 357 (noting that finance, as it stands, "may not be able to perform its supposed goal of channeling the saving of society into productive investment [because it] is hostage to the institutional arrangements governing the relation of finance to the real economy"). *Contrast* this with the reduction of the purpose to microeconomic efficiency, *in* MISHKIN & SERLETIS, *supra* note 57, at 19 (calling financial markets "critical for producing an efficient allocation of capital, which contributes to higher production and efficiency for the overall economy.").

[74] *Infra* Part VI.

[75] Timothy Geithner & Lawrence Summers, *A New Financial Foundation*, WASH. POST, (June 15, 2009), https://www.washingtonpost.com/wp-dyn/content/article/2009/06/14/AR2009061402443.html?hpid%3Dopinionsbox1.

public purposes paradigm is not focused on stability of the financial system *per se*. Rather, its concern is with the economy as a whole and, potentially, with society as a whole. The financial system is instrumental to larger purposes. Nevertheless, as reconstructed here, this regulatory outlook does not see the focus on social and economic purposes as grounds for giving up on markets. It is firmly committed to the use of financial markets, insofar as these are useful instruments for the allocation of resources, and in light of broader goals. That is to say, the public policy paradigm remains grounded in the discursive terrain of advanced capitalism. It does not extend to a socialist abolition of private control over resources, nor does it call to nationalize the banks, do away with the stock market, pick winners, or impose a collective judgment over individual consumer choice. It is "public" in the sense that it sees significant potential in a collective ordering of the financial sphere, rather than leave it "encased"—circumscribed and subordinated to private "spontaneous" ordering via the market.[76]

These convictions must rely on a robust analytical framework. Given the current dominant position of the market failure paradigm, a re-emerging public purposes paradigm has the burden of proof in showing why freed up, competitive markets should not be expected to produce a properly functioning financial system. This paradigm distances itself from the model of rational actors and presumptions of efficient markets, beyond identifying specific market imperfections, and moves toward saying that aiming to perfect these markets is, in this context, a lost cause. This needs to be persuasively argued. Of particular importance is distinguishing between financial activity that carries its proper function and that which does not, for which two key concepts that have been advanced as drawing the right line: *speculation*, central in the regulatory discourse of New Deal[77] and, closely related and more recent, *financialization*—the rise of finance relative to other sectors.[78] For the public policy paradigm to pose a real alternative to the market failure one, these concepts have to be accorded a workable meaning.

More faith in regulation, and in meaningful categories of harmful speculation and financialization, translates into supporting regulation that is more substantive and looks beyond the veil of risk incentives. Such regulation would not be easily reduced to a single policy instrument, nor will it aspire to be so reduced. Instead, it would

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[76] *See* SLOBODIAN, *supra* note 37, at 7, 239 ("[M]arkets are not natural but are products of the political construction of institutions to encase them.").
[77] *Infra* notes 124-130 and accompanying text.
[78] *Supra* note 14 and accompanying text.

seek to tailor regulatory solutions that strike tentative balances between competitive forces and collective self-determination—between private and public ordering, or between markets and democracy. There is bound to be a plurality of such solutions, pertaining to different aspects of the system of credit and the application of its institutions to the exigencies of economic and social aims. Nevertheless, unlike the questions "why, what, and how," the question "how much" to regulate is intentionally left outside this framework of two paradigms. It is a worthy lesson of legal realism, that law always constructs even the most deregulated market, and that a larger volume of regulation does not tell us much about the balance struck between "market" and "state."

III. Capital Requirements before "Market Failure"

Capital ratio requirements are the central legal institutional lens with which this work is concerned. Tracing the history of this regulatory tool is, I argue, especially illuminating for perceiving the sharp distinction between a market failure paradigm and a public purposes paradigm, for understanding their divergent aims and premises, and for assessing their significance within the current landscape. As will be shown presently, this is due chiefly to the fact that capital requirements had historically a different aim and rationale than the now familiar idea of reducing risk incentives. Examining closely how this legal tool was perceived before the 1970s illustrates how surface similarities in the institution mask a transformation in underlying assumptions. It reveals that what is "by now perhaps banal" to scholars and regulators was once quite foreign, indeed antithetical, to the dominant way of thinking. A special place in this history is given to the banking reforms of the New Deal which, contrary to an understandable misconception, were decisively not concerned with capital ratio requirements. Understanding the reasons for this misconception provides a key to a clear account of just how profoundly our ideas of finance have transformed.

A. One Institution—Distinct Rationales

Although capital ratio requirements long predate the 1980s, it appears that the notion that they reduce risk-incentives was newly introduced only at this point. As Tarullo observes:

> Discussions of bank capital regulation dating from the 1960s and the 1970s generally omits any mention of the risk-confining role of capital requirements. How-

> ever, by the time of adoption of Basel I in 1988, the rationale was not only well developed, but emphasized.[79]

What was, then, the rationale of capital requirements in these earlier decades? Until the late 1970s, capital requirements were often described as capital "adequacy", and they were seen rather simply as a cushion for absorbing potential losses.[80] Capital, or equity–that part of bank funds contributed by shareholders—is a buffer that prevents banks from failing in the event of losses on their assets.[81] If some of a bank's loans turned out badly, capital adequacy requirements ensure that the losses would first "eat into" shareholders' holdings, staving off insolvency. This simple function of bank capital is of course commonly recognized also today.[82] But unlike today, in earlier accounts we find that this was the dominant rationale for regulators to have any regard for bank capital. Whether the purpose was to prevent failure *per se* (protecting banks) or to have a "first line of deposit guarantee" (protecting depositors), either way the idea was capital as cushion.[83] In her 1969 review of the development of capital requirements, Sandra Ryon writes:

> [I]t is the consensus of writers on banking that the ultimate strength of a bank rests in its net worth or capital funds. It is the unique function of capital to absorb unusual and sustained losses, which bank management cannot reasonably be expected to

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[79] TARULLO, *supra* note 2, at 16 n. 4.

[80] *See* Sandra Ryon, *History of Bank Capital Adequacy Analysis* 1 (Fed. Deposit Ins. Corp. Working Paper No. 69-4, 1969).

[81] Haubrich, *supra* note 49, at 1 ("As such, capital can act as a buffer: If the loans don't pay off, the value of the equity gets reduced, but there will [might?] still be enough assets to pay off the depositors so the bank doesn't get closed down.").

[82] *See e.g.,* Allen N. Berger et al., *The Role of Capital in Financial Institutions*, 19 J. BANKING & FIN. 393, 418 (1995) ("The 'effective' regulatory capital requirement is difficult to measure because it may include a buffer above the regulatory capital minimum to allow the bank . . . to cushion the effects of unexpected negative shocks. . .").

[83] *See* Haubrich *supra* note 49*,* at 3 ("The early capital requirements also took the idea of capital as a buffer stock very seriously, as equity at times had double, triple, or even unlimited liability . . . That meant that if the bank suffered losses, the equity holders would have to pony up more money.").

> anticipate, so that a bank may remain solvent and re-establish its operational momentum.[84]

"Capital-as-cushion" was thus the historically dominant approach to capital regulation. The clearest indication that this conception was not linked with an idea of risk incentives is the fact that, in the very initial formulation of capital requirements, they were not imposed as ratios, but rather as dollar amounts of *minimum capital* needed to obtain a bank charter.[85] Known as "static legal minimums," the required amounts were either fixed, or (more commonly) varied according to the size of the population that the bank was intended to serve.[86] This was true of the National Banking Act of 1864, the laws of most states and the Federal Reserve Act of 1913.[87] Such static amounts reflect an early and, for us, somewhat crude approach to the function of bank capital.

This is not to say that in this earlier period it was considered irrelevant that bank shareholders stake some of their own funds, as a way of securing their concern for the fate of the enterprise. Chartering legislation required that bank be funded also by assets that shareholders would risk losing, surely serving to ensure such concern. It is reasonable to suppose that this soft version of a risk-incentives function has always been understood by governments and businessmen alike. However, the larger the financial institution became, the smaller the static capital minimums were in proportion to the banks' assets, and indeed to the other assets that the bank shareholders held elsewhere.[88] Thus, the purpose of static legal minimums cannot be meaningfully interpreted as a matter of risk incentives.

Bankers and banking authorities began using rough *ratios* as guidelines in the first and second decades of the twentieth century, when periods of expansive bank lending translated into an observed relative

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[84] Ryon, *supra* note 80.
[85] *See e.g.,* Haubrich, *supra* note 49, at 2.
[86] *See id.*
[87] The National Bank Act of 1864 required $50,000 minimum capital for a bank in a town of a population of 6,000 or less, $100,000 for a population between 6,000 and 50,000, and $100,000 if the population was 50,000 or more. *See* Nat'l. Bank Act of 1864, 38th Cong. § 7 (1864).
[88] *See* Dean Corbae & Pablo D'Erasmo, *Capital Buffers in a Quantitative Model of Banking Industry Dynamics*, 1, 24 (Fed. Res. Bank of Phil. Working Paper No. 21-24, 2021).

shrinking of the capital cushion.[89] By the end of World War I, capital ratios were approximately twelve percent, less than half of what they were at the end of the nineteenth century.[90] Bank authorities at the national and state level began looking for a rough minimum ratio of ten percent capital-to-total-deposits as indicative of bank strength.[91] The ten percent ratio endured over time, though observers noted that there appeared to be "no scientific basis for this particular ratio; it is simply a good round decimal, easy to calculate at a glance."[92] This ratio was passed as law in California in 1909, and in other states in the 1920s.[93] The Comptroller of the Currency unsuccessfully recommended that Congress impose it on national banks, and thus these ratios continued to occupy a relatively informal administrative status.[94]

B. New Deal Financial Reforms: Public Policy Regulation

From our current perspective, it is tempting to believe that New Deal reforms must have imposed capital requirements on banks, as an effective way to make bankers take less risk. It is widely known that the Roosevelt Administration was handed a shaky banking system, and

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[89] Berger et al. attribute the steady decline of actually observed capital ratios from the 1840s (about 50%) to the 1980s (6-8%) to the increased stability of banking achieved by other legislative and institutional means, which made it less necessary for banks to hold big capital buffers. Allen N. Berger et al., *supra* note 82, at 401.

[90] Tynan Smith & Raymond Hengren, *Bank Capital: The Problem Restated,* 55 J. POL. ECON. 553, 557 (1947).

[91] Note that using total deposits as the denominator makes the ratio requirement less stringent than the capital-to-asset ratios that were to be developed later. ROLAND ROBINSON, THE CAPITAL-DEPOSIT RATIO IN BANKING SUPERVISION 44 (1941).

[92] *Id.* at 41.

[93] *Id.* at 42 ("The capital-deposit ratio, therefore, has been applied only to going banks and has been largely a rule-of-thumb standard used by supervisors . . . The origin of the one-to-ten standard is obscure. The earliest citation of this standard discovered appears in the California State Bank Act of 1909.").

[94] *Id.* ("In 1914 John Skelton Williams, then Comptroller of the Currency, recommended that national banks be prohibited by law from holding deposits in excess of ten times unimpaired capital and surplus. He also suggested a one-to-eight standard for possible consideration. . . [N]o action was taken on this recommendation. . .]").

managed to stabilize it.[95] Because deregulation has become, for us, the usual suspect in causing or at least aggravating the recent financial crisis, contemporary proponents of capital requirements as the solution to financial instability tend to see it as harkening a return to the New Deal. Paul Krugman provides a statement representative of this view:

> The New Deal system of financial regulation really had two main parts: deposit insurance and bank capital requirements. The first ruled out bank runs; the second reduced the incentive for banks to take advantage of guarantees to gamble with other peoples' money.[96]

Learning that, in fact, New Deal banking reforms had nothing to do with capital requirements, is therefore as important as it is surprising. What follows aims to unearth this history, to demonstrate that it is indeed mistaken to think that the banking reforms of the New Deal dealt with excessive leverage and excessive risk and, thereby, to diagnose the misunderstanding as an anachronistic projection of current market failure premises onto the paradigmatically different outlook of the New Deal. As we will now see, that different outlook was decidedly public and macroeconomic, and its concern was to ensure the use of credit for productive rather than speculative purposes.

This complex picture needs to delineate properly the precise place of capital ratios in the understanding of contemporaries. To be sure, it would be mistaken to claim that, in the wake of the banking crisis of the early 1930s, capital ratios were simply of no concern to anyone. In fact, as it was readily apparent that capital ratios had generally trended downward when compared with the figures of traditional nineteenth century banking, this led some to the view that shrinking capital cushions played a role in the banking crisis.[97] Joseph Norton writes that

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[95] *See generally,* ARTHUR SCHLESINGER, THE COMING OF THE NEW DEAL 4 (1957); David M. Kennedy, *What the New Deal Did*, 124 POL. SCI. Q. 251, 251 (2009) [hereinafter David Kennedy].

[96] Krugman, *supra* note 7. See *also* ROBERT KUTTNER, THE SQUANDERING OF AMERICA (Knopf 2007) (a more generalized account of the destructive force that economic deregulation had on the previously successful model that the New Deal put in place). Others make similar assumptions more implicitly.

[97] *See e.g.,* William Paton, *Shoestring Banking,* CERTIFIED PUB. ACCT. 333, 336 (June 1933) (finding a fourteen percent ratio of capital and surplus to total funds to be "demonstrated by experience to be entirely inadequate" and that the insufficient capital "has been primarily responsible" for many of the bank failures).

"regulatory concern for bank capital adequacy . . . arose as a result of the collapse of the U.S. banking system in the 1930s."[98] However, this concern with capital adequacy was not widely shared. As Norton observes, "the consensus of scholarly research is that that the level of bank capital has not been causally related to the incidence of bank failure."[99]

The Banking Act of 1933 provided an opportunity to, at the very least, give formal status to the rough ten percent ratio already used by administrative agencies, but even this did not occur. Citing from the Congressional Record, Roland Robinson reported the following exchange from the deliberations leading to the Banking Act:

> Senator Tydings asked Senator Glass on the floor of the Senate whether or not he would favor a mandatory capital-deposit-ratio. Senator Glass's reply was noncommittal, and the suggestion was dropped.[100]

While this omission in the 1933 Act did not go uncriticized,[101] capital regulation remained excluded from the main banking reforms, and the only mention of capital ratios in New Deal legislation occurred in the Banking Act of 1935, which simply listed "adequacy of capital structure" among the factors to be considered in the admission of banks to the FDIC system.[102] Accounts that imagine the New Deal as especially concerned with capital ratios seem, therefore, to force the current framework into this incongruous past.[103]

But before considering why the New Deal disregarded what seems like a promising regulatory possibility, it is worth noting briefly

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[98] *See* J.J. Norton, *Capital Adequacy Standards: A Legitimate Regulatory Concern for Prudential Supervision of Banking Activities?*, 49 OH. ST. L. J. 1299, 1317 (1989).
[99] *Id.* at 1316.
[100] ROBINSON, *supra* note 91, at 43.
[101] Preston, *supra* note 11, at 605 ("The new law on this point is not a remedy. . . . The typical bank has a ratio of capital to deposits of approximately 1 to 10. This has been a constantly declining ratio here and abroad. Complete elimination of double liability should be accompanied by a gradual increase in capitalization.").
[102] Banking Act of 1935, Pub. L. No. 74-305, §101(g), 49 Stat. 684 (codified as amended at 12 U.S.C. §228). *See also* Haubrich, *supra* note 49, at 3 (Noting that new Deal legislation merely listed "adequate capital as a prime criterion for deposit insurance eligibility.").
[103] Krugman, *supra* note 7 and accompanying text.

what New Deal reforms did do to make banking and finance safer, and what the perceived concerns were.[104] The central problems concerning the *stability* of the banking system were threefold. First, liquidity: it transpired that liquidity-driven panics were not averted by the founding of the Federal Reserve in 1913.[105] Second, corrupt or semi-corrupt practices: the Pecora hearings revealed corruption and conflicts of interest in the financial system to be much more insidious than previously imagined.[106] Third, the argument of "cut-throat competition" held sway: competition under low standards of regulation, as well as the need for small banks to cover overhead expenses, resulted in banks offering high interest rates on deposits which they could only try to meet by acquiring risky/speculative assets.[107] Further, the dual-system of federal and state chartering, which had been under attack at least since 1865,[108] was seen by many as exacerbating the problem by causing regulatory races to the bottom and forcing national banks (and state-banks that were members of the Federal Reserve System) to compete

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[104] Depository institutions are generally believed to have become significantly more stable as a result of New Deal reforms, as is evidenced by the very few incidences of bank failures between the 1935 and 1970. *See* MISHKIN & SERLETIS, *supra* note 57, at 246.

[105] HELEN BURNS, THE AMERICAN BANKING COMMUNITY AND NEW DEAL BANKING REFORMS 1933-1935 6 (1974) ("In the financial centers, runs on banks accelerated, hoarding of gold and currency resulted, and even the strong banks were dragged down by the cumulative impact of the panic.").

[106] *See id.* at 78 ("In February as bank after bank closed, testimony was given under the relentless probing of Ferdinand Pecora, newly appointed counsel to the Senate subcommittee. The revelations made shocked the public. Well-known bankers had engaged in unsavory practices; bad judgment, irresponsible personal gain, and betrayal of the public trust characterized their activities.").

[107] *See The Glass-Steagall Banking Act of 1933*, 47 HARV. L. REV. 325, 325-26 (1933) ("Division of banking into two systems, national and state, has been slowly undermining the credit structure. Unbridled competition made the banking business proper one of the least prosperous in the country in the boom era . . . . A general lowering of banking standards brought disaster.").

[108] This was the year when Secretary of Treasury Chase sought to encourage federal chartering under the National Banking Act of 1863 and to drive state banks out of existence by raising substantially the tax on their issued notes. Chase himself later confirmed the constitutionality of his own move, as Chief Justice of the Supreme Court in *Veazie Bank v. Fenno,* 75 U.S. 533 (1869). State banks were struck a severe blow but regained their strength in the 1890s. *See also* HAMMOND, *supra* note 71, at 54.

with more laxly regulated state banks.[109] This competition led to very low profitability of core banking activities and encouraged speculation across the board.[110]

The Banking Act of 1933, popularly referred to as the Glass-Steagall Act,[111] tackled all three of these dimensions. After the immediate response to the liquidity panics that shut down the banks upon FDR's entry into office, the Act of 1933 established federal deposit insurance.[112] This effectively socialized the problem of managing bank liquidity and has been widely recognized as successful.[113] Public outrage contributed to the boldness of the regulatory response to the problem of corruption, addressed in the Glass-Steagall portion of the Act.[114] These four sections consisted chiefly of the prescription of a sharp institutional separation between "commercial banks" (depository institutions) and non-banks (which were allowed to engage in "investment banking" activities), and the imposition of strict prohibitions on interlocking directorates.[115] Finally, the Act's prohibition on the payment of interest on demand deposits aimed to significantly reduce the competition for deposits.[116]

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[109] *See supra* note 107.

[110] For a historical account that claims that New Deal reforms emphasized the concern with the instability of small banks, *see* BURNS, *supra* note 105. For additional summaries of the crisis and the Banking Act of 1933; SUSAN E. KENNEDY, THE BANKING CRISIS OF 1933 203-224 (1973) [hereinafter SUSAN E. KENNEDY]; and *The Glass-Steagall Banking Act*, *supra* note 162, at 326.

[111] The Glass-Steagall provisions are only a portion of the Act. Banking Act of 1933, Pub. L. No. 73-66, §16-20, 48 Stat. 162.

[112] Banking Act of 1933 §12(B)(a).

[113] *See* John Kareken & Neil Wallace, *Deposit Insurance and Bank Regulation: A Partial Equilibrium Exposition*, 51 J. BUS. 431, 431-32. While deposit insurance is considered a central—and typical—component of the New Deal reforms, it had been tried before in a number of several states (and failed) and, in fact, was almost vetoed by President Roosevelt. *See Roosevelt Warns of Bank Bill Veto; Sharply Opposes Temporary Deposit Insurance in Letters to Glass and Steagall. Measure Is Held Doomed*., N.Y. TIMES, (June 6, 1933), 1.

[114] *See* BURNS, *supra* note 105, at 78 ("In February as bank after bank closed, testimony was given under the relentless probing of Ferdinand Pecora, newly appointed counsel to the Senate subcommittee. The revelations made shocked the public.").

[115] David Kennedy, *supra* note 95, at 255; *The Glass-Steagall Banking Act of 1933*, *supra* note 107, at 326-28.

[116] Banking Act of 1933 §11(b).

The question remains, then, why capital requirements were not seen as at least one of the tools to curb risky practices and to stabilize the banks. This has both a simple and a complex answer.

The simple answer is that it would have made little sense to impose capital requirements in a shrinking economy.[117] Indeed, during the slump years from 1929 to 1933, a process of *de facto* "deleveraging" had taken place: while bank capital was hit hard, bank assets were shrinking even more rapidly, such that actual capital ratios rose steadily to around sixteen percent by 1933.[118] This capital ratio was very high even in those days, and raising it higher would have resulted in even less lending, further slowing the economy.[119]

The complex answer begins with the understanding that the dilemma posed by capital requirements—between enhancing stability and economic stimulus—underscores the deeper tension that characterizes banking and credit in a capitalist market economy. [120] The more bank lending increases, which encourages economic activity, the less stable and more prone to crisis banks become. Bank credit creation can be thought of, then, as an expression of faith in a future increase in productivity, one that may be self-fulfilling but which also potentially exacerbates vulnerability. It is useful, therefore, to understand the task

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[117] Indeed, this is a problem today. *See* BRUNNERMEIER ET AL., *supra* note 2, at xii ("[T]he multiple on capital charges rises the more credit expansion exceeds this target. The purpose of this capital charge is not to eliminate the economic cycle . . . but to lean against the wind and ensure that banks are putting aside an increasing amount of capital in an up-cycle when currently available risk measures would suggest that they can safely leverage more. This extra capital can then be released when the boom ends and asset prices fall back.").

[118] Smith & Hengren, *supra* note 90, at 558 ("The ensuing banking difficulties were accompanied by a shrinkage of assets at a more rapid rate than the decline in bank capital, with the result that the ratio rose to 16 per cent in the middle of 1932").

[119] In a system of fractional reserve banking, the process of credit creation is, other things being equal equivalent to a shrinking capital ratio, and vice versa. *See id.* at 557-58.

[120] *See* TARULLO, *supra* note 2, at 8 ("[T] he setting of bank capital requirements involves a trade-off between financial stability and moving capital to productive uses through the economy."). *See* Wesley Lindow, *Bank Capital and Risk Assets*, 1 NAT'L BANKING REV. 29, 29 (1963) ("One of the subjects most likely to engage the attention of bankers during the next ten years is the amount of bank capital that will be needed to support the expansion of bank credit in a growing economy and the twin question of how such capital should be provided.").

of the New Deal in terms of meditating this tension, rather than as concerned with stability alone.

Framing the New Deal's task in this way underscores two additional points. First, the response to the banking crisis of 1933 cannot be entirely severed from overall New Deal measures that overhauled the US economy, with their collective aim of getting out of the Depression.[121] Banking and financial regulation in the New Deal was couched in macroeconomic considerations going beyond the *stability* of the financial system. These regulations were linked with credit policy, which was tied to industrial policy, and they pertained also to monetary policy, before it was severed from fiscal policy.[122]

Rather than an abstract concern with excessive risk and its relationship to the leverage of risk-taking firms, the New Deal should be understood as being concerned with economy-wide credit expansion and with identifying how that could be encouraged simultaneously with restoring stability. This required differentiating between credit expansion that aided the economy and credit expansion that exacerbated instability. Measures were devised, therefore, to formulate and implement a government *credit policy.*[123] As importantly, legislation was passed that aimed at reducing the use of credit for speculative purposes.[124]

The imposition of restrictions on "margin trading" best illustrates the issues at stake. Found in the Securities Exchange Act of

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[121] *See generally* SCHLESINGER, *supra* note 95 ("The first priority was the banking system. Before anything else could be done, it seemed imperative to clear the financial arteries of the economy.")

[122] Laidler points out that the policy discourse of the New Deal did not conceive of a sharp division between fiscal and monetary policy. David Laidler, *Meltzer's History of the Federal Reserve*, 41 J. ECON. LITERATURE 1254, 1264 (2010). This separation would also start developing in the 1970s, with the introduction of monetarist conceptions that undermined the need for fiscal policy. The turn to "active" monetary policy, combined with the rise of the corporate finance conception of banking regulation, resulted in the removal of the macro issues tied with bank credit expansion from the regulation of banks themselves. Until then, the regulation of banks was intimately tied with macro-economic purposes.

[123] *See infra* notes 125 to 128 and accompanying text.

[124] *See e.g.,* SUSAN E. KENNEDY, *supra* note 110, at 210-11 ("The Federal Reserve System also received authority to restrict the use of bank credit for speculation . . . now each Federal Reserve bank had to keep informed about loans and investments of member banks to supervise use of bank credit and prevent its falling into speculative channels.").

1934, margin requirements limit the proportion of stock trading that may be carried out with borrowed money.[125] In current terminology, this statute limits the leverage of stock market transactions. However, the theory behind the bill was not at all framed in terms of leverage and its relationship to risk. Instead, the purposes were described in terms of the economy-wide credit priorities, and the need to direct credit away from speculation.

The House Report accompanying the Securities Exchange Act of 1934 expresses this perspective unambiguously. The report sets out the "underlying theory of the bill with respect to control of credit."[126] Within that theory, it emphasizes the need for a "general national credit policy" that ensures a "balanced utilization of the Nation's credit resources in commerce, industry and agriculture."[127] It states that the purpose of the bill is to "[reduce] the *aggregate amount* of the nation's credit resources which can be directed by speculation into the stock market and out of other *more desirable uses* of commerce and industry."[128]

Similarly, the Financial Trade Commissioner James M. Landis, appearing before the Economic Club of Chicago in early June 1934, gave the following explanation, titled "Speculative Credit Control":

> The . . . important objective of the Stock Exchange Bill is to create some adequate mechanism for the control of credit for speculative purposes. To this end it entrusts our existing agency of credit control, the Federal Reserve Board, with . . . the power to control margin requirements . . . devised to check tendencies to excessive speculation.[129]

The notion that overexpansion of bank credit fuels speculation has long and protracted roots in the history of banking and monetary thought.[130] For our purposes, it is sufficient to note two things. First,

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[125] H.R. REP. NO. 1383, at 7 (1934).
[126] *Id.*
[127] *Id.*
[128] *Id.* at 8 (emphasis added).
[129] *Landis Explains Finance Control: Text of Portion of His Chicago Address Dealing with Stock Control Act*, WALL ST. J., June 11, 1934 at 5.
[130] This idea featured centrally in early twentieth-century discussions of fractional reserve banking, whereby quantitative questions of money supply

New Deal reforms rendered the concept of "speculation" a workable category that margin requirements could curb, whereas earlier regulators considered this untenable.[131] Second, that the "fueling" of speculation by excessive financial expansion is importantly different from the notion linking leverage and risk incentives. While the former is a macroeconomic concern that draws a line between useful and harmful uses of credit, the latter is a microeconomic analysis of the capital structure of individual firms and their impact on their calculations. This difference confirms the more general point that New Deal financial reforms were an archetype of financial regulation within a public policy paradigm. The materials reviewed so far indicate clearly that the issues were not conceived within a framework of market failure, but through a broader lens concerning the role of finance in the real economy, and viewing the role of government as guarding and fostering the link between the two.

C. Role and Significance of Capital Ratios 1930–1970

Though not a major concern nor federally legislated as part of the New Deal, throughout the 1930s and ensuing decades, banking authorities regularly continued to refer to capital adequacy and capital ratios, and substantially developed and refined them as tools of bank supervision. As we will see, however, their importance on the national level remained minor until the 1970s. To understand the reasons for this relative insignificance we should take account of the crucial observation that capital ratios never assumed in this period a risk-confining rationale,[132] as well as, more fundamentally, that at the time bankers were not assumed to be engaged in rational risk calculations vis-à-vis

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were seen as interlinked with the quality of bank credit. *See* J. Laurence Laughlin, BANKING REFORM, 21 (1912) (arguing that large reserve requirements, restricting credit expansion "*would stop any loan demand for speculative purposes"*) (emphasis added). *See generally* HAMMOND *supra* note 71, and the explanation offered *supra* note 123.

[131] *See especially* John E. Tracy and Alfred Brunson MacChesney, *The Securities Exchange Act of 1934*, 32 MICH. L. REV. 1025, 1034 (1934) (discussing the rejection by the Hughes Commission on 1909—commissioned to investigate speculation after the 1907 panic—of the proposal to impose margin restrictions on stock trading. While commissioners expressed dismay with "gambling" in the stock exchange, they found it "impractical to draw a line between the sheep, investment, and the goat, speculation, since the form of the two is identical.").

[132] *See* TARULLO, *supra* note 2, at 16 n. 4.

the prospect of their institutions failing. We will now consider these historical claims.

The Federal Deposit Insurance Corporation was especially active in churning out increasingly elaborate, technically formalized methods for assessing bank "safety and soundness," including different formulae for assessing capital adequacy.[133] By 1939, the FDIC revised the customary capital-to-deposit ratio and opted for the capital-to-*assets* ratio that is familiar today (with the 10 percent figure continuing as lodestone).[134]

With the onset of the Second World War, concern over capital ratios was all but dismissed, as it became imperative that banks lend freely to the U.S. government.[135] Thus, in 1942, regulatory authorities issued a joint statement assuring banks that "no supervisory action would be taken against banks increasing their holdings of Government securities,"[136] with the result that, by the end of 1944, average bank capital-to-asset ratios dropped to 5.9 percent.[137] After the War, regulators turned their attention to this decline, and what constituted "adequate" capital became a regular topic of scholarly and bureaucratic attention.[138]

It is arguably this post-war phenomenon of very low capital ratios that were nevertheless considered unproblematic—lending to the government was thought both necessary and relatively safe—that led to the development in the 1950s of "risk adjusted" capital ratios, using "risk-assets" rather than total assets as the relevant denominator.[139] Initially, "risk assets" were all assets except those considered risk-free: cash and government bonds, which were assumed never to

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[133] Ryon, *supra* note 80.

[134] *Id.*, at 7 (citing the 1939 Annual Report of the FDIC).

[135] FDIC, A BRIEF HISTORY OF DEPOSIT INSURANCE IN THE UNITED STATES 41 (1998), at 40 ("Large-scale war financing of the federal government was the primary factor contributing to the rise in bank assets.").

[136] Ryon, *supra* note 80, at 8 (citing the 1945 Annual Report of the FDIC).

[137] FDIC, *supra* note 135, at 34 ("Between 1934 and year-end 1944, the aggregate capital-to-assets ratio of banks had declined from 13.2 percent to 5.9 percent. Despite the decline in capital ratios, bank examiners were not particularly critical of bank behavior because of the quality and liquidity of bank assets.").

[138] Ryon, *supra* note 80.

[139] This idea was probably first formalized in a study funded by the Illinois Bankers Association, *see* GAYLORD FREEMAN, THE PROBLEMS OF ADEQUATE BANK CAPITAL 11-12 (1952) (explaining that the amount of capital required depends on the degree of risk and the amount of assets subject to that risk).

depreciate.[140] Thus capital ratio standards would not interfere with the ongoing bank provision of government debt.[141] The ratio that was then considered appropriate was 1:6 of capital to risk assets.[142] The Federal Reserve District Bank of New York further improved the system by developing specific risk-asset categories with assigned risk-weights, seeking to provide a more refined indication of bank safety.[143] These risk categories were then adopted and further refined by the Federal Reserve Board in 1956.[144] Debates and regulatory changes also emerged regarding the nominator side of the ratio.[145] These asked what should properly count as capital for the purpose of capital adequacy ratios—all forms of stock? Some forms of subordinated debt? Similar efforts to refine risk-adjusted capital ratios continued into the 1960s.[146]

On the whole, however, this instrument did not have a great impact at the national level, since at that time national banks were generally under the supervisory ambit of the Comptroller of the Currency.[147] Unlike the Federal Reserve, the Comptroller's approach

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[140] Especially while government bonds were "pegged" by the Fed. *See* Lindow, *supra* note 123, at 33 ("As banks emerged from the war with inflated holdings of Government obligations, risk less from a credit point of view, the focus on capital adequacy was shifted to the amount of capital in relation to "risk assets"; i.e., assets other than cash and holdings of U.S. Government securities.").

[141] *Id*.

[142] Norton, *supra* note 98.

[143] *Id.*

[144] Haubrich, *supra* note 49, at 3.

[145] *Id*. ("Furthermore, the different regulators had different definitions of what counted as capital.").

[146] E.g., Lindow, *supra* note 123, at 32 (discussing the Comptroller's influence and exercising control over national banks); Richard Cotter, *Capital Ratios and Capital Adequacy*, 3 NATI'L BANKING REV. 333, 333 (demonstrating that capital-to-total-deposit ratio is a bad predictor of bank safety for 1921-1933 data); ROLAND ROBINSON & RICHARD PETTWAY, POLICIES FOR OPTIMUM BANK CAPITAL (Ass'n of Rsrv. City Bankers, 1967). A thorough historical survey conducted for the FDIC refers to these works and many others; *see* Ryon, *supra* note 80.

[147] At the time, state authorities and the FDIC were the important regulatory bodies for state banks, and the Comptroller of the Currency, not the Fed, was the primary supervisor of national banking institutions. National Banking Act of 1864, 12 U.S.C. §38. This was to change only in the 1970s as, with the rising significance of the bank holding company form, an increasing number of banks came under the supervisory authority of the Federal Reserve, as

was to treat capital ratios as a rough, and not especially helpful, instrument.[148] The Comptroller considered a 1:7 ratio of capital to "gross loans" to be generally satisfactory, and it focused more on a case-by-case supervision of banks, considering also that the "adequacy" of capital for any bank depended on that institution's overall safety.[149] In turn, bank safety was assessed by the quality of management as seen through the bank's earnings history.[150] Many bank supervisors, and especially bankers themselves, continued to use the ten percent ratio of capital-to-total-deposits.[151] Bankers argued, predictably, that the evaluation of capital adequacy is a matter of judgment that can only be made by bank managers and which defies mathematical formulation.[152]

Significantly, throughout this entire period the notion that capital requirements would reduce risk incentives was entirely absent. Instead, the rationale we find in these discussion reflects the old notion of capital as cushion. Crucially, the use of risk-*adjusted* ratios does not amount to a concern with risk *incentives* as such. Rather, this mechanism was originally conceived to fine-tune the size of the required cushion according to the riskiness of the assets held by a particular institution. While this can be interpreted as incidentally encouraging the banks to hold less risky assets, the functioning of such an incentive mechanism depends entirely on the assumption that banks would otherwise prefer riskier assets.

This assumption was generally not made before the 1970s. Indeed, at least some observers espoused precisely the *opposite* analysis

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mandated by the Bank Holding Company Act of 1956. Bank Holding Company Act of 1956, 12 U.S.C. §1841.

[148] Ryon, *supra* note 80, at 4-5; Roger Tufts & Paul Moloney, *The History of Supervisory Expectations for Capital Adequacy: Part I (1863–1983)*, MOMENTS IN HISTORY (Off. Comptroller Currency), June 13, 2022, at 10 (quoting Comptroller's Manual, Office of the Comptroller (Mar. 1973)) (noting that "ratios alone are not conclusive, and they always must be integrated with all other pertinent factors.").

[149] Roger Tufts & Paul Moloney, *supra* note 148 (listing the eight factors of capital adequacy used by the Comptroller in the 1960s: "[t]he quality of management, the liquidity of assets, the history of earnings and the retention thereof, the quality and character of ownership, the burden of meeting occupancy expenses, the potential volatility of deposit structure, the quality of operating procedures, [and] the bank's capacity to meet present and future financial needs of its trade area, considering the competition it faces").

[150] *Id*.

[151] Ryon, *supra* note 80, at 6 (citing the statistical work of William Staats).

[152] *Id*. at 24.

of the relationship of capital to risk-taking, compared with that prevalent today. The contrast is so striking that it is worth quoting at length two clear examples:

> Bank supervisors also recognize additional benefits to be derived from the maintenance of an adequate capital backlog. Banks with relatively large amounts of capital *can afford to take greater risks* and thus better serve the credit needs of the community than can those operating on slim margins.[153]

> Another aspect of the question relates to the effect of declining bank capital ratios on the willingness of banks to assume risks. Presumably this willingness would be reduced to the extent that banks regarded their capital as inadequate, with the practical result that concerns presenting the higher degrees of risk would tend to be eliminated from the company of eligible bank borrowers. At least the terms on which such firms might borrow would tend to become more severe. Thus, any tendency reducing banks' willingness to take risks would seriously weaken the forces making for economic growth.[154]

Such an analysis would be unimaginable today, for four reasons. First, it perceives banks to be conservative institutions, with a strong inclination toward protecting their institutions from failure, rather than rational calculators (or irrational risk-lovers) vis-à-vis the prospect of their own institutions failing. Second, it espouses a notion of risk that today would be considered naïve or pedestrian, failing to reflect the now-familiar notions of risk-return correlations. Third, it suggests that regulations should encourage banks to take more risk, implying that a concern with stability was not paramount. Fourth, it ties capital requirements and risk-taking directly to a concern with ensuring credit is available for worthy projects in the real economy, thus framing capital adequacy in the context of economic growth.[155]

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[153] Smith & Hengren, *supra* note 90, at 556 (emphasis added).
[154] DURAND, *supra* note 23, at x.
[155] *See* Smith & Hengren, *supra* note 90, at 561 (noting that the comptroller's solution to bank capital concerns in the 1940s was to "urge[] banks to

This dramatic difference in perception and theory reflects what clearly was a different reality: the banking business of the post-New-Deal era, prior to the age of deregulation. A model of rational calculation, even if it were conceivable in theory, would have made little sense during that period, given that bankers operating under tight regulatory constraints and limited competition could afford to be cautious and conservative. Krugman alluded to this important distinction, stating that, in the New Deal:

> [C]apital requirements actually worked better than they really should have, because of a third factor: limited competition meant that banks had a large franchise value, which they were reluctant to endanger.[156]

Severing Krugman's statement from the historical claim that New Deal regulation imposed capital requirements (which, as we saw, was not the case), we should distill from it the important insight that capital ratios operate differently in varying conditions of competition. In turn, we can see why changes in the regulatory and competitive environment would go hand in hand with different assumptions about the motivational impact of capital ratios. As we discuss next, the theoretical assumption that increased capital ratios reduce risk incentives in fact arose simultaneously with the deep structural changes in the industry itself.

IV. The Rise of the Market Failure Paradigm

The profound historical transformation in financial regulation that occurred between 1970-2000 can be illustrated by two quotes regarding "excessive risk," the first by deregulation champion Allan Meltzer in 1967, and the second, seemingly diametrically opposed statement, from Jackson and Symons's 1999 textbook on financial regulation:

> The general argument for regulation based on overexpansion or "excessive risk taking" by bankers

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examine the adequacy of their existing capital structures . . ." to ensure that lending sufficiently increases for the "peacetime economy").

[156] Krugman, *supra* note 7.

> appears to rest on a misapplication of economic theory.[157]
>
> [T]he principal justification for regulation in the field concerns the tendency of financial intermediaries to take excessive risks, if not severely restrained by governmental controls.[158]

These conflicting ideas on "excessive risk" are, as we will presently see, best understood as two phases within a single "market failure" paradigm, a paradigm that reinvented and privileged capital requirements as the most important, most sensible and most legitimate tool of regulatory policy.

When and how does this paradigm emerge and take hold? In this Part we will see how, by the late 1970s, two sets of interwoven transformations had occurred, one in political economy and the other in ideology. In political economy, this was a momentous legal and institutional shift toward deregulation, premised on the ambition to remove all the limitations of the New Deal. This shift rediscovered and emphasized the power of markets and competition, as well as the demands of global competitiveness (that is, maintaining the profitability of national firms in the global financial environment).[159] A rising intellectual framework, the "modern theory of finance," nourished this change with a new analysis centered on "risk." This movement met with ever-increasing success as many New Deal restrictions were increasingly removed and seen as irrelevant, as relics of a bygone era.

Central to these intellectual and institutional processes, was the undeniable fact that, simultaneous with deregulation, repeated waves of financial failure wrought havoc in the financial system, especially in the 1980s. These breakdowns rendered a simple-minded market-

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[157] Allan Meltzer, *Major Issues in the Regulation of Financial Institutions*, 75 J. OF POL. EC. 482, 484 (1967).

[158] JACKSON & SYMONS, *supra* note 2, at 5-6.

[159] Note the tension between the two meanings of 'competition' as used in this period: *competitiveness* vis-à-vis foreign banks or non-banking financial firms, meaning ensuring the viability and profitability of banks, versus *competition*, in the immediate sense of creating a market where small firms are price takers without economic power, fighting each other and spurring each other to improve services and products and reduce prices. Common to them is a notion that the market should be left alone. *See* Part IV.A.

fundamentalism publicly untenable.[160] The regulatory paradigm that ensued, therefore, resulted from a mediation of the tension between the market imperative and the perception that financial markets cannot responsibly be left to themselves. This mediation characterizes the new approach, from its inception and throughout its development.

A. Deregulation in the 1970s: Law and Ideology

In July of 1978, the University-of-Chicago-based *Journal of Business* published a symposium on bank regulation.[161] The chair Samuel Chase opened by considering the remarkable growth in the banking industry and the significant changes in its structure and character.[162] In a statement that illuminates the changed landscape financial regulation in the 1970's, Chase declared that, after years of limited scholarly attention to the issue of financial instability, "the regulation of risk in banking has become a complex phenomenon in search of a theory."[163]

In what sense had "risk in banking" become more complex than it had been previously? What had changed to require a theory where none had existed before? During the 1970s, banking activity was fundamentally reorganized and dramatically consolidated.[164] This reorganization generated pressures for, and was reinforced by, a gradual erosion of the New Deal regulatory apparatus. Supporting these shifts was an ideological sea change in favor of "liberalization," and a growing influence of theories that supported this inclination. "Risk" was fastened as the organizing concept with which to understand the issues at stake and assess policy alternatives. Forming the backdrop to Chase's declaration, these changes prepared the ground for the revolutionary theoretical move toward capital requirements that was to take place in the pages of the Journal of Business's 1978 symposium.

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[160] Except to very few commentators. *See e.g.,* John H. Kareken, *Federal Bank Regulatory Policy: A Description and Some Observations*, 59 J. OF BUS. 3, 5 (1986), (arguing that there "would be perfectly safe banks" under a "laissez-faire policy (nonpolicy)").

[161] Samuel Chase, *Introduction*, 51 J. OF BUS. 375 (1978) (introducing the Symposium).

[162] *See id.* at 376 ("Banking's enormous growth in the late 1960s and early 1970s made the industry a natural target for inquiring minds.").

[163] *Id.* at 375.

[164] *See id.* at 376.

Bolstered by a few decades of economic stability, banking in the 1970s was a burgeoning industry, as a matter of size, of profits and of the proliferation of financial products.[165] This enormous expansion of the industry gradually attracted not only investors but also economists to the field. The growth in bank assets and profits was accompanied by structural changes that began in the preceding decades. "Financial innovation"—the formulation of financial entitlement packages ("products") on terms that varied from traditional deposits, lending and investment contracts—was a main driver of these changes.[166] From the late 1960s on, both "bank" and "non-bank" financial institutions devised such instruments in pursuit of profit opportunities (partly created by inflation), using channels that extant legislation sought either to prevent or to restrict to specified types of financial institutions.[167] Partly designed to circumvent such regulatory restrictions, financial innovation began to chip away at the legislative categories defining the roles and prerogatives of different kinds of financial institutions, and finance as a whole.[168]

The growing use of the holding company, through which the activities of bank and non-bank companies could be directed in tandem, achieved similar effects, with additional advantages.[169] The increasing use of this form of corporate organization undergirded the beginning of the great consolidation in the financial sector, a significant shift in political economy.[170] Commercial banking, until the late 1960s, was much more fragmented than other sectors of the American economy (and as compared with banking in other developed economies)—a unique situation that was shaped by state and federal banking legislation

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[165] *See* Henry C. Wallach, Member, Board of Governors of the Fed. Rsrv. Sys., American Banks During the 1970's and beyond, Remarks at the Roundtable on Credit Systems in the 1970's (Sept. 5-7, 1980).

[166] *See* Legraw & Davidson, *supra* note 11, at 262 (describing the expansion of financial tools and "unprecedented innovative activities," which banks used to argue for the need of greater flexibility).

[167] *See* Samuel Chase & John Mingo, *The Regulation of Bank Holding Companies*, 30 J. OF FIN. 281, 281-82 (1975) ("During the late 1960s increasing numbers of the nation's largest banks formed one-bank holding companies, not subject to the provisions of the 1956 Act.").

[168] *See, e.g.,* Rubin, *supra* note 5, at 1250 ("Sustained increases in interest rates during the 1970s led to a determined search for financial instruments and legal stratagems to circumvent these limitations.").

[169] Chase & Mingo, *supra* note 167, at 281-82 (1975).

[170] *See id*.

long preceding the New Deal.[171] By 1975, the bank holding company was a ubiquitous form of organization, adopted by almost all the large banks and many of the smaller ones.[172] Up to 1970, the holding company was also widely used as a vehicle to raise funds by means prohibited to commercial banks, in particular the floating of commercial paper.[173] "One-bank holding companies" became very popular, and they successfully evaded Fed regulatory authority under the Bank Holding Companies Act of 1956, which defined holding companies only as those "controlling more than one bank."[174]

The 1970 revision of the Bank Holding Company Act sought to close this loophole and, in this respect, reflected that element within the legal-political establishment that was committed to *reinforcing* the New Deal regulatory categories and the financial-institutional status quo.[175] Similarly, in the 1971 Supreme Court decision in *Camp*,[176] the Court refused to condone a relaxed interpretation of the Glass-Steagall Act by the Comptroller of the Currency, holding fast to what it considered to be the "original purposes" of that pivotal New Deal legislation. While granting that bank regulatory agencies should generally be given significant deference, the Court in *Camp* established what would later be referred to as the "subtle hazards" principle; the idea that the Glass-Steagall provisions should be interpreted as a categorical prohibition against the mixing of banking with securities activities, even where the danger of such mixing was not immediately visible.[177] The Court found that Glass-Steagall was premised on Congress' perception, at the time of enactment, that such mixing would carry with it hazards that were not entirely amenable to analysis, and that the clear purpose of the Act was to avoid precisely these dangers.[178] In relying on this interpretation of

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[171] *See id.*
[172] *See id.* Note that today ninety percent of all commercial bank deposits are held in banks owned by holding companies. MISHKIN & SERLETIS, *supra* note 57, at 282.
[173] *See* Chase & Mingo, *supra* note 167.
[174] *See id.* at 281-82 ("The 1956 legislation covered only holding companies controlling more than one bank. During the late 1960s increasing numbers of the nation's largest banks formed one-bank holding companies, not subject to the provisions of the 1956 Act.").
[175] *See* Legraw & Davidson, *supra* note 11, at 239.
[176] Invest. Co. Inst. v. Camp, 401 U.S. 617 (1971).
[177] *Id.* at 630.
[178] *Id.* at 630-32.

the original legislative purpose, the Court displayed a strong aversion to the liberalization of the banking industry.[179]

In other chambers, deregulatory ideas had already been gaining momentum.[180] Indeed, the dynamic of consolidation and financial innovation resulted from the interplay between the continued enforcement of existing regulation and areas of regulatory forbearance, as well as active moves toward enabling what had formerly been prohibited. This resulted in opening gaps in the regulatory fabric.[181]

Of particular importance were two types of restrictions on banking that were gradually eroded in the 1970s by regulators and judges, an erosion which both reflected and reinforced the industry shifts toward financial product innovation and consolidation. The first to be subjected to erosion were New Deal restrictions that delineated and severed the *types of activities* that banks and other financial institutions were allowed to engage in.[182] Embodied in the Banking Act of 1933, legislation in the various states, and in regulatory and supervisory policies at both the state and Federal level, these restrictions had been perceived hitherto as necessary for ensuring that "deposit institutions"—i.e., commercial banks—were relatively safe.[183] This supervision was initially relaxed in New England, where "savings banks" (formally non-banks) were increasingly permitted to offer "withdrawal services" that resembled checking accounts. The Massachusetts Supreme Court delivered the opening salvo in *Consumers Savings Bank*, which authorized state savings institutions to

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[179] *See id.* at 635 ("From the perspective of competition, convenience, and expertise, there are arguments to be made in support of allowing commercial banks to enter the investment banking business. But Congress determined that the hazards outlined above made it necessary to prohibit this activity to commercial banks.").

[180] *See* Rubin, *supra* note 5, at 1251 ("The reduction of the barriers to interstate banking has been initiated by a different and more unexpected actor—the state legislatures.").

[181] *See generally* Rubin, *supra* note 5.

[182] *See* Rubin, *supra* note 5, at 1253 ("Elimination of the regulatory barriers that separate banking from other financial activities such as securities dealing, brokerage, investment services, insurance, and from commerce generally, has proceeded the most gradually of these three forms of deregulation, although, or perhaps because, the largest number of actors have participated in the process.").

[183] *See* LARRY ALLEN, ENCYCLOPEDIA OF MONEY, 299 (2009) (depicting the perceived purpose and effect of the Glass-Steagall Act of 1933).

operate "NOW" (negotiable order of withdrawal) accounts.[184] These were de facto checking accounts but, not being formally defined as such, were permitted to escape "Regulation Q," i.e., they could bear interest.[185] Meanwhile, the federal Comptroller of the Currency had begun to regularly expand the list of permitted activities for commercial banks.[186] This parallel relaxation of the categories caused a tidal wave of financial innovation and further deregulation that washed out the old barriers between banks and non-banks in the following years.

Restrictions that limited the geographical expansion and size of banks were likewise progressively eroded. Embodied in the McFadden Act of 1927, which upheld the protective laws of the various states, these restrictions prevented inter-state and some intra-state branching, effectively limiting banks' exposure to competition.[187] Industry efforts to escape antitrust controls over mergers, which were bolstered by the enactment of Bank Merger Acts of 1960 and 1966, were wholly suppressed by the Justice Department and the Supreme Court.[188]However, consolidation via the "bank holding company" form was regularly overlooked, and allowed geographical expansion and consolidation.[189] For their part, state authorities facilitated consolidation at the state level by gradually removing their limitations on branch banking.[190]

This process of deregulation, commonly described as the "deepening" of financial markets, [191] is better understood as its flattening: the gradual elimination of restrictions on the types of

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[184] Consumers Sav. Bank v. Comm'r of Banks, 282 N.E.2d 416 (Mass. 1972). at 417-18.

[185] The prohibition of interest payment on deposit accounts originated in the Banking Act of 1933, and was the key element of New Deal legislation which was clearly aimed at the restriction of "cut-throat competition" that was understood to lead to overly speculative or risky investment choices by commercial banks. *See* ALLEN, *supra* note 183.

[186] *See* Rubin, *supra* note 5, at 1252.

[187] Federal Reserve Bulletin, Vol. 66 No. 1, 1, 2 (1980) (Lexis) ("By prohibiting banks in one state from establishing banking operations in another state, the McFadden Act created major barriers to entry in banking").

[188] *See* Douglas Austin, *The Evolution of Commercial Bank Merger Antitrust Law*, 36 BUS. LAW 297 (1980).

[189] *See* Black, Miller & Posner, *supra* note 26, at 383.

[190] *See id.*

[191] *See e.g.,* Era Dabla-Norris, Yasuhisa Ojima, & Marco Arena, *Financial Sector deepening and Transformation, in* FRONTIER AND DEVELOPING ASIA: THE NEXT GENERATION OF EMERGING MARKETS 141 (IMF, 2015).

activities that different categories of financial institutions may engage in grazed to the ground the financial architecture that was in place since the 1930s.[192] Deregulation leveled the financial landscape such that "capital" became less confined by regulatory and institutional structures and channels and was allowed to flow increasingly freely via transactions between market players.

In the midst of this process, there were also sporadic indicators that not all was fine with the freed-up financial sector. In 1971, U.S. National Bank of San Diego was rescued.[193] In May 1974, the Federal Reserve Bank of New York tried to rescue the Franklin National Bank with a discount-window loan of $125 million, later increased to more than $1 billion, but this did not prevent the bank's insolvency by October.[194] Other significant disruptions in international banking, especially the failure of the Bankhaus Herstatt in West Germany, led to the establishment in 1974 of the Committee on Banking Regulations and Supervisory Practices by the "Group of Ten" of the OECD countries plus the central bank of Switzerland.[195] This group operated within the Bank for International Settlements in Basel (BIS) and sought to encourage convergence of bank supervisory practices in the member regulatory institutions.[196] The public expenditure also increased the interest in the condition of banks[197] and the proper roles and tools of regulation.

B. Enter Chicago: Finance as Market

The question of regulating bank holding companies formed the basis of the transformational article by Fischer Black, Merton Miller and Richard Posner that we will now consider carefully.[198] The authors

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[192] *See* Rubin, *supra* note 5, at 1253.
[193] *See* William A. Lovett, supra note 34, at 1381 (recounting this rescue and justifying it as necessary, despite the resulting moral hazard).
[194] Kareken & Wallace, *supra* note 113, at 432.
[195] J.J. Norton, *The Work of the Basel Supervisors Committee On Bank Capital Adequacy and the July 1988 Report on "International Convergence of Capital Measurement and Capital Standards,"* 21 INT'L LAW. 245, 245-63 (1989).
[196] *Id*. at 248-49 ("The Committee . . . serves as an informal forum for on-going cooperation on bank prudent supervision matters.").
[197] *See e.g.*, Milton Friedman, *Subsidizing Banks*, NEWSWEEK, July 15, 1976, at 70 (showing government spending taxpayer money on banks increased scrutiny on those banks to operate properly.).
[198] Black, Miller & Posner, *supra* note 26.

commenced their article by welcoming this proliferating corporate form, and argued that subjecting it to regulatory constraints would be misguided, much like most other types of direct regulation.[199] Decrying the waste and rigidity of banking regulation, the authors welcomed the "striking and heartening development" of the preceding few years, which witnessed a move "away from exclusive preoccupation with bank asset safety and toward greater awareness of the benefits of competition."[200]

The deregulatory proposal was then tempered by a theoretical and practical suggestion for improving, indeed reconceptualizing, financial regulation.[201] The authors assumed as given that regulation was widely perceived to be necessary, and considered the protection of depositors to be a legitimate aim for regulation (as opposed to the prevention of bank failure).[202] They proposed a new intellectual device: fashioning regulation by having the government step into the shoes of depositors, and mimic the actions that depositors would have taken to protect their own interests as creditors of the bank.[203] The reasons why depositors might fail to take such actions themselves were not developed at this point (this would happen later on).[204] The central theoretical device that the authors advanced entailed, first, viewing bank depositors through the corporate finance lens of the position of creditors in a firm and, second, recasting the regulatory task as equivalent to imposing the measures that such corporate creditors would take to protect their interests vis-à-vis their debtors.[205]

It is here that capital ratio requirements entered the field. Black, Miller and Posner argued that this form of regulation was preferable to all others for several reasons. Most importantly, they claimed that creditors in free market conditions imposed capital requirements on debtors in order to reduce the debtors' tendency to take greater risk than

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[199] *Id.* at 381.
[200] *Id*.
[201] *Id.* at 382.
[202] *Id.*
[203] *Id.* at 385 ("The essential elements of bank regulation are best explained by assuming that the government has assumed the responsibility of protecting the interest of the depositors, who are lenders to the banks. The government insures the depositors, and it is appropriate for a credit insurer to impose the kinds of constraints on a borrower that the lender would impose if he were not insured; the insurer is standing in the lender's shoes.").
[204] *Id.* ("*Why* the government insures depositors is a separate question, which we postpone.").
[205] *Id*.

that incorporated into the terms of the loan.[206] By involving more of the shareholders' equity, corporate incentives were re-adjusted to minimize this "moral hazard" and reduce monitoring costs.[207] Thus, instead of seeing this practice as intended to ensure a capital "cushion," the authors' account relied on a number of formal assumptions regarding agents' economic rationality and risk calculations to reinterpret the practice as a matter of adjusting risk incentives.

Black, Miller and Posner explicitly grounded their analysis in the "modern theory of finance," presenting their position as a fruitful application of that theory to banking regulation.[208] Two decades earlier, the field of corporate finance was revolutionized by an article co-authored by Merton Miller himself, along with Franco Modigliani.[209] The field had hitherto been preoccupied with prescribing the optimal capital structure for firms.[210] Modigliani and Miller applied to this field austere neoclassical assumptions of rationality and frictionless financial markets and concluded that, under such idealized conditions, the capital structure of firms had no impact on their value.[211] In perfect markets, the price of equity and debt already reflected all relevant knowledge and preferences, including those regarding the risk levels associated with leverage itself, such that the price of all forms of financing tended to equilibrate and, consequently, there were no hidden benefits to be had from opting for debt rather than equity or the other way around. [212] Indeed, there was no categorical difference between debt and equity, but simply a variety of products arrayed along a spectrum of risk and expected return.[213] In their 1978 article, Black, Miller and Posner relied on this tenet—which came to be known as the Modigliani-Miller

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[206] *Id.* at 386-87 ("The private lender will typically impose an initial capital requirement by limiting the amount of the loan . . .").
[207] *Id.* at 402.
[208] *Id.* at 380.
[209] *See* Franco Modigliani & Merton H. Miller, *The Cost of Capital, Corporation Finance, and the Theory of Investment*, 48 AM. ECON. REV. 261, 296 (1958) (developing mathematically a new theorem to help put cost of capital "on the shelf of solved problems.").
[210] *Id.* at 281.
[211] *Id.* at 268 ("That is, the market value of any firm is independent of its capital structure.").
[212] *Id.* at 295.
[213] *Id*.

Theorem—as another reason to prefer capital requirements to other types of regulation, because, in principle, it was costless.[214]

Finally, Black, Miller and Posner further suggested that capital ratio requirements were a superior form of regulation, as they involve less intervention than other regulatory methods in the affairs of the private sector and, especially, in the asset choices made by banks.[215]

Conceptualizing the government's relationship to banks in terms equivalent to the relationship between creditors and shareholders in private finance (especially in regards to the incentive and information issues that arise between them) and linking, likely for the first time, the notion of capital requirements with the reduction of risk incentives, Black, Miller and Posner set the foundation for a new framing of the regulatory question within a generally deregulatory outlook. Under this conception, the central mission was to transform an institutionally compartmentalized financial system into a generalized, and largely unencumbered, market for financial products. The modern notion of "risk," and the risk behavior of rational agents were the organizing concepts for redefining the regulatory sphere. With this theoretical arsenal, the myriad policy issues around finance and its role in the economy were simplified, narrowed and channeled into the quantitative metric of risk calculation.

C. Market meets Failure: The Excessive Risk Consensus

Black, Miller and Posner said nothing about "market failure." They proposed to deregulate what was still at the time a heavily regulated sector, postulating that a free financial market would be much more efficient than a regulated one.[216] But in the three decades following the 1978 symposium, developments, "market" met

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[214] Black, Miller & Posner, *supra* note 26, at 388 ("A well-known result in the theory of finance is that even in a world of uncertainty, if such factors as taxes and the costs of issuing different kinds of securities are assumed away, the capital structure of a firm does not affect the firm's value.").

[215] *Id.* at 404 ("It is better to allow banks to diversify freely but require them to make appropriate adjustments in their capital to reflect any increased risks to depositors (or their surrogate, the government) than it is to prevent them from entering businesses in which they may have some comparative advantage over existing firms.").

[216] *Id.* at 383 ("[T]here is evidence that regulation has gone further in protecting creditors than is efficient, resulting in the imposition of considerable (and avoidable) social costs.").

"failure."[217] On the one hand, deregulation, or "liberalization" of the financial industry, was accelerated, undoing the edifice of New Deal banking regulation and freeing up financial markets more fully, beyond geographical borders and institutional constraints.[218] The deregulatory agenda thus became the rule rather than the exception.[219] On the other hand, severe financial crisis, the likes of which had not occurred since the 1930s, meant that some regulation was nevertheless thought to be necessary. In this new setup, capital requirements very soon emerged as the regulatory tool of choice, reaching global consensus in 1988 with the signing of the Basel Accord, and occupying the lion's share of discussions on financial regulation ever since. [220] Thereby, the fundamental premises set out by Black, Miller and Posner were increasingly refined, generalized and developed into a full-blown regulatory paradigm. Applying the newly found notion that capital requirements reduce risk incentives, the newly perceived need to correct for *excessive* risk taking of financial institutions became the organizing framework of the regulatory rationale.[221] In short, these three decades saw the extension and application of the theory laid down by Black, Miller and Posner, adapted to the reality of a deregulated, crisis-prone, financial world.

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[217] *See e.g.,* FED. DEPOSIT INS. CORP., HISTORY OF THE EIGHTIES, LESSONS FOR THE FUTURE (1997), at 37 (considering that "increased numbers of bank failures" resulted when unfavorable market conditions were exacerbated by "ill-timed deregulation.").

[218] *See* Rubin, *supra* note 5, at ("[deregulation] has proceeded on three fronts: the elimination of interest rate restrictions, the reduction of geographic barriers to interstate banking, and the more gradual reduction of the separation between banking and other businesses.")

[219] *See* FED. DEPOSIT INS. CORP., *supra* note 217, at 105 ("Banking legislation traveled a long road between 1980 and 1991. Deregulation marked the beginning of that road and was perceived as a way to create a more stable and profitable banking system.").

[220] *See* MISHKIN & SERLETIS, *supra* note 57, at 230 (describing the coalescence around the "Basel Accord, which required that banks hold as capital at least 8% of their risk-weighted assets" of "more than 100 countries, including Canada and the United States.").

[221] *Supra* note 2.

1. Crisis and Deregulation

From the beginning, the 1980s were a decade marred by a rising incidence of depository institutions' failures and losses.[222] First Pennsylvania Bank, the oldest bank in the United States, failed in 1980 and was rescued by a group of banks.[223] In 1982, PennSquare failed, affecting Continental Illinois bank in Chicago, which had to be effectively nationalized, with the federal government injecting several billion dollars.[224] The hitherto highly profitable Bank of America had to write off great amounts in bad loans (over $4 billion between 1980 and 1985).[225] In the mid-1980s, over forty banks failed each year, and the numbers of banks the FDIC defined as "problem banks" rose steadily to over 1000 in 1986.[226] Then, as real estate prices plummeted in the late 1980s, a monumental crisis hit savings and loans institutions (S&Ls), "spilling over" to many banks.[227] In 1987, the thrifts industry lost around $7 billion, and in 1988, over 700 banks and 1000 S&Ls were

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[222] George Hanc, *The Banking Crisis of the 1980s and Early 1990s: Summary and Implications*, 11 FDIC BANKING REV. 1 (1998) ("The distinguishing feature of the history of banking in the 1980s was the extraordinary upsurge in the number of bank failures."). *See generally*, *An Examination of the Banking Crises of the 1980s and Early 1990s*, FED. DEPOSIT INS. CORP, *supra* note.

[223] Hanc, *supra* note 222, at 24.

[224] Gary B. Gorton, *Banks and loan sales Marketing nonmarketable assets*, 35 J. OF MONETARY ECON. 389, 390 (1995) ("A reason for the illiquidity of loans is illustrated by the example of Penn Square, the bank that failed in 1982. Subsequently, Seafirst of Seattle and Continental of Illinois, both major purchasers of Penn Square's loans, failed.").

[225] John Maxfield, *A Brief History of Bank of America Crisis*, The Motley Fool (Oct. 16, 2018, 4:11 PM), https://www.fool.com/investing/general/2015/06/28/a-brief-history-of-bank-of-america-in-crisis.aspx [perma.cc/7EBW-QZZ3] ("Loan write-offs [from 1981-1986] totaled $4.6 billion – an amount then greater than the average annual income of the population of Sacramento, Louisville, or Tampa.").

[226] *See* Hanc, *supra* note 222, at 1 ("The distinguishing feature of the history of banking in the 1980s was the extraordinary upsurge in the number of bank failures. Between 1980 and 1994 more than 1,600 banks insured by the Federal Deposit Insurance Corporation (FDIC) were closed or received FDIC financial assistance.").

[227] *See* Hanc*, supra* note 222*,* at 13-14.

closed down.[228] The thrifts had been guaranteed the support of the federal government, which in 1982 resolved to support the Federal Savings and Loan Insurance Corporation, and their downfall was a significant blow to the economy.[229]

These crises did not slow the process of deregulation, which significantly extended the trend of the 1970s.[230] The changes in financial regulation in the 1980s should be considered from two complementary points of view. First, the "flattening" of capital markets resulted in the financial system resembling what Modigliani & Miller assumed and modeled theoretically.[231] From this view, financial "products" were in fact increasingly streamlined on a single spectrum of risk and return, with less qualitative distinctions between "debt" and "equity," deeply altering the way banks were managed and perceived.[232] Second, just as the financial world was getting flatter and closer to a "market" model, so the movement toward consolidation in the financial industry continued to grow, rendering the image of individual players and powerless price-takers misleading.[233]

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[228] *See* Carl K. Oshiro, *Partners in Crime: California's Role in the $335 Billion Savings and Loan Heist*, 10 CAL. REGUL. L. REP. 1 (1990) ("Since 1985, over 700 savings and loan institutions have failed in the United States.").

[229] *See* Hanc, *supra* note 222, at 5 ("As the thrift crisis deepened and commercial bank problems were developing, Congress passed the Competitive Equality Banking Act of 1987 (CEBA). It provided for recapitalizing the fund of the Federal Savings and Loan Insurance Corporation (FSLIC) through the Financing Corporation (FICO), authorized a forbearance program for farm banks, extended the full faith-and-credit protection of the U.S. government to federally insured deposits, and authorized bridge banks.").

[230] *See id.* at 2 ("Intrastate banking restrictions were lifted, allowing new players to enter once-sheltered markets; regional banking compacts were established; and direct credit markets expanded.").

[231] Modigliani & Miller, *supra* note 209, at 280 ("Our propositions can be regarded as the extension of the classical theory of markets to the particular case of the capital markets.").

[232] *See id.* at 262 ("Indeed, in a world of sure returns, the distinction between debt and equity funds reduces largely to one of terminology.").

[233] *See* Hanc, *supra* note 222, at 4 ("Although the overall performance of the banking industry varied greatly during the 1980-94 period, in its structure the industry showed a strong trend in one direction—toward consolidation into fewer banking organizations.").

During this period, both deregulation and consolidation were reinforced by legislative, administrative, and judicial action.[234] These continued the erosion of restrictions on activities and geographical expansion and consolidation, which had begun in the 1970s, backed by the discourse of free market competition, which featured calls to trust "market discipline" and to dethrone banks from their special status as performing a unique public role—thus undermining the justifications for treating banks with more regulatory attention than other firms.[235]

As we have seen, the process of financial innovation was both a result and a cause of deregulation.[236] Into the 1980s, deposits were shrinking in their relative proportion within bank balance sheets.[237] At the beginning of the process, while banks and thrifts were still subject to interest-rate restrictions (Regulation Q), securities were yielding high returns on investment.[238] Depositors gradually left banks, especially in favor of money-market mutual funds (MMMFs), and corporations increasingly opted for raising capital in capital markets (a process labeled "disintermediation," i.e., the obviating of banks as intermediaries between savers and borrowers).[239] As a result, banks and thrifts developed, and increasingly offered, alternatives to deposit accounts, including NOW and sweep accounts and negotiable CDs ("certificates of deposit"), which were not technically deposits and therefore were allowed to bear interest.[240] In turn, banks had to acquire assets that would support these higher interest payments, at the price of increased risk. While attempts to formally and completely repeal Glass-Steagall remained unsuccessful until 1999, Congress passed legislation that supported both the liability and asset sides of its erosion. The Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMCA) and the Depository Institutions Act of 1982 (Garn-St. Germain), both approved new "products" that financial institutions

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[234] *See* Rubin, *supra* note 5, at 1250-1253.

[235] *See* E. GERALD CORRIGAN, ARE BANKS SPECIAL?, 1982 FED. RESERVE BANK OF MINNEAPOLIS ANN. REP. 2.

[236] *Supra* Part IV.A.

[237] *See generally*, Alton Gilbert, *Requiem for Regulation Q: What It Did and Why It Passed Away*, 68 FED. RSRV. BANK OF ST. LOUIS 22, 33 (1986).

[238] *See id.*

[239] *See id.* at 30 ("Sharp increases in interest rates in late 1979 and early 1980, combined with Regulation Q ceiling rates . . . induced large outflows of small denomination deposits from banks and thrifts. Money market mutual funds had become major competitors with depository institutions for small-denomination investment accounts.").

[240] *See id.* at 31.

could offer (these are the financial institution's liabilities): NOW accounts, sweep accounts, and money market deposit accounts (MMDAs).[241] They also significantly increased the type of assets thrifts could hold, opening them up to commercial assets (i.e., commercial loans) and equity holdings.[242] This resulted in the involvement of thrifts in highly speculative projects and junk bonds, which exposed them to new risks.[243] More broadly, these changes blurred old distinctions between different types of financial institutions.[244]

Administrative agencies generally supported deregulation. The Office of the Comptroller of the Currency was the first and most active actor pushing for deregulation,[245] but by the mid-1980s two other federal agencies—the Federal Reserve Board and the FDIC—increasingly allowed banks to provide new "products," purchase new assets, and establish ties with non-bank affiliates.[246] The latter process

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[241] Anatoli Kuprianov, *The Monetary Control Act and the Role of the Federal Reserve in the Interbank Clearing Market*, 71 ECON. REV. 23, 25 (1985) ("Thrifts and other financial institutions nationwide were not permitted to offer interest bearing checkable deposits until 1980, when the DIDMCA was passed.").

[242] While thrifts had been allowed to hold mainly home mortgage loans, they were now permitted to hold up to forty percent in commercial real estate, thirty percent in consumer lending and thirty percent in equity holding. *See* J. Patrick Raines & Kenneth W. Vance, *An Assessment of the Impact of Thrifts on Commercial Bank Competition in the Richmond, Virginia, R.M.A.*, in E.C.R.S.B. 88-9 ROBINS SCHOOL OF BUSINESS WHITE PAPER SERIES 1, 13 (1988).

[243] Elijah Brewer & Thomas H. Mondschean, *An Empirical Test of the Incentive Effects of Deposit Insurance: The Case of Junk Bonds at Savings and Loan Associations*, 26 J. OF MONEY, CREDIT, AND BANKING 146, 148 (1994) ("[F]rom the end of 1985 to the end of 1988, total S&L holdings of junk bonds grew from $5.59 billion to $14.64 billion, an increase of over 160 percent in three year.").

[244] Legraw & Davidson, *supra* note 11, at 226-27.

[245] The deregulatory outlook of this particular Federal agency probably started with the work of James J. Saxon, who was appointed as Comptroller of the Currency by President Kennedy and was committed to allowing banks to increase their sphere of operation. Some of his decisions were successfully challenged in courts. *See generally*, JERRY W. MARKHAM, A FINANCIAL HISTORY OF THE UNITED STATES: FROM J.P. MORGAN TO THE INSTITUTIONAL INVESTOR (1900-1970) 337 (2002).

[246] *See* FED. DEPOSIT INS. CORP., *supra* note 217, at 123 ("By the late 1980s the Federal Reserve Board was increasingly allowing bank holding

stretched the limits of Glass-Steagall and the Bank Holding Company Act to allow affiliation between banks and non-banks. This process involved significant collaboration between Courts and federal agencies, during which the Supreme Court gradually relaxed its approach to the application of Glass-Steagall, giving greater deference to administrative discretion, thereby allowing expanded services and affiliations.[247]

In its earlier *Camp* decision in 1971,[248] the Court clearly rejected the attempt of the Comptroller of the Currency to expand permitted bank services. It established the "subtle hazards test," an approach to the Glass-Steagall prohibitions that read them broadly and did not require demonstrating that the activity in question would result in a conflict of interest.[249] The Court in *Camp* applied what it found to be Congress' purpose in enacting Glass-Steagall: increasing confidence in the banking system by avoiding even remote chances of a conflict of interest or other sources of instability.[250] Influenced by the emergence of new financial products, courts in the 1980s began to read the Glass-Steagall provisions differently,[251] and they showed increasing deference to the deregulatory attitude of administrative agencies The barrier between commercial banks and securities and investment banking activities, which the Glass-Steagall provisions had put in place, specified categories of acceptable and prohibited activities that did not neatly capture the new forms of financial transactions, thus allowing for such interpretations.[252]

Two provisions of Glass-Steagall are relevant to this discussion. Section 16 allows banks to engage in buying and selling of securities (other than government bonds) only as an *agent* for customers, and Section 21 prohibits persons or organizations engaged in investment banking from taking deposits.[253] These investment banking activities

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companies to enter many new areas. The FDIC did not have authority to permit state banks to engage in new activities, but it did rule in 1984 that insured nonmember banks could establish or acquire subsidiaries that were engaged in securities activities").

[247] *See id.* at 125.

[248] *See* Invest. Co., 401 U.S. at 639 (holding that the Comptroller of the Currency did not have the authority to allow commercial banks to engage in investment banking).

[249] *See id*.

[250] *See id.* at 634.

[251] For a detailed account of the important court decisions, *see* Legraw & Davidson, *supra* note 11, at 226-27.

[252] *See id.*

[253] *See id.* at 236.

are defined as including "the business of issuing, underwriting, selling or distributing . . . stocks, bonds, debentures, notes or other securities."[254] The significant interpretive moves by federal courts in the 1980s can be generally understood as both a broad reading of the meaning of "agent" within Section 16 and a narrow reading of the meaning of the activities that constitute investment banking. The net result was a significant watering down of the prohibitions of Glass-Steagall.[255]

The approval of the 1983 acquisition by Bank of America of the largest discount broker in the U.S., Charles Schwab, was one such move.[256] The Fed had approved the acquisition under the Bank Holding Company Act of 1970.[257] In *Schwab*, the Supreme Court found that the approval was within the Fed's authority and not in violation of Glass-Steagall, in part relying on the finding that brokers were "agents," rather than underwriters or distributors.[258] The practice of selling "private placements" of commercial paper, which some argued was equivalent to underwriting, was finally deemed not to fall within that term and was therefore permitted.[259] Similarly, in *NATWEST*, the Court confirmed that National Westminster Bank and NatWest were allowed to provide, via a subsidiary, investment advice and discount brokerage services.[260] Significantly, in *ICI II*, the Court found , further, that the Fed could authorize affiliation of banks with non-bank companies that carried out activities clearly prohibited to banks under Glass-Steagall.[261] As the Bank Holding Company Act allowed the Federal Reserve Board to authorize affiliation between banks and companies that engage in activities that are "closely related to banking," these affiliates surely could not be restricted to what the banks themselves were allowed to

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[254] 12 U.S.C. § 378 (1982).
[255] *See* Legraw & Davidson, *supra* note 11*,* at 245-46.
[256] *See id.* at 243.
[257] *See id.* (describing the history leading up to the *Schwab* decision).
[258] Sec. Indus. Ass'n. v. Board of Governors of the Federal Reserve System (Schwab), 468 U.S. 207 (1984).
[259] Sec. Indus. Ass'n. v. Board of Governors of the Federal Reserve System (Bankers Trust II), 807 F.2d 1052 (D.C. Cir.1986), *cert. denied* 483 U.S. 1005 (1987).
[260] Sec. Indus. Ass'n. v. Board of Governors of the Federal Reserve System (NATWEST), 484 U.S. 1005 (1988).
[261] *See* Legraw & Davidson, *supra* note 11, at 245.

perform.[262] In *ICI II*, the Court approved the Fed's decision to allow affiliation between a bank and a company that acted as an investment advisor to a "closed-end investment company."[263]

The expansion of permissible activities and the consolidation of the banking sector thus went hand in hand. Interstate branching had begun on a regional basis in the early 1980s and was supported by state laws and the relaxed administrative and judicial application of restrictions on bank holding companies and affiliates.[264] Thus, much of the consolidation preceded the formal legislation that allowed interstate banking by a decade. The Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 repealed the Douglas Amendment to the 1956 Act—with the result that banks no longer needed to obtain authorization from states to expand across state borders.[265] The ongoing attitude of "regulatory forbearance" as well as positive encouragement of the processes of securitization and "financial innovation" was affirmed by legislation such as the Gramm-Leach-Bliley Act of 1999, which officially ended the Glass-Steagall era.

D. The Capital Requirements Solution and Its Significance

Capital requirements not only survived liberalization but were actually strengthened. By the mid-1980s, as Black, Miller, and Posner foreshadowed, capital requirements would become the form of regulation that gained the most support, intellectually and institutionally, and became the central regulatory framework of the deregulatory moment. In 1989, Norton observed:

> [C]apital adequacy now is emerging as the cornerstone for regulatory approaches to prudential supervision of domestic and international banking activities by bank regulators in the United States, United Kingdom, and

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[262] *See id.* ("The Court relied on Congress' reasoning that bank affiliates might engage in services and activities that would be impermissible for the bank itself. Additionally, the Court reasoned that the section 4(c)(8) exception of the Bank Holding Company Act 'would be unnecessary if it applied only to services that a bank could legally perform.'").

[263] Board of Governors of the Federal Reserve System v. Inv. Co. Inst. (ICI II), 450 U.S. 46 (1984).

[264] *See* Chase & Mingo, *supra* note 167, at 281.

[265] *See generally*, Jane D'Arista, THE EVOLUTION OF U.S. FINANCE (1994).

> other industrialized countries, and is a subject lending itself increasingly to more formal rulemaking characterization.[266]

Federally mandated regulation of capital ratio requirements occurred for the first time in 1983, as the administrative agencies interpreted the International Lending Supervisions Act's reference to "adequate capital" as referring to capital ratios (rather than absolute minimal amounts).[267] This further fueled the discussion regarding what counted as an appropriate capital ratio. Following a few decades in which these ratios were used by some agencies without a common standard,[268] either for the ratio figure or for the definition of the relevant assets, in 1985, American regulatory agencies reached an agreement on uniform capital ratio requirements for banks:

> In view of the relatively low capital ratios at many large banks and the rise in the number of failures, all of the agencies favored the objective of explicit capital standards, but initially they differed on the specifics; the FDIC generally favored higher capital requirements than the OCC, and the Federal Reserve offered a compromise in at least one instance. In 1985, with congressional encouragement, the regulators agreed on a uniform system covering all banks.[269]

The Basel Capital Accord of 1988 ("Basel I") brought capital requirements to a level of global consensus.[270] This agreement, entered into between banking regulatory authorities in the Group of 10 plus

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[266] *See* Norton, *supra* note 98, at 1316.

[267] The International Lending Supervisions Act of 1983 mandated federal supervisory agencies to "cause banking institutions to achieve and to maintain adequate capital by establishing minimum levels of capital for such banking institutions and by such other methods as the appropriate federal banking agency deems appropriate." 12 U.S.C. § 3907(a) (2012). This was interpreted to refer to capital ratios (rather than absolute minimal amounts). *See* Norton, *supra* note 98, at 1325-26.

[268] *Id.* at 1326.

[269] *See* FED. DEPOSIT INS. CORP., *supra* note 217, at 13. This account also reports that, already in 1980, some regulators imposed mandatory capital-to-assets ratios. *Id.* at 89.

[270] *See* TARULLO, *supra* note 2, at 45.

Luxembourg and Spain,[271] and implemented in domestic legislation in the following few years, [272] sought to converge bank capital requirements internationally.

The characteristic feature of this regulatory regime was the imposition of "risk-based" capital requirements. Capital ratio restrictions varied according to the risk-levels that various *types* of bank assets were deemed to have, based on four risk-categories (or "buckets") of assets, which defined the risk weight and determined the applicable capital ratio requirement.[273] Banks with international operations were then subjected to a capital requirement set at 8% of risk-weighted assets.[274]

It was no coincidence that capital requirements became the central regulatory tool in the era of deregulation, as an extension of the deregulatory-regulatory approach laid down by Black, Miller and Posner. The idea that capital requirements reduce risk taking was embraced by Basel. [275] As we have noted, by the 1980s the risk-incentives rationale for capital requirements, was "not only present but emphasized."[276] The 1989 Annual Report of the Bank for International Settlements explains this rationale:

> [C]apital standards . . . ensure that the proportion of a bank's risk borne by shareholders does not fall below a certain minimum level. Raising capital standards increases this proportion and therefore reduces the benefit to a bank's shareholders of high-default-risk investments.[277]

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[271] These regulatory authorities organized in 1974 to form the Basel Committee for Bank Supervision, which formulated Basel I. Since 1988, other countries have joined, and further agreements on capital ratio requirements were reached in 2003 (Basel III) and 2010 (III). *See* MISHKIN & SERLETIS, *supra* note 57.

[272] Basel I was implemented by regulators in G10 countries in the early 1990s and, since then, in about one hundred countries. *See id.* at 230.

[273] The various types of assets counted as zero percent (e.g., cash and home country Treasuries), twenty percent (e.g., mortgage-backed securities with AAA rating), fifty percent (residential mortgages) or one-hundred percent risk weight (most corporate loans). *See id.*

[274] *See id.*

[275] *See* TARULLO, *supra* note 2, at 16.

[276] *Id*.

[277] BANK FOR INTERNATIONAL SETTLEMENTS, *supra* note 34.

Notably, this understanding was not thought to displace the idea of capital-as-cushion. The Annual Report also states:

> Higher capital standards should strengthen individual banks in two main ways: by increasing the size of the cushion for a bank's creditors against losses . . . and by reducing the attractiveness of high-risk investments for a bank's shareholders.[278]

In the developments that followed Basel I, both capital requirements and this rationale were further strengthened and refined. They also continued to reflect the growing commitment to freeing up capital markets, and the dwindling faith in the power of regulation.[279] Basel I was widely perceived as giving rise to dangerous regulatory arbitrage, as banks easily chose the most risky assets within each rigid risk "bucket."[280] In response to this, the much more complex Basel II was signed in 2004.[281] Basel II allowed the large banking institutions to substitute the risk categories with their own internal risk models, reflecting the perception that banks are better managers of risk than the regulators could ever be.[282] The notion that capital requirements reduce risk incentives became the standard textbook understanding and remains so to this day, whether formulated as the colloquial "skin in the game," or given more detailed mathematical analysis.[283] Notably, the capital-as-cushion idea never disappeared.

A subtle yet important shift occurred, however, between Black, Miller and Posner's argument and later developments. Deregulation became the rule, rather than the exception. Therefore, rather than taking *some* regulation as given, and taking the protection of depositors as the acceptable aspiration–as made sense for the authors in 1978—by the late 1980s, the need for regulation could not be taken for granted, and it became necessary to justify the imposition of capital requirements with a theory of why *any* regulation was needed.[284] Why should banks not be left to their own devices? This is how the notion that banks take

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[278] *Id*.
[279] TARULLO, *supra* note 2, at 5-6.
[280] *Id.* at 5.
[281] *Id.* at 1.
[282] *Id.* at 5-6.
[283] *See* MISHKIN & SERLETIS, *supra* note 57, at 247; BRUNNERMEIER ET AL., *supra* note 2, at 3.
[284] *See* McVea*, supra* note 39, at 414.

excessive risk, which had been absent from Black, Miller and Posner, has emerged.

Following the devastating Savings and Loans crisis, it would have seemed rather clear that banks were taking too much risk. However, the mere occurrence of crisis was in principle insufficient reason for regulation, as the new emphasis on competition implied that bank failure was not *per se* a regulatory concern.[285] The notion of excessive risk had to be rooted, therefore, in a story about incentives and distortion. This perspective underlies the development of works that applied the outlook of equilibrium analysis more comprehensively, and that identified the reasons for distortions in banks' risk-choices.

Illustrating this framework is the report accompanying Basel I, which locates the source of distortion in the presence of government guarantees. The report explains that the need to reduce bank risk incentives derives from the "dangerous appetite for high risk projects" which financial institutions develop when they enjoy implicit or explicit government guarantees against bank failure.[286] This dynamic, later labeled the "moral hazard" problem, is perfectly aligned with laissez faire and continues to be emphasized by commentators.[287] A parallel development, however, focused increasingly on market imperfections and structural characteristics of financial transactions that affected information and distorted incentives.[288]By the late 1990s, it became standard to identify a host of market imperfections as the cause for excessive risk-taking, focusing on information gaps, costs and asymmetries, exacerbated by vast externalities from bank failure.[289]

1. The Deregulatory-Regulatory Outlook

Discussing deregulation, Ed Rubin stated in 1989:

> Whether there is a countervailing movement [to deregulation] or a countervailing theory remains to be determined. But by using the term "reregulation" to

[285] *See* Kareken & Wallace, *supra* note 113.
[286] *See* BANK FOR INTERNATIONAL SETTLEMENTS, *supra* note 34, at 92.
[287] *See* MISHKIN & SERLETIS, *supra* note 57, at 179.
[288] *See* LLEWELLYN, *supra* note 51, at 5.
[289] JACKSON & SYMONS, *supra* note 2, at 5; MISHKIN & SERLETIS, *supra* note 57, at 659.

> describe that possibility, we clearly participate in the established vision of its predecessor."[290]

The analysis so far affirms that the rise of capital requirements regulation continued the development of a single and coherent market failure paradigm for which the deregulatory project built the foundations. This tight link between capital requirements and the theoretical foundations of deregulation has gone generally unappreciated. Some accounts described the simultaneous occurrence of these two processes as a matter of mere coincidence. Jackson and Symons, for example, state that, with deregulation, "capital regulation has become our residual regulatory structure."[291] More reflectively, the authors then consider the rise of capital requirements to be a response to increased risk that *resulted* from deregulation:

> [T]he steady expansion of permissible [bank] activities, and the resulting lessening of the significance of portfolio-shaping rules on assets and liabilities, has tended to shift regulatory attention to capital adequacy requirements, in an attempt to have the banks assume the increased risk-taking.[292]

Similarly, Tarullo describes capital requirements emerging as a *response* to the dwindling of other restrictions:

> The symbiotic effects of the evolution of the financial services industry and the relaxation of many restrictions on bank activities have placed capital regulation at the center of bank regulation.[293]

By contrast with these accounts, the historical analysis provided here situates both deregulation and capital requirements within one framework that transformed financial regulation and the way we understand it. Rather than responding to increased risk, capital requirements were part of the transformation that invented the focus on

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[290] Rubin, *supra* note 5, at 1249.
[291] *See e.g.,* JACKSON & SYMONS, *supra* note 2, at 184.
[292] *Id.* at 117. They also state that "[a]s bank activities were perceived to be increasing in their level of complexity, diversity and risk, demands for adequate capital increased." *Id.* at 185.
[293] TARULLO, *supra* note 2, at 8.

risk: the market failure paradigm. To recap, the main tenets of this paradigm may be distilled as follows. First, it is an analytical framework that models the financial system as a market qualitatively indistinguishable from other sectors, where rational agents engage in private transactions over debt and equity products, and which focuses on the incentive and information issues that arise between them. Second, it expresses a default commitment in favor of deepening financial markets (deregulation), which is overcome only when regulation can be justified based on identifiable "excessive risk" dynamics, exacerbated by negative externalities. Third, it involves a privileging of capital ratio requirements over other regulatory options as an instrument that discourages risk-taking without imposing any substantive intervention on bank asset choices.

V. The Ambivalence of the Current Regulatory Landscape

Assessing whether the 2008 crisis caused a paradigm shift in financial regulation requires examining whether a more ambitious regulatory model has in fact superseded the pre-crisis paradigm. As we have seen, when the market failure paradigm came to dominate financial regulation, with its reliance on microeconomics and corporate finance, it displaced approaches that centered on the role of credit in the real economy. Whether this paradigm is now loosening its grip depends significantly on whether such considerations are now brought back to the fore as legitimate and important regulatory aims. This part will seek to assess the extent to which this has been the case.

Remarkably, while the financial crisis appears to have shaken confident perceptions of the efficiency of markets just as it has brought down seemingly indestructible financial giants, [294] capital ratio requirements have weathered the storm. This is most clear in the case of the Basel Committee, which steadfastly continues to pursue its agenda of emphasizing risk-weighted capital ratio requirements as the chief response to the crisis, along lines broadly similar to those of previous

[294] Alan Greenspan, *We Need a Better Cushion Against Risk*, FIN. TIMES (Mar. 26, 2009), https://www.ft.com/content/9c158a92-1a3c-11de-9f91-0000779fd2ac ("It is clear that the levels of complexity to which market practitioners, at the height of their euphoria, carried risk-management techniques and risk-product design were too much for even the most sophisticated market players to handle prudently."); RICHARD A. POSNER, A FAILURE OF CAPITALISM, 269-87 (Harvard Univ. Press 2009) (describing the collapse of Lehman Brothers due to bad investments and the financial crisis).

rounds of capital agreements.[295] Basel III increases the required ratios and tightens the definition of "capital" while continuing to rely heavily on banks' internal risk models for the risk-weighing process, raising suspicion that nothing has changed in the organizing framework and its ideological underpinnings.[296] Capital ratio requirements were the hallmarks of the market failure paradigm, and clearly remain the center of the regulatory framework. If this is "more" regulation, it is nevertheless qualitatively similar to the financial situation prior to the 2008 crisis.

Accompanying Basel and related academic work, however, are some new frameworks of analysis that might indicate that capital requirements are again undergoing a profound change of character. Emphasizing "systemic risk" and "macroprudential regulation," these new frameworks disclose a potential qualitative change in the substantive content of this regulatory form and should be examined closely. Further, the renewed regulatory project post-2008 is not limited to capital ratio requirements, and is developing new instruments. In particular, the Dodd-Frank Act put in place a new regime for regulating derivatives trading.[297] Do these steps signal a departure from the foundational premises of the market failure paradigm or do they extend that paradigm to a new terrain, with new regulatory forms?

A. New Wine or New Bottles? Macroprudential Capital Requirements

Key policy reports of the post-crisis years, written by the most prominent regulatory bodies and academic contributors, emphasize the need for better understanding and treatment of "systemic risk" and—what may amount to the same thing—the need to turn from "micro-prudential" to "macro-prudential" regulation.[298] These notions have

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[295] BASEL COMMITTEE ON BANKING SUPERVISION, *supra* note 3, at 57.

[296] *Id.* at 2-4 (proposing several reforms to capital requirements, and introducing "requirements for banks to perform their own internal assessments of externally rated securitisation exposures").

[297] Stout, *infra* note 357, at 5.

[298] International Monetary Fund, et al., *Elements of Effective Macroprudential Policies: Lessons from International Experience*, 3 n. 1-4 (Aug. 2016) (detailing how finance organizations have been focusing on "macroprudential tools").

influenced significantly also the instrument of capital ratio requirements.[299]

1. The Nine Lives of Capital Requirements

In the recent work of the Basel committee, there are signs of change in both the fashioning of capital requirements and in the analysis of their underlying purposes. Basel III introduces some novel elements, two of which are of special interest for how they seem to go against the grain of the approach characteristic of the market failure paradigm. First is the use, in addition to the weighted capital ratios, of simplified, un-weighted capital requirements, [300] intended to guard against measurement errors in banks' risk models.[301] Second is the deployment of counter-cyclical capital requirements, an option described as a "macro-prudential" element that would help contain systemic risks.[302] These additions echo the proposals of two prominent groups of scholars that challenge the pre-2008 approach to capital requirements.

With respect to the simplification of capital requirements, the key proposal lies in Martin Hellwig's work since the mid-1990s, and in his recent collaboration with Anat Admati et al. [303] Central to our purposes is these authors' advocacy of simple (un-weighted), and much higher capital ratios (in the range of ten percent or even closer to twenty to thirty percent), and the rejection of a common perception that these ratios would be "costly."[304] Admati et al. strongly advocate a retreat from attempts to create ever more sophisticated models of risk as the bases for regulation.[305] Hellwig, in his earlier work, sounded similar

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[299] BASEL COMMITTEE ON BANKING SUPERVISION, *supra* note 3, at 2.

[300] These are often referred to as "leverage ratios" rather than "capital ratios," because "capital" has come to be associated with *weighted* capital. MISHKIN & SERLETIS, *supra* note 57, at 230.

[301] BASEL COMMITTEE ON BANKING SUPERVISION, *supra* note 3, at 4.

[302] *Id.* at 7 ("The purpose of the countercyclical buffer is to achieve the broader macroprudential goal of protecting the banking sector in periods of excess aggregate credit growth.").

[303] Admati et al., *supra* note 6, at 6-7.

[304] *Id.* at 55.

[305] A letter decrying the inadequacy of Basel III and proposing to increase capital ratios to "at least 15%, of banks' total, non-risk-weighted, assets", was signed by prominent scholars. *Healthy Banking System is the Goal, Not Profitable Banks*, FIN. TIMES (Nov. 9, 2010), https://www.ft.com/content/63fa6b9e-eb8e-11df-bbb5-00144feab49a. (claiming public purpose-

warnings of the illusions of quantified risk measurement, counter to the dominant currents in Basel and the financial sector.[306] As we have seen, the concepts of quantitative risk and risk calculations, were central to the development of the market failure paradigm—both for the assumptions regarding rational agents, and for the increasing orientation of regulators toward heeding banks' own risk management models.[307] Proposing to abandon these efforts as futile and harmful and to return to a more rudimentary capital cushion approach is indicative of a significant theoretical departure.

The 2009 Geneva Report authored by Markus Brunnermeier et al., carrying the ambitious title "The Fundamental Principles of Financial Regulation," provides a second proposal for counter-cyclical capital requirements.[308] This report calls for a thorough overhaul of how capital requirements are imposed, by making them strongly counter-cyclical.[309] Higher capital ratios would be demanded in phases of credit expansion, lower ratios in times of contraction—creating a bigger buffer in good times to be available for service in bad.[310] This proposal also suggests a broad leap in the theoretical foundations for capital requirements and financial regulation.

While these proposals are distinct, both center on capital requirements and both argue that the focus of regulatory efforts should be on the mitigation of systemic risk, offering an analysis of what this risk involves. The institution of capital requirements seems to serve as a catchall for a modified perception of the problem. Admati et al. find in systemic risk a reason for abandoning risk models internal to single firms.[311] Brunnermeier et al. base their proposal on an analysis of the relationship between systemic risk and the boom-bust cycle in a system

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focused regulation incentivizes banks to reduce risk-taking activity, and in turn, reduce the probability of financial crises).

[306] Martin Hellwig, *Banks, Markets, and the Allocation of Risks in an Economy*, 154 J. INST. & THEORETICAL ECON. 328, 329 (1998).

[307] *Supra* Part IV.

[308] BRUNNERMEIER ET AL., *supra* note 2, at 31-37.

[309] *Id.* at 31 ("[W]e noted the pro-cyclicality that follows from banks chasing returns on equity, maintaining value at risk, and using mark-to-market valuation and risk approaches . . . we describe how counter-cyclical regulation may be put in place.").

[310] Scott, *supra* note 47, at 680-82 ("The CCMR and the Treasury also recommended the adoption of techniques to ensure that capital ratios are countercyclical, with ratios higher in good times (characterized by rising markets) than in bad times with falling valuation and liquidity.").

[311] Admati et al., *supra* note 6, at 51.

of credit reliant on market pricings.[312] Nor are these scholars alone in advancing systemic-risk management as the goal of capital requirements. The Basel Committee itself has followed suit, and the systemic risk trope appears to be on its way to becoming a universal currency.[313]

Thus, it appears that we have entered a third round of changes to the seasoned institution of capital requirements: if its early significance was simply as a "cushion," and in the 1980s it became the risk incentives regulator, post-2008 may be ushering in the era of "systemic risk" capital requirements. But is this a qualitative shift away from the microeconomic approach of the market failure paradigm, heralding the dawn of a new paradigm? Whether it is, and perhaps even approaches the ambit of the New Deal, depends on what is meant by "systemic risk" and the conception of the regulatory task to which it is linked, increasingly labeled "macroprudential regulation."[314]

2. A Macroprudential Revolution?

What do the notions of "systemic risk" tied to "macroprudential regulation" add to the market failure framework? In particular: What does the shift from firm level to "systemic" risk signify for the analysis of "risk" and its proper management? Are there other "systemic" properties being brought into the analytical and regulatory fold, besides "risk" as standardly conceived under the market failure paradigm? And to what extent does consideration of "macro"-level questions portend a reorientation of the regulatory focus toward the role played by financial activity in relation to the real economy?

A useful entry point for answering these questions is comprehensive law-and-economics analysis of the meaning—and possible regulatory implications of—systemic risk, undertaken by Steven Schwarcz.[315] Synthesizing and further developing existing

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[312] BRUNNERMEIER ET AL., *supra* note 2, at 22.

[313] BASEL COMMITTEE ON BANKING SUPERVISION, *supra* note 3, at 3 (discussing measures to reduce procyclicality in order to reduce financial system risk).

[314] For tracing the post-2008 hyperinflation in the term "macroprudential" *see* Piet Clement, *The term "macroprudential": origins and evolution*, BIS Q. REV., 59-65 (Mar. 2010), http://www.nytimes.com/library/tech/98/12/cyber/cyberlaw/11law.html (documenting the usage of the term "macroprudential prior to the 2008 crisis).

[315] Schwarcz, *Systemic Risk, supra* note 47, at 197.

theoretical treatments of the concept, Schwarcz's discussion remains anchored in a microeconomic, market-oriented analytic. He advocates capital requirements as the appropriate tool, and his default premise remains that financial markets ought to be unregulated unless proven otherwise. Noting at the outset that a "threshold question is whether regulatory solutions are appropriate," the author offers in reply the following microeconomic explanation:

> This Article argues that they are [appropriate] because, like a tragedy of the commons, no individual market participant has sufficient incentive, absent regulation, to limit its risk-taking in order to reduce the systemic danger to other participants and third parties.[316]

The regulatory agenda, then, remains that of affecting the risk-incentives of individual participants, understood in abstract terms without reference to the content or purpose of financial activity. Indeed, it is not clear what "systemic risk" adds to the general "excessive risk" idea, except for an enumeration of additional reasons why firm-level risk-taking can be expected to be excessive (primarily regarding externalities and interactive interdependencies between firms). The central thrust of the analysis remains within the frame developed within the market failure over the past few decades and, as with excessive risk, the systemic risk formulation does not purport to define by how much, exactly, risk should be reduced.

Most importantly, the objective of regulation continues to be cast in terms of static allocative efficiency, without consideration given to the growth function of credit. Although the analysis proposes to go "beyond economic efficiency,"[317] this only leads to acknowledging financial "stability" as an independent ground for regulation. Schwarcz considers the social effects of financial instability to reach beyond economic efficiency strictly defined, involving considerations such as potential crime rate increases,[318] but does not take into account the macro-dynamic elements of finance. As such, his account remains squarely within the mainstream of the market failure approach, which

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[316] *Id.* at 198.
[317] *Id.* at 207.
[318] *Id.* ("Although efficiency in a broad sense includes health and safety, these are sometimes viewed from a regulatory standpoint as going beyond efficiency.").

had already accepted "stability" as a key aim of regulation prior to the turn to systemic risk.[319]

On first blush, the proposals by Admati et al. and Brunnermeier et al. also subsume systemic risk under the language of externalities. The Geneva Report states on numerous occasions that the purpose, indeed "arguably the only purpose"[320] of financial regulation, is to ensure that banks internalize the externalities, or social costs, that arise from bank failures. This concept sits comfortably within the microeconomic approach of the market failure paradigm, which conceives of individual-level units as primary and their effects on each other as secondary, and in which all causes and effects are reducible to the non-interactive welfare of individuals.

On closer inspection, however, both proposals provide analyses of systemic dynamics that exhibit what are truly "emergent" properties—phenomena that can only meaningfully be explicated if the interaction, correlation and collective behavior of the various parts are analyzed as a unit rather than as a secondary effect.[321] The proposals of the Geneva Report rest on its elaborate account of boom-bust cycles and the specific characteristics of the recent bust.[322] The very treatment of the business cycle or, more accurately, the credit cycle, has not been part of the market failure paradigm.[323] Such matters used to be discussed in the context of monetary policy, which, as we have seen, the market failure paradigm pushed outside the ambit of banking regulation.[324] Further, on the analysis of the Geneva authors, the cycle is not simply understood as one where credit expansion or contraction occurs across many institutions simultaneously. Rather, asset prices and credit levels tend to rise in a relation of mutual dependence with declines in measured risk and with increased maturity-mismatch, and these tendencies

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[319] Early attempts to exclude stability, and to suggest that bank failures should not *per se* be of regulatory concern, were quickly aborted, when worries about the effects of financial collapse took over as a matter of government practice. Discussed *supra* Part IV.C.

[320] BRUNNERMEIER ET AL., *supra* note 2 at 11.

[321] *Id.* at 12.

[322] *Id.* at 11.

[323] The authors of the report point out that they are filling this particular void. *Id.* at 15 ("The current approach to banking regulation seems to assume that financial crashes occur randomly . . . In reality, crashes follow booms. . . [W]e need to supplement micro-prudential regulation with macro-prudential regulation to calm the booms and soften the busts.").

[324] *See generally* Laidler, *supra* note 122, at 1264.

exacerbate each other when any one of them begins to reverse.[325] Thus, "risk" is taken to be "endogenous to bank behavior."[326]

This latter point has also been at the center of Hellwig's work over the last couple of decades. He has forcefully demonstrated how risk depends on the way a bank's balance sheet correlates with those of other firms and the risks that they imply. For instance, an apparent risk-free asset on the balance sheet of a firm can cause a significant risk at the systemic level (as occurs when credit-default swaps are perceived to hedge the risks of certain derivatives, while the counter-party risk of these CDSs actually correlates with the credit risk of the underlying assets).[327] This point is developed in Admati et al.'s critique of attempts to refine risk-measurement models for regulatory purposes. Their chief ground for imposing high capital ratios is the role of high leverage in downward "deleveraging" spirals, in which losses due to asset-price declines make it both more difficult and more urgent to refinance, and where "leverage multipliers" accelerate the decline.[328] For example, a 2.5 percent capital ratio means that a loss of 1 dollar would trigger deleveraging through the selling of 40 dollar's worth of assets, the price of which will continue to decline because of such massive selling-off.

These lines of analysis cannot, arguably, be properly described, let alone developed, within the confines of a reductive microeconomic analysis. Hellwig states that the recent downward spiral of the financial

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[325] BRUNNERMEIER ET AL., *supra* note 2, at 11 ("In trying to make themselves safer, banks, and other highly leveraged financial intermediaries, can behave in a way that collectively undermines the system. Selling an asset when the price of risk increases, is a prudent response from the perspective of an individual bank. But if many banks act in this way, the asset price will collapse, forcing institutions to take yet further steps to rectify the situation. It is, in part, the responses of the banks themselves to such pressures that leads to generalised declines in asset prices, and enhanced correlations and volatility in asset markets.").

[326] *Id.* at 15.

[327] *See* Hellwig, *supra* note 306, at 309 ("The correlation of the counter-party risks of these credit default swaps with the underlying credit risks of the MBS CDOs themselves went unnoticed.").

[328] *See* Admati et al., *supra* note 6, at 7 ("Another consideration concerns corrective measures that are taken when losses have occurred. If supervisors—or short-term creditors—are concerned with the bank's capital ratio, then, following a reduction of capital through losses, the bank must either recapitalize or deleverage by selling assets. Deleveraging puts pressure on asset markets, inducing prices to fall, with negative repercussions for other market participants, who also have these assets on their books.").

system "can be understood as a systemic response to a collective deleveraging attempt."[329] Some of the correlations observed arise from the joint dependence of different securities and markets on common factors that drive the overall system."[330] Although writings on capital ratios have, over the past few decades, begun gradually to qualify the "Newtonian" assumptions of Modigliani and Miller and relax their conditions,[331] the language used here arguably reflects an analytical framework quite distinct from the building blocks of that theory.

Brunnermeier et al. have gone even further away from the familiar regulatory terrain of the last few decades. Their proposal of counter-cyclicality arguably does more than identify cycles and respond to them with care by increasing buffers to prepare for busts.[332] While they are presented as a way of avoiding the *pro*-cyclicality that usually attends the imposition of capital requirements,[333] they can also be understood as similar to monetary policy, i.e., affecting the *economy-wide levels of credit*.[334] Their prescribed capital requirements would "lean against the wind," and the authors recognize that their effect could be to "calm the booms and soften the busts."[335] This is potentially a momentous shift, as the concern with overall credit expansion, which used to be a central preoccupation of banking theorists and regulators until and including the New Deal, was an important component that the MFP did away with.[336] Further, under the Geneva proposal, the ratio that would be required will be significantly affected by two multipliers, one of which would rest on an assessment of what is considered a

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[329] *See* Hellwig, *supra* note 306, at 8.
[330] *See id.*
[331] *See* Allen N. Berger, et al., *supra* note 84, at 397.
[332] BRUNNERMEIER ET AL., *supra* note 2, at xvi.
[333] Capital requirements are pro-cyclical where the amount of weighted capital depends on risk rating—high ratings at good times translate into further lending, and vice versa. *See* BRUNNERMEIER ET AL., *supra* note 2, at xii.
[334] *See id.* at 4-5 (noting that the "health of the financial system . . . is key to the satisfactory functioning of the wider economy" and that credit restriction can weaken the wider economy).
[335] *See id.* at xvi-xvii.
[336] As I have shown, this was part of the idea behind margin requirements in 1934. *See supra* Part II.B. It has also been suggested that *capital* requirements, specifically, were used by the Bank of Italy in the 1950's with this "quantitative" end in mind. *See* BRUNO FOA, MONETARY RECONSTRUCTION IN ITALY 106 (1949).

sustainable ratio of credit to GDP.[337] This comes very close to touching the root issue of excessive financialization, and is probably the single strongest indicator of going outside the market failure paradigm.

These lines of analysis reveal the potential for a "systemic" analytical lens to open for policy consideration a concern with the financial system's performance in the real economy. The European Union regulation establishing the European Systemic Risk Board (ESRB) contains a description of the regulatory task at hand that points in this direction.[338] In its description, the ESRB is not only entrusted with "the prevention or mitigation of systemic risks to financial stability" but also expected thereby to "ensure a sustainable contribution of the financial sector to economic growth."[339] The regulation also defines systemic risk as "a risk of disruption in the financial system with the potential to have serious negative consequences for the internal market and the real economy."[340] These formulations appear to be informed by a more expansive analytical and regulatory horizon than for financial regulation than has prevailed under the market failure paradigm.

3. Financial Stability as a Public Good

Nevertheless, even if these proposals are taken as representative of the new mainstream, it would be misguided to conclude that the reflect a renewed public purposes paradigm. None of the works discussed so far in this Part proposes any *substantive* restrictions on bank transactions or re-reintroduces institutional divisions between firms providing different financial services (which deregulation had all but obliterated).[341] The authors of the Geneva Report explicitly state that they "do not share the zeal of some for governments to be involved in

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[337] *See* BRUNNERMEIER ET AL., *supra* note 2, at xvii.
[338] *Id.*
[339] Regulation (EU) 2010/1092, 2010 O.J. (L 331) 3 (1) (EC), ("The financial crisis has revealed important shortcomings in financial supervision, which has failed to anticipate adverse macro-prudential developments and to prevent the accumulation of excessive risks within the financial system.")
[340] *Id.* at Art. 2.
[341] *See* Hellwig, supra note 306, at 5 (discussing how certain modes of regulation became "dysfunctional because financial innovations, the liberalization of international capital flows, and the revolution in information and communication technologies had changed the makeup of the industry and intensified competition in financial sectors all over the world.").

the micro-decisions of private firms."[342] Both reports accept the general premise of the risk-incentives rationale for capital requirements, although they do not emphasize it. Further, central to the work of Hellwig and Admati et al. is the application of the Modigliani and Miller theorem to the issue bank capital requirements, in support of their central thesis that it is not, in principle, costly, to have banks hold higher equity levels.[343] These elements in the two proposals continue the trend of the market failure paradigm.

Perhaps this might have been expected from the focus on capital requirements. Indeed, it is at the level of proposed policy responses that the limits of the current interpretations of "systemic risk" are most obvious. This is largely the work of the Basel Committee, hosted by the Bank for International Settlements (BIS). BIS economists routinely describe systemic risk as implicating the "objective" of financial regulation, but not its "instruments."[344] Where the institution continues to be capital requirements, the Basel Committee is likely to retain its centrality in the global regulatory arena, and the possible theoretical advances held out by a more deeply systemic approach may be rendered relatively sterile. Most likely, the real economy will continue to be seen only as a potential victim of financial instability, rather than as also defining a positive ambition. Arguably, for the financial sector to deliver a "sustainable contribution to economic growth" as envisaged in the ESRB mandate,[345] it would require more ambitious policy instruments, indeed perhaps a different institutional architecture.

The outer limits of the currently dominant discourse are captured by the idea that financial stability is a public good.[346] This

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[342] BRUNNERMEIER ET AL., *supra* note 2, at 13.

[343] Admati et al., *supra* note 6, at 5 n.9.

[344] Andrew Crockett, General Manager of the Bank for International Settlements and Chairman of the Financial Stability Forum, Remarks before the Eleventh International Conference of Banking Supervisors: Marrying the Micro- and Macro-Prudential Dimensions of Financial Stability (Sept. 20-21, 2000) ("The distinction between the micro- and macro-prudential dimensions of financial stability is best drawn in terms of the objective of the tasks and of the conception of the mechanisms influencing economic outcomes. It has less to do with the instruments used in the pursuit of those objectives."); *see also* Claudio Borio & Mathias Drehmann, *Assessing the risk of banking crises - revisited*, BANK FOR INT'L SETTLEMENTS Q. REV. 29, 29 (Mar. 2, 2000).

[345] 2010 O.J., *supra* note 393, at Art. 3(1).

[346] This conception was advanced at least by two central figures of the banking world, before and after the recent crisis. One is the former head of

familiar market-failure formulation delineates the types of things that are appropriate for the government to provide because the market would do poorly at providing them.[347] Here, government regulation is justified where financial stability is non-excludable and non-rivalrous, thereby constituting a classic "public good." As such, the market can be expected to do poorly at providing stability in a self-regulating manner given its nonexcludability, meaning that firms are unable, under current technological and institutional conditions, to adequately internalize its benefits. To supply financial stability at efficient levels would require firms to be able to appropriate enough of its benefits to cover its costs of provision—presumably taking lower risks for lower returns. Further, as the enjoyment of financial stability by some does not come at the expense of others—it's non-rivalrous—it would not in any case be desirable to render it more excludable, reinforcing the case for public intervention.

The "stability as public good" concept dovetails, then, with the core analysis of "systemic risk" discussed above. Most "systemic risk" analyses present private actors as lacking the incentives to internalize the risk to the rest of the system, thus taking risks that reflect only their individual cost-benefit analysis.[348] While this is also true of market participants in other fields, in the area of finance, the systemic effects are understood to be vast negative externalities that, in the event of collapse, far outweigh the benefits of competition when considered socially.[349] Identifying the interconnectedness of the financial system as the source of the systemic risk, then, is the mirror image of conceiving financial stability as a public good.

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the IMF, Michel Camdessus. *See Michel Camdessus,* Managing Director of the International Monetary Fund, Remarks at the IMF/Research Conference: International Financial and Monetary Stability: A Global Public Good? (May 28, 1999) (transcript available at http://www.imf.org/external/np/speeches/1999/052899.htm). The other is the head of the Bank of Japan, Masaaki Shirakawa. *See* Masaaki Shirakawa, Governor of the Bank of Japan, Remarks as the IMF-World Bank Meetings (Oct. 14, 2012).

[347] McVea, *supra* note 39, at 419 ("The significance . . . for the market failure paradigm is that market forces tend to under-provide public goods, and it is this under-provision which is said to constitute a market failure which may require regulation to remedy it.").

[348] *See* BRUNNERMEIER ET AL., *supra* note 2, at 15.

[349] *See* Acharya, *supra* note 47.

B. Half-Hearted Derivatives Regulation

While capital requirements continue to be central to the current landscape of financial regulation, they are not the only institution to occupy regulators' energies. In particular, the Dodd-Frank Act in the US and similar legislation in Europe have accorded special attention to the regulation of derivatives, a phenomenon of vast global proportions that has been described as "toxic" [350] and a "weapon[] of mass destruction."[351] What significance does this regulation have for the ongoing terms of the discourse as discussed so far? It emerges from the brief account the follows that, in this area too, there is little to indicate a shift away from the market failure paradigm, taking the form of a lingering resistance to considering the economic benefits—or, indeed, the lack thereof—of derivatives trading.

A series of G20 meetings following the 2008 crisis was Central to the Dodd-Frank Act, for it announced that devising a regulatory framework for derivatives trading is a key task for global financial regulation.[352] Led by the US and culminating in a 2009 Pittsburgh summit, the meetings resulted in a set of shared understandings on how to get the world economy back on track and, in particular, on the need for strong regulation of financial institutions. In their joint statement, leaders declared that they "will not allow a return to banking as usual" and asserted that "[s]tandards for large global financial firms should be commensurate with the cost of their failure."[353] First and foremost, they called "to raise capital standards."[354] But not much further down the list came the need "to improve the over-the-counter derivatives market."[355]

Derivatives trading arguably already ceased to be banking as usual in an important sense around the mid-1990s, when it started growing to unprecedented proportions. By 2007, the volume of

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[350] George Soros, *One Way to Stop Bear Raids: Credit Default Swaps Need Much Stricter Regulation*, WALL ST. J. (Mar. 24, 2009, 12:01 AM), http://online.wsj.com/news/articles/SB123785310594719693 ("CDS are toxic instruments whose use ought to be strictly regulated: Only those who own the underlying bonds ought to be allowed to buy them.").

[351] Warren E. Buffet, *Chairman's Letter* (Feb. 21, 2003), https://www.berkshirehathaway.com/letters/2002pdf.pdf ("[D]erivatives are financial weapons of mass destruction, carrying dangers that, while now latent, are potentially lethal").

[352] *See* Leaders' Statement, *supra* note 36.

[353] *See id.*

[354] *See id.*

[355] *See id.*

derivatives trading in organized exchanges equaled global GDP, and over-the-counter trading was estimated at about ten times that amount.[356] That taming them is considered bold and innovative signals the dominance of market-centered premises. Moreover, while it is often said that over-the-counter derivatives were not regulated prior to 2008, it is not the case that they operated in a legal free-for-all.[357] As Lynn Stout has convincingly shown, an old common law rule had deemed some derivatives contracts unenforceable, and this had kept such trading on a leash until the rule was gradually eroded in the UK and, from the mid-1980s, also in the United States.[358] Derivatives regulation on a global level is a formidable regulatory task. However, as the "market improving" formulation quoted above indicates, the regulation envisioned by the G20 is minimal, in the sense of favoring market-mimicking patterns over more ambitious alternatives.[359] That is, the goal here is to make derivative markets better *as markets*, rather than reduce any derivative activity deemed economically (or socially) undesirable.[360] In line with the market failure paradigm, this formulation of the regulatory aspiration reflects the working assumption that facilitating more market transactions for any product, including financial "products," is always and everywhere a good thing.

"Transparency" is the key word that captures this approach.[361] Whenever the regulator's role is understood in terms of increasing transparency, the problem to be solved is conceived as one of information deficiencies.[362] The aspiration, in other words, is to have

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[356] The Bank for International Settlements, OTC DERIVATIVES STATISTICS, *OTC derivatives outstanding* (May 17, 2023) https://www.bis.org/statistics/derstats.htm [https://perma.cc/564C-73G7].

[357] Lynn A. Stout, *Derivatives and the Legal Origin of the 2008 Credit Crisis*, 1 HARV. BUS. L. REV. 1 (observing that prior to 2008 derivatives trading was regulated to some extent by clearinghouses and the Commodity Exchange Act).

[358] *See id.*

[359] *See* Leaders' Statement, *supra* note 36, at 18 ("We will minimize any negative impact on trade and investment of our domestic policy actions . . . . We will not retreat into financial protectionism, particularly measures that constrain worldwide capital flows, especially to developing countries.").

[360] *See id.* at 8.

[361] *See* David E. Pozen, *Transparency's Ideological Drift*, 128 YALE L. J. 100 (2018).

[362] *See* Leaders' Statement, *supra* note 36, at 13 (calling for more refinement and improvement of information about the commodity market, including more detailed and disaggregated data).

existing markets better approximate the perceived ideal of a market with perfect information.[363] Indeed, "transparency" is central to the guidelines promulgated by the global Financial Stability Board (FSB), which state that the reforms in the "over-the-counter (OTC) derivatives market" aim to "improve transparency . . . mitigate systemic risk, and protect against market abuse."[364] As we have seen, mitigation of systemic risk does not, by itself, tell us of any standard outside the market.[365] This is all the more true of the notion of market abuse, a standard that is internal to markets. The concern is that OTC derivatives are traded in unusual channels, with prices that have been decided bilaterally in private, and that there is a mess of trading—shady and abusive—that nobody knows about.[366] If only it were cleaned up and allowed to operate like we expect markets to operate, all would be well.

The two main pieces of regulation to emerge from the FSB guidelines are, in the United States, Title VII of the Dodd-Frank Wall Street Reform and Consumer Protection Act[367] ("Dodd-Frank") and, in Europe, in the European Market Infrastructure Regulation ("EMIR").[368] In line with the perception of the problem as one of transparency, both statutes impose reporting requirements and dictate that derivative prices be made public.[369] In addition, both stipulate that derivatives trading be carried out through clearinghouses as "central counterparties."[370] The latter is a measure that goes beyond mere transparency toward some dictation on how market activity should be organized. Yet, crucially, it remains within the same general approach: that is, to improve and

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[363] *See* Dan Awrey, *The Mechanisms of Derivatives Market Efficiency*, 91 NYU L. REV. 1104, 1123-1124 emphasizing Dodd-Frank Act's primary rationale of enhancing "price discovery" of derivatives).

[364] Financial Stability Board, *OTC Derivatives Reforms Progress* 1 (Sept. 2, 2013) http://www.financialstabilityboard.org/publications/r_130902a.pdf.

[365] *See* the discussion of systemic risk *supra* Part V.A.

[366] Financial Stability Board, *supra* note 364, at 3 ("The stresses of the crisis exposed these risks: insufficient transparency regarding counterparty exposures; inadequate collateralisation practices; cumbersome operational processes; uncoordinated default management; and market misconduct concerns.").

[367] Dodd-Frank Wall Street Reform and Consumer Protection Act, H.R. 4173, 111th Cong. (2009-2010). Some of the Act's provisions have been eased in 2018 by the Economic Growth, Regulatory Relief, and Consumer Protection Act.

[368] Regulation (EU) 2012/648, 2012 O.J. (L 201) 1 (EC).

[369] *See id.;* H.R. 4173, *supra* note 367.

[370] *See* H.R. 4173, *supra* note 367; 2012 O.J. (L 201), *supra* note 368.

smooth out market behavior, by mimicking solutions that market participants would be expected to create spontaneously.[371] The regulation seems therefore to prod and nudge the market in this direction. Significantly, neither are designed to reduce derivatives trading or to limit it to certain uses, only to streamline it.[372]

1. The Elephant in the Room

What is derivatives trading good for? This question recurs in the post-2008 discussion of their rise, risks, and fate. Does this vast market reflect ingenious new instruments for reducing risk exposures or a playing field for rampant speculation, in which the house always wins? Who can tell? One thing is clear at the outset: the regulatory response to derivatives so far does not seek to give an answer to this theoretical question, much less to provide an adequate response to the real-world problems it raises. But it would be a mistake to ignore the significance of this issue in the background, for spurring the processes that brought about the regulation.

Astute observers of the derivatives market have sought to see beyond the fog of technical terminology, and to understand what derivatives trading is about.[373] Both positive and damning accounts of derivatives provide some discussion of their purpose and cite the reduction of risk exposures—or hedging—as their redeeming feature.[374] This feature is widely understood to be crucial to economic activity, as futures contracts allow the planning and insuring needed for business planning and the avoidance of devastating fluctuations. We often learn about the centuries—even millennia-old—practice of agricultural futures. However, these justifications say little on whether the dramatic increase in derivatives trading the last few decades serves an economic purpose or not. Concerned observers point out that the meteoric rise of derivatives trading from the 1990s onward was not the result of more innovative ways to hedge (reduce exposures) but, rather, reflects new

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[371] As they have indeed created in the past. *See* Stout, *supra* note 357, at 14 (describing how, when the state could not be relied upon to enforce derivatives, private actors have established their own clearing houses, to ensure netting etc.).

[372] *See* H.R. 4173, *supra* note 367; 2012 O.J. (L 201), *supra* note 368.

[373] *See* Dan Awrey, *Split Derivatives: Inside the World's Most Misunderstood Contract*, 36(2) YALE J. ON REG. 495, 507 (2019) [hereinafter Awrey, *Split Derivatives*]; Stout, *supra* note 357.

[374] *See* Stout, *supra* note 357, at 11.

ways for traders to profit, in a supportive legal environment, while spurring an avalanche of speculative trading.[375] Indeed, when one examines the figures, it emerges that credit default swaps, for example, are traded in volumes that are a number of times larger than the underlying assets.[376] This means that *most* of the trading is speculative.[377] If we take this issue to be a serious problem, the regulatory concern with transparency, as well as the establishment of clearinghouses, do not even scratch the surface.

But is this really a problem? To be precise, is this a *conception* of the problem that is suitable for regulatory treatment? As we have seen, in the New Deal reforms the problem of speculation was perceived to be critical, and the regulator turned the distinction of investment-speculation from irrelevant or untenable to central, operationalized it, and established what had seemed earlier—both theoretically and practically—to lay outside the regulatory ambit, as the justification for imposing margin requirements.[378] Today, however, the regulatory discourse around derivatives has again given up on the very ambition to tackle speculation directly.[379] Significantly, this is not generally perceived as a weakness. Rather, the paradigm on which regulation today operates holds any regulatory distinction between hedging and speculation to be untenable or illegitimate. It is central to the market failure approach that there be no substantive judgment outside the market as to what constitutes appropriate investment, appropriate financial activity, or appropriate uses of financial instruments. The focus on derivatives post-2008 does not change this.[380]

In other words, the transparency response congeals a *perception of the problem*, one that has nothing to do with the appropriate purposes of derivatives trading and its relationship to the real economy. The

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[375] *See id.* at 19-20 (explaining how regulations loosened—and how firms began to speculate and lose big).

[376] *See id.* at 24 (stating that it "is difficult to see how a derivatives market four times larger than the underlying economy can be explained away as 'insurance.'").

[377] *Id.*

[378] *See supra* note 131 and accompanying text.

[379] *See* Stout, *supra* note 357, at 19-20.

[380] *See* Dan Awrey, *The FSA, Integrated Regulation, and the Curious Case of OTC Derivatives*, 2 U. PENN. J. OF BUS. L. 1, 35 (2011) (summarizing the objectives of the regulatory approach toward OTC derivatives to include the following: "(1) guard against excessive systemic risk; (2) promote transparency and efficiency; (3) prevent market manipulation . . . (4) block inappropriate marketing to unsophisticated parties.").

"transparency" route that the regulation has taken assumes no questions ought to be asked about the social usefulness of this kind of activity. What the regulation purports to do is reduce the odds of another catastrophe similar to 2008, by bringing OTC derivatives more in line with normal trading in stock, smoothing out and oiling the market. It thereby assumes away any possible *relationship* between the increased systemic riskiness and the *purposes* for which this trading occurs.[381] It operates on the assumption that, so long as the game is on the up, there is no problem. That is, if the entities doing the trading stay in business, all is well. As we will see below, some argue persuasively that such a relationship is key, and that over-speculative finance is itself the source of instability.[382]

In legal and institutional terms, it is not difficult to imagine regulation that does distinguish hedging from speculation, and at least two routes are readily available. One route would be based on intentionally reducing the *volume* of trading, with the likely assumption that the first thing to go would be that which is economically less necessary. This harks back to the margin requirements of the New Deal,[383] and is central to proposals of a "Tobin Tax."[384]

A second route would be to restore a common law distinction between trades with an economic interest in the underlying assets and those without such interest and refuse to enforce the latter. In the context of derivatives, deregulation took the form of dismantling the common law rule against difference contracts, as part of a process referred to at the time as "modernization."[385] This first occurred in Thatcher's U.K., with the Financial Services Act 1986; then, in the United States with Commodity Futures Modernization Act of 2000. Rendering all derivative contracts enforceable has also meant that, in line with contemporary economic thought, the question of social purpose and the

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[381] *See* Awrey, *Split Derivatives, supra* note 373, at 502 (stating that the "emphasis on market transparency" distracts away "from the significant prudential risks posed by the widespread use of derivatives," but stopping short of linking this instability with speculative uses).

[382] *See* Dimitri B. Papadimitriou & Wray, L. Randall, THE ELGAR COMPANION TO HYMAN MINSKY, 117 (2010) ("[E]xcessive speculation prevented the stock market from fulfilling its 'proper social purpose' of directing 'new investments into the most profitable channels.'").

[383] *Supra* Part III.C.

[384] *Infra* Part VI.A.

[385] *See* Stout, *supra* note 357, at 22 (noting that Congress "removed legal restraints on derivatives speculation that traced back . . . centuries," in the name of "modernization.").

term "speculation" came to be officially perceived as old-fashioned and moralistic.The economic theories that would support denying legal enforcement to speculative contracts were pushed aside. The "modern" approach, as we have seen, insists on subjective preference as the sole and final arbiter of value, and refuses to draw lines of "good" and "bad."This is at the heart of the current ideological landscape.

Here is a suggestion: although obscured in the regulatory framework, everybody knows that the problem with derivatives trading is that it is predominantly speculative and that it has taken on economically unjustifiable proportions.Something is wrong with the market for derivatives itself, and it cannot be resolved by making this market smoother and the prices more public. It is not just that this trading is opaque, but rather that there is way too much of it, and that it reflects sheer speculation for the benefit of traders. The unprecedented vastness of derivatives trading is a socially *useless* and harmful phenomenon. This is obvious to anyone with eyes to see—yet, in most official circles, this formulation cannot be respectably uttered, for it is not in line with received economic premises.

In less official pronouncements, we do find indications that this problem is understood in these terms, and that this understanding might drives regulatory initiatives. Arguably, Dodd-Frank would not have been pushed for if not for Rep-D Barney Frank's wider sense of the issue, which clearly does see speculation and volume as a problem.[386] In television interviews Frank expressed the view that much derivatives trading was useless and that, if the regulation had the effect of shrinking the market (as traders warn), this would not be a problem.[387] Nor is Barney Frank alone. Adair Turner, on the other side of the Atlantic, has likewise made remarks about the "social uselessness" of certain financial instruments.[388] Coming from the head of the British Financial Services Authority, this caused an uproar.[389]

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[386] PBS Frontline Documentary Interview with Barney Frank, Inside the Meltdown (Feb. 2009).

[387] *Id.* ("[T]he holding company at the top that took the profits generated by the insurance company and speculated in the most irresponsible, unregulated way.").

[388] Caroline Binham, *Turner Plan on "Socially Useless" Trades Make Bankers See Red*, BLOOMBERG (January 7, 2010 at 7:01 PM EST), https://www.bloomberg.com/news/articles/2010-01-08/turner-plan-on-socially-useless-trades-make-bankers-see-red#xj4y7vzkg.

[389] Note especially the outrage expressed by Howard Wheeldon, senior strategist at BGC Capital Partners, who was quoted to say that he was

VI. Reconstructing the Public Purposes Paradigm

In contrast with the market failure paradigm stands a regulatory outlook grounded in a *public and purposive* conception of finance. This paradigm foregrounds the social function of the financial system, evaluating its performance in terms of how effectively it channels social savings toward desirable activity (productive, consumptive, or otherwise, as we will see). Financial activity is assessed primarily through the lens of fulfilling its role of guiding investment in the real economy.[390] Accordingly, the problem with the global financial system up to—and post—2008 is not a matter of excessive private "risk" by individual firms, but of an inflated financial system hanging over the real economy rather than serving it, with surplus capital being channeled into speculation or other financialized activities divorced from productive investment.[391] On this approach, the aim of regulation should be not merely, or even primarily, to improve or smooth out financial markets. It should be to target and significantly reduce the related phenomena of *speculation* and *financialization*.[392] This may be done modestly, by curbing market activities that derail finance from its proper

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"appalled, disgusted, ashamed and hugely embarrassed that [he]should have lived to see someone supposed to be held in high esteem and that who already commands a senior and crucially important position as effective head of the UK regulatory regime making such damaging and damning remarks." *Id.*

[390] *See* Tamara Lothian, *Rethinking Finance Through Law: A Theoretical Perspective* 1, 4 (Ctr. Of L. and Econ. Studies, Working Paper No. 412, 2011) [hereinafter Lothian, *Rethinking Finance*] (noting that "channelings savings to productive investment is not automatic . . . its failure can't be understood as a consequence of short-term, market imperfections); Lothian & Unger, *supra* note 35, at 27 (stating that, when finance loses its "connection to the imperatives and opportunities of production," it "does relatively little good to the real economy.").

[391] *See id.*, *supra* note , at 2 (calling it "necessary to reshape the . . . relation of finance to the real economy so that finance becomes servant rather than master."); *see also* Hockett & Omarova, *supra* note 20, at 1214 (explaining that financialization happens when regulators are "unable or unwilling to modulate . . . in a manner that prevents excess private credit-generation" and financial institutions misallocate the excess credit by diverting it from "uses other than investment in productive enterprise.").

[392] *See* Hockett & Omarova, *supra* note 20, at 1215, 1217 (arguing for a financial model that aims to "drain[] excess credit from more purely speculative instruments" and "proactively counteract and minimize" financialization).

course, or more boldly, by encouraging better performance through affirmative government credit policy and institutional design.

As Ed Rubin noted in 1989, deregulation "rests upon a vision of the world" that is "rarely made explicit" but makes "strong claims about social organization, individual behavior, and political action."[393] This vision "is one way of looking at, or interpreting, a certain group of events, and must be evaluated according to its usefulness as an interpretation."[394] As we have seen,[395] the market failure paradigm does not call into question the vision and premises of deregulation, reflecting a "deregulatory-regulatory" approach.

The public purposes paradigm, by contrast, precisely rejects the usefulness of the interpretation offered by the market failure paradigm. Indeed, this paradigm carries out a *double reversal* of the premises of the market failure paradigm. First, it reverses the default presumption against regulation, with the conviction that unfettered market mechanisms will tend to be deeply inadequate for ensuring the proper functioning of the financial system, and that their very scope, not only their riskiness, should be circumscribed by regulation. While it sees markets as "failing" in the broader sense of the term, this paradigm is not premised on the standard notion of "market failure" that is couched in static economic efficiency and that sees micro-level individuals (agents or firms) as the sole unit of analysis. Thus, the public purposes paradigm also does not call for an ongoing investigation of incentive and information dynamics in individuals' interactions to demonstrate that a market failure is present in the form of excessive risk-taking. Being more concerned with *where* credit is going, the paradigm does not center on the risk behavior of participants and their abstract risk-return calculations. Rather, it asserts the particularity of the financial sphere and its distinction from other markets, a distinction that is qualitative and hierarchical. Financial institutions are unlike other firms,[396] and the financial economy has a particular role vis-à-vis the real economy. This is precisely the inverse of the intellectual and institutional moves that began in the late 1950s and matured by the late 1970s, which effectively flattened finance, reducing all phenomena to a single continuum, both internally (debt and equity instruments are all

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[393] Rubin, *supra* note 5, at 1250.
[394] *Id.*
[395] *Id*. at 1249 (arguing that the use of the term "reregulation" reflects a participation in "deregulation" by defining itself as an opposition to the concept).
[396] *See* CORRIGAN, *supra* note 235.

equivalent) and externally (vis-à-vis the rest of the economy). The public purposes paradigm insists on considering financial markets as instruments rather than ends.

Second, embedding financial markets within the real economy also implies embedding economic analysis within social purposes. The public purposes paradigm calls for a regulatory discourse in which the ends and values guiding policy are determined by conscious deliberation, and are not limited to those presently espoused—implicitly or explicitly—by most mainstream economists, policy technocrats and bankers. The fused commitment to "the market" and to economic efficiency in its narrow sense is seen as just one set of claims in a wider discourse of political and economic possibility: Economics should be the subject of political contestation and be used in the service of socially determined ends.[397] This does not imply that regulation takes a populist or "moral" turn to the detriment of economic sense. Rather, it reinstates a normative continuity characteristic of a political economy mode of thinking, in which economic theory is assessed by its responsiveness to accepted values.

Rejecting also the hubris of the project to keep improving calculations of future uncertainty as "risk," the public purposes paradigm focuses more on goals and potential than on modeling the risk of failure.[398] But it also expects, as Hyman Minsky has argued, that a dwindling relationship between financial activity and investment in the real economy is itself a recipe for instability.[399] This paradigm is chiefly concerned by the related phenomena of speculation and *financialization*: the rise in size and profitability of the financial sector relative to other sectors.[400] The proliferation of trade in financial derivatives, which the market failure paradigm addresses with "transparency," is here scrutinized as a wasteful house of cards, rather than a market mechanism that can infinitely improve risk-allocation—

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[397] *See* Rubin, *supra* note 5, at 1273 ("The argument based on alternative policies is different. It does not claim that the market has failed in a particular area, but that a market is not the social policy that we should employ to achieve our objectives.").

[398] *See Healthy Banking System is the Goal, Not Profitable Banks*, *supra* note 305 (proposing the use of simple capital ratios, thereby abandoning sophisticated risk calculations).

[399] *See* Papadimitriou & Wray, *supra* note 382, at 1 (discussing Minsky's Financial Instability Hypothesis in light of the global financial crisis that began in 2007).

[400] *Infra* note 422 and accompanying text.

if only information were fully available.[401] Addressing the possibility that financial institutions might be (at least temporarily) stable but nevertheless *dysfunctional* in this deeper sense, the analytical and institutional project of the public purposes paradigm is to devise methods that identify, and measures that target, speculative financial activity. Its more ambitious horizon is the positive articulation of credit policy. In what follows, I seek to simplify this spectrum into two clusters, or two versions of the paradigm: a modest one that focuses on curbing speculative trading, and a bolder one that aims to articulate positive visions of the public ends of credit.

Note that, as reconstructed here, the public policy paradigm is a coherent and distinct spectrum of ideas and commitments, which answers the questions "what," "why," and "how" to regulate differently from the market failure paradigm. It consists of analytical, normative and institutional components. As with the market failure paradigm, these components are interrelated, and their tenets allow some flexibility.

A. Modest Version: Taxing Transactions and Curbing Financialization

Given the strong grip that the market failure paradigm continues to hold, it appears more likely that the public purposes paradigm can only regain influence along modest tenets, which do not require a significant ideological leap, and that would be palatable to most policymakers. Proposals grouped here under this version veer only incrementally from the dominant approach and prescriptions, and are rendered in the normative and analytical vocabulary of welfare economics. Nevertheless, it is clear that the sensibility animating this view is "public" and should be seen as a meaningful step outside the prevailing paradigm, providing markedly different answers to "what" and "why" and "how" to regulate. A key proposal that captures this outlook is the financial transactions tax, also known as the Tobin tax.[402]

A variety of reasons and sentiments have supported calls to impose a small levy on financial transactions, ranging from sheer revenue-raising pragmatism to fairness-based—sometimes populist—arguments that the financial industry should shoulder some of the cost

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[401] As discussed in the context of derivatives regulation. *Supra* Part V.B.

[402] The original Tobin Tax was to decrease volatility in the foreign exchange market. James Tobin, *A Proposal for International Monetary Reform*, EASTERN ECONOMIC JOURNAL 153 (1978).

of bailouts.[403] Arguably the most persuasive argument for the tax is the economic justification. Simply put, the idea is to throw sand in the gears of our overly liquid financial markets and *increase* the costs of transactions, in order to discourage short-term speculative trading which, by and large, is economically wasteful and destructive.[404] The European Commission's proposed directive for imposing a financial transactions tax (at a rate of 0.1 percent on most trade and 0.01 percent for derivatives), evokes this argument setting out to limit "undesirable market behavior."[405]

Identifying some financial activity as "undesirable" and limiting its volume is an idea diametrically opposed to the premises of the market failure paradigm, because it deems certain forms of financial activity as intrinsically problematic, not just excessively risky. The underlying premise is that such activities divert finance from its proper purpose, calling to mind the forms of New Deal-era measures against using credit for speculation.[406] Not surprisingly, both the premise and the corresponding regulatory ambition have an older "public purposes" grandfather.[407]

John Maynard Keynes first proposed a transaction tax in the context of his famous "casino" passage in the General Theory[408] to restrict stock market speculation. He defined "speculation" in contradistinction to "enterprise," to denote trading that was not based on an assessment of how the underlying assets would perform in the long run, but on predictions concerning the psychological patterns of behavior of the rest of the market.[409] Often short-term and disconnected

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[403] Thomas I. Palley, *The Economic Case for the Tobin Tax*, *in* DEBATING THE TOBIN TAX: NEW RULES FOR GLOBAL FINANCE 5, 6 (James Weaver, Randall Dodd, Jamie Baker, ed., 2003).

[404] *Id.* at 10.

[405] Pieter Baert, Financial Transaction Tax (FTT), European Parliament Legislative Train (September 20, 2023), https://www.europarl.europa.eu/legislative-train/carriage/financial-transaction-tax/report?sid=7301. The proposal fell through as European Union legislation but was then adopted by some member states.

[406] Discussed *supra*, Part III.B.

[407] HYMAN P. MINSKY, JOHN MAYNARD KEYNES 94 (1975).

[408] KEYNES, *supra* note 14, at 80. ("Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done.")

[409] *Id.*

from the perception of real future yield, excessive speculation prevented the stock market from fulfilling its "proper social purpose" of directing "new investments into the most profitable channels."[410] Key to Keynes' analysis was the insight that market mechanisms could not resolve the problem, because widespread speculation was precisely the "scarcely avoidable outcome of our having successfully organized 'liquid' investment markets."[411] That is, "deepening" the marketization of finance is not only not the solution; it is the catalytic cause.

In 1989, a pair of concurring opinions to Keynes' proposal were published, one by Lawrence and Victoria Summers and the other by Joseph Stiglitz, both of which recast this regulatory approach in the updated vocabulary of economic efficiency or social welfare.[412] Yet their starting point was the quintessential "public purposes" diagnosis that says much of Wall Street trading hinders the stock market's performance of its "*ultimate social functions* of spreading risks, guiding the investment of scarce capital, and processing and disseminating the information possessed by diverse traders."[413] Indeed, both found that ongoing increases in "transactional efficiency"—the facilitation of free trade in an ever-growing array of securities—have resulted in an overall reduced efficiency in the allocation of capital.[414] Stiglitz emphasizes that a large part of short-term trading, which is the sort of activity that the tax would reduce, is a wasteful zero-sum game with no social welfare benefits, conducted by people who believe (irrationally) that they can beat the market.[415] Summers' work identifies the harmful, rather than merely wasteful, outcome of "noise trading," trading that is not based on fundamentals (similar to Keynes' "speculation").[416] Although such trading can act as arbitrage and may correct for mistakes in share prices, patterns of mistakes are not random but cumulative, and

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[410] *Id.*
[411] *Id.*
[412] Lawrence Summers and Victoria P. Summers, *When Financial Markets Work Too Well: A Cautious Case for a Securities Transaction Tax*" 3 J. OF FIN. SERV. RSCH. 261, 262 (1989); Joseph Stiglitz, *Using Tax Policy to Curb Speculative Short-Term Trading* 3 J. OF FIN. SERV. RSCH. 101, 102 (1989).
[413] Summers & Summers, *supra* note 412, at 266 (emphasis added).
[414] *Id.* at 262 ("There are, however, increasing concerns that financial markets may have deteriorated over time in performing their social functions of spreading risk and efficiently guiding the allocation of capital, despite their increased transactions efficiency.").
[415] Stiglitz, *supra* note 412, at 106.
[416] Summers & Summers, *supra* note 412, at 268.

this sort of arbitrage is insufficient to correct them.[417] The result is that market prices become increasingly distant from fundamentals, thereby distorting signals for investment decisions and creating bubbles destined to burst.[418]

Stiglitz and the Summers also warn against the effect of short-term trading on the behavior of firms, as corporate managers committed to shareholder value align themselves with the market's attention span and operate increasingly on shorter horizons of profitability—to the detriment of longer-term projects.[419] Finally, and most generally, both emphasize the overall size of the financial sector, arguing that it is much too big and inefficient (in the broad sense of the term) and anecdotally lamenting the brain drain from more welfare-enhancing fields into Wall Street.[420] The statistics advanced to support these authors' concerns have only become more extreme in the decades since they wrote.[421]

This example highlights the answer of the modest public policy paradigm to the question "why regulate," and its relationship to the notion of market failure. The regulatory task is to ensure that the financial system is not derailed from its servicing of the real economy, and is built around the goal of productive growth, or "dynamic"

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[417] *See* Stiglitz, *supra* note 412, at 108-109 (explaining how noise trading can actually decrease the efficiency of capital allocation; for example, by issuing more stock when noise traders overvalue their shares).

[418] *See id.* at 105 (explaining how the overvaluation or undervaluation of the stock market that led to the 1987 crash "was a persistent one" that had been building for "perhaps years").

[419] Summers & Summers, *supra* note 412, at 266 ("It then considers three possible adverse consequences of excessive short-term trading: increases in volatility; the excessive diversion of resources into rent-seeking activities; and the shortening of the investment horizons of corporate managers."); Stiglitz, *supra* note 412, at 102 (arguing that short-term speculative trading "induced" firms "to pay excessive attention to short-term returns rather than long-term concerns").

[420] Summers & Summers, *supra* note 412, at 173 ("There is, however, a more fundamental reason for concern about the diversion of human and capital resources into the trading of securities than the costs of additional government regulation or the absolute size of the financial sector."); Stiglitz, *supra* note 412, at 109 (noting that "the costs of running the financial sector are huge.").

[421] Hannah Miao & Hugh Son, *$200,00 Paychecks, Exit Opportunities and Proximity to Power: Why Graduates flock to Wall Street*, CNBC (Aug. 19, 2021), https://www.cnbc.com/2021/08/19/why-college-graduates-flock-to-wall-street-jobs.html.

efficiency.[422] Within this broader sense of efficiency, the presumption of market efficiency is reversed. Indeed, in the important piece by Stiglitz, Jaramillo-Vallejo, and Park, *The Role of the State in Financial Markets,* the authors state that "not only is there no presumption that competitive markets are efficient, but there is a presumption that they are inefficient."[423] Thus, while their article is rooted in a market failure analysis (it is structured around seven grounds for market failure in banking), its aim is to establish that the basic presumption of market efficiency should be reversed, that there is overall *more failure* than efficiency.[424]

This approach to the purpose and scope of regulation goes beyond stability and, therefore, beyond the notion of "financial stability as a public good."[425] Instead, a more complete conception would be the *properly* functioning financial system as a public good. Within this conception, a well-functioning financial system is not simply up and running, but rather promotes and guides productive investment. Like stability, proper functioning would be poorly produced by the market.[426] We cannot expect individual participants to care about capital flowing to the right places: a single bank has no advantage in investing in a productive project over a similarly profitable speculative one, because the benefits of long-term economic growth are non-excludable. It would also be wasteful to try to render such benefits more excludable, as they are non-rivalrous.[427] The bank's choice highlights both aspects of the problem: First, private market actors can be expected to exhibit a much shorter time horizon for costs/benefits (have a much higher discount rate for the future) than is merited from a social point of view. Second, as Stiglitz's analysis demonstrates, individual participants have insufficient incentive to prefer a positive-sum game over a zero-sum game.[428] Speculation shifts around an existing pool of resources;

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[422] *See* Joseph E. Stiglitz, Jaime Jaramillo-Vallejo, & Yung Chal Park, *The Role of the State in Financial Markets*, WORLD BANK RSCH. OBSERVER 23 (1993).
[423] *Id.* at 19.
[424] *Id.* at 20.
[425] Discussed *supra* Part V.A.3.
[426] *See* Tobin, *supra* note 405, at 158 (calling it "dubious" that the financial market can be efficient given the "dominating preoccupation" with speculation).
[427] *See* Stiglitz, et al., *supra* note 422, at 24 (explaining non-rivalrousness and non-excludability).
[428] *See id.* at 109.

investment augments that pool.[429] This public goods situation calls for the state to provide some of the means to ensure that capital does go to the "right places" or at least, in this version of the paradigm, that less capital goes to the wrong ones.[430]

This image of the financial system can be thought of as an expansive interpretation of the concept of systemic risk and of macroprudential regulation. To the standard understanding of these terms, the expansive interpretation adds the idea that, given the recognition that financial institutions are heavily interconnected, they should not be conceived of as isolated market actors that partake in a web of networks. Rather, they should be understood, from the outset, as a "system" that interacts as such, both internally and with other parts of the economy. To this end, the emphasis on stability is insufficient. Rather, once a system is identified, the regulatory effort must be guided by the purpose and proper functioning of that system.

B. Bold Version: Finance as Servant

When compared to the market failure paradigm, the bold version of the public purposes paradigm that we will now consider shares much with the modest variant. However, it is significantly more ambitious along all three dimensions: (a) it is animated by a broader set of social ends; (b) it is more deeply troubled by financialization and offers more tools for discussing and targeting it; (c) it displays a higher level of confidence in, and expectations from, public regulation and entrusts it with positive roles rather than merely preventative ones. The image that captures this version is "finance as servant."[431] Key contributors to this version have been Tamara Lothian, Roberto Unger, Robert Pollin, and Dean Baker.[432]

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[429] To use terminology from economics of IP, there is a great difference between a firm that enters just to "cannibalize" or "divert" sales or consumer surplus from incumbent patentees by offering a non-improving substitute rival, and one that augments consumer surplus by offering improvements or variety that increase consumer satisfaction. *See* Oren Bracha & Talha Syed, *Beyond the Incentive—Access Paradigm? Product Differentiation & Copyright Revisited*, 92 T.X. L. R. 1841, 1856 (2014).

[430] Summers & Summers, *supra* note 412, at 266.

[431] *See* Lothian & Unger, *supra* note 35, at 337.

[432] The rest of the discussion will refer mainly to the following works: Robert Pollin, *Credit Allocation Policies to Advance Financial Stability and Social Welfare*, (New America Found. 2009); Pollin & Baker, *supra* note 42; M.

As we have seen, the public policy paradigm displaces the thin and purportedly value-free economic analysis with a discourse of *purposes*, and then seeks to shape markets and assess their performance in light of such purposes. The modest version considered the role of credit within the aims of production, dynamic efficiency, or "growth."[433] But bolder variants assert that this should not be taken as the exclusive goal, an essential aspiration or a given *telos*. Rather, broader social and economic ends, including the very aspiration toward expanded production and growth, should be open to reflective public deliberation. On this approach, while production remains at the center of the conversation of the role of finance, an ongoing and public articulation of a refined *productive agenda* is undertaken.[434] This is then the input for devising a public *credit policy*.[435]

The key concerns that refine "growth" as the guidepost for credit policy begin with creating the conditions for the long-term *sustainability* of credit expansion.[436] The concern with sustainable growth calls for the positive development of technological innovation, and a responsible exploitation of the Earth's resources.[437] To this may be added further social priorities and, in particular, normative commitments toward equitable growth, both in terms of fair distribution of its proceeds[438] *and* wider opportunities to participate in its generation.[439] This may be pursued through a credit policy that

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Ahmed Diomande, James Heintz & Robert Pollin, *Why U.S. Financial Markets Need a Public Rating Agency*, *in* THE ECONOMISTS' VOICE, (Berkeley Electronic Press 2009); Lothian & Unger, *supra* note 35; Lothian, *Rethinking Finance*, *supra* note 390.

[433] Stiglitz et al., *supra* note 422, at 23.

[434] *See* Lothian & Unger, *supra* note 35, at 338.

[435] *See* Pollin, *Credit Allocation Policies, supra* note 432.

[436] Such concerns are occasionally expressed also by mainstream actors. *See e.g.,* Leaders' Statement, *supra* note 36, at 6 ("As we commit to implement a new, sustainable growth model, we should encourage work on measurement methods so as to better take into account the social and environmental dimensions of economic development.").

[437] Pollin argues that regulation should be used to "channel a share of [financial institutions'] total lending into areas of the economy that would be most effective in advancing social welfare and environmental sustainability." *See* Pollin, *Credit Allocation Policies*, *supra* note 432.

[438] *Id.*

[439] *See, e.g.,* Lothian & Unger, *supra* note 35, at 3 (describing a regulatory program that achieves the ideal of "socially inclusive economic growth"

encourages lending toward certain uses (such as home ownership, education loans, and consumer loans).[440] Lothian and Unger emphasize the direction of credit to small firms via decentralized local banks, as a market-based reorganization that increases economic activity while simultaneously offering a broader tranche of the population the opportunity to engage in innovative, growth-enhancing activity and share in its fruits.[441]

While these ends might be shoehorned into the language of efficiency, that would be deeply inadequate for capturing, and certainly for stimulating, the kind of thinking and deliberation this approach calls for.[442] The reason for this inadequacy, and for the stronger rejection of the market default in finance, may be conceived in terms of the following argument: The so-called "externalities"—both to the proper functioning of the system ("positive") and to its failures ("negative")—are dramatically greater than what individual actors can meaningfully be made to calculate or internalize. Consequently, conceptualizing the financial system as a market that tends toward efficient equilibrium, and the aspiration toward completing the market, where all the information and incentive issues would be resolved at the level of individual calculations, is theoretically untenable. Such a construction would mean that every individual should internalize practically all of the relevant

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through basing that growth on an "institutionalized broadening of economic and educational opportunity.").

[440] Pollin gives the example of the policies around the establishment of Savings and Loan associations under the old Glass-Steagall framework. Pollin, *Credit Allocation Policies*, *supra* note 432 ("S&Ls were permitted to only lend money to households to finance the purchase of private homes. This requirement channeled massive pools of credit toward supporting the goal of middle-class home ownership, and everything that goes with that.").

[441] Lothian & Unger, *supra* note 35, at 23 (describing that one solution to the economic slump present in the U.S. today is a stimulus invested in the "the multitude of small and medium-size businesses responsible for generating the vast majority of jobs and of output in every contemporary economy," through "opening access to credit to credit, technology knowledge and knowledge-based capabilities.").

[442] The leap that the bold version makes, relative to the modest version, in terms of the scope of the agenda can be illustrated by another look at the Adair Turner affair. Having been reprimanded by bankers for saying that some financial activity is "socially useless," Turner said in an interview: "I wish I had said 'economically useless' rather than 'socially useless,' as it would have been more precise." Binham, *supra* note 388. "Economically useless" is a notion that calls forth the modest version of the public policy paradigm. By contrast, "socially useless," evokes the expansive horizon of the bold version.

social costs and benefits into their private "maximizing" calculation—which is precisely what the invisible hand logic (and, later, the equilibrium analysis) says an individual need not be expected to do. Therefore, the financial system should instead, from the outset, be modeled as a social instrument, operating as an infrastructural foundation of the economy and not as a self-justifying private market.[443]

This bold version of the paradigm gives regulation the objective and task of positively enabling and safeguarding the fit between the financial system and its purposes. Yet, just as importantly, it continues to hold that the actual work of the financial system should be carried out through competitive markets.[444] This paradigm remains committed to the conviction that markets are instruments of great power and that market mechanisms unleash immense economic potential for production, and innovation and the advancement of what is most desirable for societies and individuals.[445] This approach is therefore not proposing that the government engages in picking winners, takes over the banks, or engages in command-and-control supervision of the financial system.[446]

Indeed, for Lothian and Unger, the key concern with current arrangements is the *stifling* of private enterprise, through the diversion of resources into speculation.[447] Indeed, over the last few decades firms have been funding their operations almost exclusively through retained earnings.[448] This indicates that banks and the stock market barely contribute to real economic activity and that capital and credit are doing very little of what they are supposed to do.[449] Instead, "[f]inancial intermediation is substantially self-directed, oriented to asset trading and position taking."[450] A refinement of this analysis is provided by

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[443] *See* Lothian & Unger, *supra* note 35, at 337.

[444] *See* Pollin & Baker, *supra* note 42, at 15 (arguing that it "is more effective when private businesses compete in a free market to satisfy the demands of consumers.").

[445] *See* id. at 3 (explaining that productive investments are "the single most important engine—of economic progress," because it will "raise over-all productivity and deliver technical innovations into the everyday stream of economic activity.").

[446] *See id.* (stating "that public investments do not in fact 'crowd out' but actually 'crowd in,' private investments.").

[447] *See* Lothian & Unger, *supra* note 35, at 20.

[448] Pollin & Baker, *supra* note 42, at 11 (reporting that from 1980-2007 corporations' retained profits accounted for 98.7 percent of investment).

[449] *Id*. at 30.

[450] Lothian & Unger, *supra* note 35, at 3.

Pollin and Baker, who point out that companies have actually been borrowing, even at increasing rates, during the period from 1980 to 2007.[451] However, as capital investments are indeed being funded primarily with retained earnings, this borrowing is directed toward acquiring outside financial assets.[452] The cause and effect are therefore not necessarily that credit is snatched away from businesses, but that the dynamics of financialization have made it increasingly appealing for companies to acquire financial assets rather than engage in *their own* core activities of production and innovation.[453]

Regulatory proposals that rest on public purposes premises are varied and do not aspire to mimic the market. However, they are not necessarily more heavy-handed than the imposition of capital ratio requirements.[454] They can range on a spectrum of light to heavy "intervention," and do not seek to influence levels of risk-taking, but rather to nudge and prod the system to channel credit to appropriate spheres of real-economic activity.

An example of a regulatory framework for derivatives that is minimally invasive, but nevertheless potent from a public policy point of view, is provided by Lynn Stout's proposal to reinstate the common law rule against difference contracts.[455] This rule used to demand that, to be legally enforceable, derivative contracts have at least one party have an economic interest in the underlying assets.[456] This created a court-administered distinction between speculative and non-speculative trading. Without prohibiting or curbing derivatives trading artificially, this old rule resulted in most derivative contracts not being OTC,

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[451] Pollin & Baker, *supra* note 42, at 12.
[452] *Id.*
[453] *Id.* at 11 ("[C]orporations use their overall level of available funds to acquire financial assets as opposed to purchasing new plants and productive equipment."].
[454] *See* Black, Miller & Posner, *supra* note 26, at 403 (acknowledging that although imposing a capital requirement on creditor banks is a "relatively inexpensive way for the Federal Reserve Board to offset the added risk created by the holding company's nonbanking activities," it leads to the Federal Reserve Board, "[preventing] bank holding companies from engaging in certain activities.").
[455] Stout, *supra* note 357, at 12.
[456] *Id.* at 11 ("[A] contract for the sale of goods to be delivered in the future . . . is only valid when the parties really intend and agree that the goods are to be delivered by the seller and the price to be paid by the buyer.") (quoting Irwin v. Williar, 110 U.S. 499, 508-09 (1884)).

because private exchanges self-organized to facilitate transactions and secure enforcement.[457]

Stout's proposal carries an especially interesting legal-realist significance: instead of regulation that seems like "intervention," the state could simply revert to the previous common law situation, in which it refused to enforce certain contracts deemed contrary to public policy. By an extension of the same legal realist insight, one can see why this route of "non-intervention" would infringe upon the commitment of the market failure paradigm. What counts is not whether the legal form of the response appears to be hands-off, a "no-power" rather than a "liability,"[458] but rather, the dictate that no policy should hang on the distinction between "speculation" versus "hedging."[459] Present-day regulation reflects the ongoing hold of the premise that this distinction is not for the state to draw—that it is not the state's business. The reason is not that this distinction is *impossible* to draw, nor that regulators have committed explicitly not to draw it, but that they operate within a paradigm in which the question of social usefulness, or economic purpose, is beyond the pale.[460]

Further along the scale are regulatory tools that rely on incentive-based mechanisms to affect credit allocation. An important example is provided by Thomas Palley and Robert Pollin's proposals for asset-based reserve requirements.[461] With asset-based reserve requirements, banks must hold reserves—on which they cannot gain—against particular types of assets.[462] This allows the regulator to set credit policy priorities by defining the types of assets that are subject to,

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[457] *Id.* at 14-15 (highlighting that although the courts denied derivatives speculators judicial relief, speculators turned to "private ordering;" moving their trading into private venues that were willing to enforce speculative trades).

[458] Wesley N. Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 YALE L. J. 16, 55 (1913).

[459] Stout, *supra* note 357, at 12.

[460] *See*, *infra* p. 56.

[461] Thomas I. Palley, *Asset-based Reserve Requirements: Reasserting Domestic Monetary Control in an Era of Financial Innovation and Instability*, 16 REV. POL. ECON. 43 (2004).

[462] Pollin, *Credit Allocation Policies*, *supra* note 432 ("Such requirements can serve both to discourage financial market investors from holding an excessive amount of risky assets, and as a cash cushion for the investors to draw upon when market downturns occur.").

and those that are exempt from, reserve requirements.[463] This idea echoes the proposal made in the 1970s by MIT economist Lester Thurow, who also provides a clear sense of the underlying theoretical premises.[464] Against the general turn to competition and competitiveness, Thurow argued that social priorities should continue to be relevant in the allocation of credit and therefore in banking regulation.[465] While he was "convinced that in a perfectly functioning world most social priorities *should* be met with budgetary expenditures," the issue was "whether the real world is close enough to a perfectly functioning world so that we can afford to operate on the premise that the real world functions perfectly."[466] He described in detail the biases in the lending market (in particular, to the disadvantages of agriculture, small business, and housing) and weaknesses in the ability to raise taxes.[467] This led him to conclude that, while the most efficient solution would be "the nationalization of social lending," a more politically realistic solution would be the "general asset reserve requirements"—specifically developing the idea of government requiring a certain portion of bank assets to be directed to specified uses or else be subject to a one-hundred percent reserve requirement.[468]

Lothian and Unger propose further solutions that are market-based, yet boldly directive and implement public credit policy aimed at "tightening of the link between saving and production."[469] In particular, they envisage policy that directly assists local banks, which could place "finance more effectively at the service of the local producer as well as of the local consumer" than most large national banks.[470]

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[463] *Id.* (exemplifying how the Federal Reserve Chair could channel credit to "productive investments" like clean energy, and "discourage speculative investments where risks are relatively opaque," by requiring financial institutions to hold the same percentage of those investments in assets).

[464] Lester Thurow, *Proposals for Rechanneling Funds to Meet Social Priorities*, *in* POLICIES FOR A MORE COMPETITIVE FINANCIAL SYSTEM 179 (Federal Reserve Bank of Boston 1972).

[465] *Id.* at 180 ("First, the present institutions and regulations have not channeled funds toward social priorities in sufficient quantities to be worth the inequities that they have produced. The present arrangements are simply not worth preserving as a vehicle for meeting social objectives.").

[466] *Id.* at 179-80.

[467] *Id.* at 181.

[468] *Id.* at 188-89.

[469] Lothian & Unger, *supra* note 35, at 364.

[470] *Id.* at 358.

Less deferential to private markets, yet still grounded in market mechanisms, are ideas for establishing new public agencies that perform similar functions to existing private firms. Lothian and Unger suggest that the administration of public credit policy should make "use of independent public entities—administered independently and professionally and subject to the discipline of market competition" that will "imitate the work of private capital." [471] More concretely, Diomande, Heintz and Pollin, defend a proposal for the establishment of a public credit rating agency.[472]

Finance as a "servant" is the image that captures this version of the public policy paradigm.[473] If finance is to serve the real economy, thinking of it as a system involves also adjusting its functioning to the demands and needs of production, namely, channeling savings (surplus) to investment (as opposed to idleness, speculation, or consumption).[474] This formulation already highlights the element of subservience that most contemporary analyses leave out, even while referring to financial institutions as "intermediaries."[475] But "finance as "servant" lends itself to a more profound interpretation, which distinguishes it also from the

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[471] *Id.* at 364.

[472] Diomande et al., *supra* note 432.

[473] Some have argued that this was the approach of the New Deal and of Bretton Woods; *see* Craig Murphy, *Can Finance Be Made the Servant Again?*, 40 MERSHON INT'L STUD. REV. 332 (1996) (citing Eric Helleiner, *When Finance Was the Servant: International Capital Movements in the Bretton Woods Order*, in FINANCE AND WORLD POLITICS: MARKETS, REGIMES AND STATES IN THE POST-HEGEMONIC ERA. (Phil Cerny, ed., 1993). Lothian and Unger use this term explicitly. *Supra* note 35, at 2.

[474] *See* Pollin & Baker, *supra* note 42, at 3. Although consumption may be considered on par with "investment" as pertaining to the proper function of finance.

[475] The notion of intermediation is a weak guideline for regulation when coupled with the standard assumption that savings automatically translate into investments. *See* Lothian & Unger, *supra* note 35 (focusing on this assumption as the key problem with contemporary analysis of finance). Within such a perception, the intermediation takes on the quintessentially "market-efficiency" roles of facilitating trade by pooling, hedging and spreading of risk, and channeling market discipline. These leave out the dynamic performance of the real economy. *See e.g.,* Robert C. Clark, *The Federal Income Taxation of Financial Intermediaries*, 84 YALE L. J. 1603, 1610 (1975) (stating that the "economic functions" of financial intermediaries are to "enable pooling and diversification of portfolio risk to take place more efficiently and on a larger scale.").

modest version of the public policy paradigm.[476] On this reading, the "master" of finance is not "the economy" but the body politic. The implication is that we remove the question of ends away from the field of economics and subject it to collective democratic deliberation.

VII. Conclusion

Financial markets should be viewed as instruments to further a society's economic agenda. The deregulatory-regulatory premises of the pre-2008 market failure paradigm continue to stand in the way of a regulatory ambition that enshrines this vision. Even if Basel III's new and improved version of capital ratio requirements is successful in containing the next financial collapse, an internally stable financial system is not all that financial regulation should aim for. A financial system that manages its own risks is nevertheless dysfunctional if it fails to channel resources effectively to productive enterprise in the real economy.

Adopting even the modest version of the public policy paradigm would allow us to reestablish a more ambitious regulatory project. It would reclaim the priority—and superiority—of social purposes over financial markets, and of democratic choice over narrowly conceived economics. This would unleash the potential of finance, currently diverted into extraneous uses, for the betterment of human life. Embracing a bolder public policy paradigm would take us further, spurring ongoing deliberation over appropriate credit policies, and fashioning novel regulatory tools and institutions. Any of these two options would have the positive side effect of encouraging a discourse of financial regulation that is less technocratic and more embedded in public life.

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[476] *See* Lothian & Unger, *supra* note 35, at 2.