

# The Global Crisis and the Governance of Power in Finance

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## 1. Introduction

This paper argues that resolving the nearly global crisis of financial systems—and, by extension, of macroeconomic stagnation—depends on recognizing and responding to the considerable, multi-dimensional power accumulated by the very financial firms whose dysfunctionality helped create that crisis in the first place. The power of finance, and especially that of the mega-institutions at the heart of the modern financial system, has grown steadily in the past forty-five years. Much of the celebrated innovation of these institutions has involved capturing more operational leverage by accessing more liquidity. In the end, the success of these strategies, via competitive global deregulation and the creation of new methods of risk-shifting and risk-taking, ended by compromising global liquidity just when it was most needed.

The economic and financial crisis that has arisen nearly world-wide in the 2007-10 period has posed such a profound challenge for policy-makers precisely because it is rooted in the systemic failure of this brave new world of intermediation. Initiating concrete steps toward re-imagining and re-creating a socially efficient and economically productive financial sector requires, first of all, acknowledging the current financial system's inordinate, multi-dimensional power. The links between this accretion of power and the excessive risk-taking and increased financial exploitation that triggered the crisis must be better understood. This will permit a re-engineering of the financial system that eliminates the destructive tendencies linked to the accumulation of power in finance.

Undertaking this reshaping will not be easy. The existing rhetoric of financial regulation among academic experts and policy insiders evaluates the "efficiency" and "stability" of the financial system in narrow terms, and focuses attention on problems of mechanism design. It is blind to the presence and implications of systemic power in this system. But unless the debate over financial regulation is broadened, decades of sub-par growth and excessive financial exploitation lie ahead.

Section 2 describes why this crisis has intensified policy debate and brought about the end of polite discourse in economics. Section 3 summarizes received views on financial regulation, which interpret power in finance as stabilizing and an indication of competitiveness. Section 4 explores why the current crisis necessitates a reframing of debate about the governance—not simply regulation—of finance.<sup>2</sup> Section 5 lists some critical elements for understanding real-world financial systems, including power. Section 6 discusses how the locus of power in finance has shifted with the rise of the "originate-and-distribute" model in the 2000s. Section 7 examines the implications of the sub-prime crisis for the governance of power in finance, and Section 8 contains some ideas on restoring effective financial regulation.

## 2. The End of Polite Discourse in Economics

Many, if not most, economists prefer debates which are clearly bounded, so that discussion is invariably polite. In particular, this means respecting the authority of those with pre-existing claims to expertise in given subject-matter areas. But the current crisis has engendered a deep discontent with status-quo thinking in economics. Prior to this crisis, different theoretical schools developed

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<sup>2</sup> The term "financial governance" often refers to shareholders' guidance of financial firms. Here this term refers to the public governance of financial institutions and markets.

their own explanations for core questions about the economy: Why do banks exist? Is regulation needed? Does active fiscal policy raise welfare? Each school developed its own answers; the more influential and well-funded the school of thought, the more settled the views.

So while differences of view about core economic questions have persisted over time, in the past three decades, most economists called to positions of economic-policy leadership have portrayed their own views as reflective of a sensible consensus. This suggested that economists' views vary within a narrow band, from slightly-critical-of-unregulated-markets to suspicious-of-government-regulation. Regarding financial regulation, economists have routinely celebrated the importance of free markets and of reducing burdensome regulation. The financial-system flaws most frequently mentioned were the moral-hazard traps that arise due to bad regulatory design, about which pro-market and pro-mild-regulation could readily agree. An example here is the 'consensus view' orchestrated among macroeconomists, whether they subscribed to the new Keynesian or new Classical schools of thought. Maintaining this consensus required that debate be polite: limited to empirical questions and to queries about equilibrium models with pre-agreed analytical features. Economists were certainly free to challenge the premises of this new-Classical/new-Keynesian consensus in favour of alternative ideas derived from overlooked thinkers such as Minsky and Keynes. But to challenge basic premises was to disagree impolitely; and such challenges could only be freely exercised outside the inner circles of policy influence.

Nonetheless, as structural cracks and tensions began to emerge in the economy, several leading academics and policy veterans expressed their unease. John Geanakoplos of Yale, drawing on his Wall Street experience, began writing papers about 'broken promises' (1996) and 'leverage cycles' (2003) in financial markets—topics which had gone virtually unmentioned since the efficient market hypothesis became a super-orthodoxy in the 1970s.<sup>3</sup> In April 2005, Paul Volcker wrote an op-ed piece in the *Washington Post*, "Economy on thin ice," which foresaw the demise of Wall Street. Raghuram Raj, formerly head of research at the IMF, hypothesized that liberalizing financial markets could increase risk-taking and fragility, not welfare. Paul Krugman, in his public dialogue space at the *New York Times*, drifted steadily to the left.

Then, after innumerable crises in the global South, a mega-crisis hit the global North. And the truce among economists proved fragile. Suddenly the rules of discourse wavered. The consensus that certain things were not to be spoken of was forgotten. Some economists continued to work from 'first principles', urging caution in responses to the crisis. Others set aside theoretical niceties and jumped toward pragmatic responses based on looking hard at the numbers.

The U.S. Treasury's huge bailout proposal in the heart of a national election season added to the drama, and the gloves came off. Nobel Prize winner Joseph Stiglitz (2008) wrote an article in *Forbes* entitled "Capitalist Fools"; Paul Krugman (2009) publicly disparaged the failure of macroeconomics, and was savaged in the weblog of Chicago economist John Cochrane (2009). Robert Barbera (2010), a well-regarded Wall Street economist, responded to Cochrane in kind, in an article entitled "If There Were a Fight, They Would Have Stopped It in November 2008."

This shift from polite to impolite exchanges that challenge established experts has been repeated in other substantive areas. The next two sections discuss and then challenge the expert consensus regarding financial governance, which has overlooked the problematic of megabanks' power.

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<sup>3</sup> Fox (2009) describes how the efficient-markets hypothesis came to dominate research on financial markets.

### 3. The Consensus View of Financial Regulation: Power Hiding in Plain Sight

Expert and academic views on financial regulation have co-evolved over the last 30 years. Banking deregulation was already on the table when the Reagan Administration took power. Soon, close regulation by examiners was replaced by deregulation with self-monitoring of risks (Dymski 1999).

However, by 1982, amidst skyrocketing interest rates and an oil-price collapse, the US savings-and-loan system and commercial banks in "oil patch" states systematically defaulted. Savings-and-loans' undue risk-taking after deregulation, including investments in speculative real-estate ventures, and the failure to account for recourse risk, added to the magnitude of system failure.<sup>4</sup>

The question then was implicitly posed—was the 1980s crisis of the US financial system due to inadequate prudential supervision or to ill-advised incentive mechanisms within banking firms? A set of self-appointed experts termed the "Shadow Financial Regulatory Committee" (Benston et al. 1986) dominated discussion about the causes of these depository-institution crises and what to do about them. This "Committee" attributed the thrift crisis to moral hazard in lending (Kane 1989; Kaufman 1990): deposit insurance removes depositors' incentives to discipline intermediaries whose managers or boards take undue risks. The prescription was continued deregulation, including more limited bank regulation; but the key was to get incentives right so that the financial system could be self-policing.<sup>5</sup> Government intervention would only lead to mismanagement. As George Kaufman put it in a 1995 essay,

The major source of both the instability in the U.S. banking system in the 1980s ... was not the private sector but the public or government sector. The government first created many of the underlying causes of the problem by forcing S&Ls to assume excessive interest rate risk exposure and preventing both S&Ls and banks from minimizing their credit risk exposure through optimal product and geographic diversification and then delayed in applying solutions to the problem by granting forbearance to economically insolvent or near-insolvent institutions. That is, the banking debacle was primarily an example of government failure rather than market failure. (Kaufman, 1995: 259)

The perspective of the Committee has two intellectual underpinnings. One, noted above, is the efficient-markets approach in financial economics; the second is the public-choice approach to public economics. Some members of this committee (especially Benston, Kane, and Kaufman) see regulators not as neutral purveyors of well-intentioned policies, but as advocates for their own interests. Thus, empowering regulators while reducing the scope for market forces can lead to dysfunctional outcomes (such as the savings and loan crisis itself) and huge inefficiencies. At the same time, financial market forces are viewed through a pragmatic Chicago-School lens more than through an efficient-markets hypothesis lens. Committee members would not agree with the conclusion of Fama (1980), based on strict efficient-markets logic, that banks have no effect on resource allocation. But while admitting that markets may misbehave and generate rents for firms capturing monopolistic power, their core belief is that market forces should be given maximum sway and government intrusion minimized. In a 2000 paper, Benston asks the question that motivates much Shadow Committee research and policy discussion: "is government regulation of banks necessary?" The author answers in the negative. In his view, only deposit insurance, which leads banks to hold insufficient capital, constitutes a valid rationale for bank regulation. "Otherwise, banks should be regulated only as are other corporations." (185)

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<sup>4</sup> Recourse risk arises when a lender sells a loan (or other asset) it has made or bought to a third-party to whom a minimum rate of return has been promised. If the asset underperforms, the third-party holding it has recourse to the lender to be made whole on its contract. See Wall (1991).

<sup>5</sup> Similarly, analyses of the Latin American debt crisis attributed non-payment to inadequate debtor "effort," that is, to moral hazard factors - not to "type." See, for example, Eaton, Gersovitz, and Stiglitz (1986).

For the Shadow Committee, then, the financial industry is threatened by an aggressive and bullying government. One would never imagine that this besieged industry spends millions annually to win friends and influence people in Congress and the Administration. This manifestation of power is not discussed, though Committee members who worry about government regulators are influenced by the prospect of 'golden parachutes'. The Committee's focus is on getting government policy right, and this means maximum scope for market forces: leave owners free to control their firms, and firms freer to enter markets.

This experts' panel continues to function to this day; it is currently sponsored by the American Enterprise Institute. Its members have founded a new academic journal, the *Journal of Financial Services Research*, helping to shape a generation of research. More than half its members have been members of this Committee from its founding; several have served in appointed governmental positions. The Committee has met several times in 2010 and sponsored press conferences on proposed taxes on big banks, SEC regulation of equity markets, and so on.

Leaving aside the Shadow Committee itself, the literature on bank structure and regulation has centered in recent years on the relationship between concentration and competition in banking. Berger, Demirgiic-Kunt, Levine, and Haubrich (2004), in their summary of this research, argue for tolerance regarding monopoly power in banking, for several reasons. First, older structural tests for market power are prone to estimation error, especially selection bias. Second, they argue that markets can be both competitive and concentrated. The presence of a monopoly or oligopoly in itself does not imply that rents are being unfairly taken from customers, in these authors' view; markets are competitive as long as they are contestable. Third, more concentrated banking markets can be more stable and less crisis-prone. Here again, financial power is hiding in plain sight.<sup>6</sup>

In the past decade, studies exploring the links between market structures, stability/crisis, and regulation have used three quite separate methodologies. One involves building formal banking models. Repullo (2004) shows that when banks must compete for funds, they will earn fewer revenues per loan, and hence be more likely to make loans to risky customers. In this event, capital requirements can be effective; conversely, when banks face less competition for funds, they will choose safer loans, and capital requirements will be either unneeded or impose deadweight losses. In a similar result, Boyd, De Nicolo, and Smith (2004) find the probability of a costly bank crisis is higher under competition than under monopoly.

The second approach involves intensive empirical studies of individual markets. Some recent studies using this approach have come to less comforting conclusions regarding the treatment of bank customers in concentrated markets. Carow, Kane, and Narayanan (2006) show that borrowers have lost out in bank megamergers. Further, Hale and Santos (2009) examine bank loan data for borrower firms that eventually floated IPOs (initial public offerings). They find that banks do charge higher loan rates for firms that have not gone public; as the authors put it, banks do "price in" their informational monopoly on firm creditworthiness as long as they maintain it.

Such "traditional" empirical studies have been joined by a new empirical approach established during the Asian financial crisis. Hoping to better understand the determinants of financial crises, the IMF and World Bank developed extensive data bases on financial crises, macroeconomic conditions, and banking structure and regulation in a large sample of nations, over a wide swath of historical time. This made it possible to utilize econometric methods to assess the macroeconomic, microeconomic (structural), and regulatory conditions that accompanied or preceded (and thus may

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<sup>6</sup> In the 1980s, the latter view won out over the former in the Federal Reserve and other regulatory agencies (Dymski 1999).

have caused) financial crises. So in the same panel, 1981 Mexican GDP growth might be evaluated as a determinant of the 1982 Mexican debt crisis, while 1996 Korean GDP growth would be evaluated vis-a-vis the 1997 Korean meltdown (and so on). Demirguc-Kunt and Detragiache (1998) conclude that financial liberalization increases the probability of banking crisis.

It soon became clear that data structures drawing on global experiences over broad time periods could be used to consider other questions, including the links between regulation and banks' market structure and behaviour. In consequence, the large-scale dataset approach is now widely used in the broader literature on bank market structure and regulation. This approach assumes that developing and developed nations are part of one financial-development continuum, and that the experience of any one country (Latvia) should be given equal weight with any other (the United Kingdom).

This approach, while it often leads to complex results, has yielded a coherent set of policy implications. Demirguc-Kunt and Levine (2004) conclude—based on 150 countries' experience with financial crisis, financial structure, and development—that maintaining outside investors' legal rights and efficient contract enforcement will ensure effective financial-sector development. Beck, Demirguc-Kunt and Levine (2004) argue, using this database, that financial-sector development reduces poverty. Barth, Caprio, and Levine (2004) used a 107-country study to show that direct government regulation of banking markets is not effective, and leads often to fragility. Financial development and stability is better fostered by empowering and properly incentivizing private-sector corporate control of banks. Beck, Demirguc-Kunt, and Levine (2006) use data from 69 countries from 1980 to 1997 to show—after controlling for regulatory and macroeconomic policies, and nation-specific shocks—that systematic banking crises are less likely in countries with more concentrated banking systems. Further, regulatory policies that thwart competition are associated with greater bank fragility. A new study of 250 banks in 48 countries by Laeven and Levine (2009) shows that bank risk-taking increases as bank shareholders' power rises in corporate governance.

Taken together, these multi-country, multi-year studies suggest that permitting bank concentration to arise by easing regulations, permitting freer entry into banking markets, and relying on private-market guidance will lead to continuous, stable financial-system development—and thus contribute, as per the expectations of the finance-development literature, to higher rates of economic growth. But insofar as market concentration embodies the accumulation of power in financial markets, this means that the price of stability in financial markets is megabanks' acquisition of market power therein. And potential entry should discipline megabanks and limit their abuse of customers. Power is there, but it is principally a marker of some financial firms' competitive success; and those firms' incentives are for a 'quiet life' in financial markets that are well-organized and tranquil.

The peculiarity of this empirical approach is that it does not evaluate the lessons learned in more advanced financial systems for less-developed systems; it establishes a meta-outcome that encompasses simultaneously the experience of the most humble and the most advanced markets. Giving sway to market forces and restricting government intervention into financial systems will not create the panacea envisioned in the efficient financial markets hypothesis; indeed, the consolidation that has gradually occurred will hurt some borrowers—as a study co-authored by a Shadow Committee member (Kane) shows. But insofar as this approach assures a stable and competitive system of finance, such losses count only as collateral damage.

This builds in the presumption that systemic behaviour consists simply in an aggregation of individual markets, and that all markets are created equal for purposes of empirical testing. There is also thus one-dimensionalizing of banking—a reduction of banking and financial behaviour to a lowest-common-denominator activity. The distinction that the Congressional investigation of Goldman Sachs' role in the sub-prime crisis has raised, between megabanks' "fiduciary responsibility" to their depositors and their autonomous role as "market makers" operating on their

own behalf (Guerrera 2010), does not arise. For what is common in the Turkish and Bangladeshi and U.S. banking systems is the lender-bank-depositor relation, the "fiduciary" role. Only in the center of financial power can one find the outsized "market maker" role—a role replete with remarkable power to make and break entire markets—that Goldman Sachs and other megabanks took on in the "originate-and-distribute" model of credit creation. But any investigation of *that* role cannot be undertaken with an empirical tool designed to explain what financial crises around the world all have in common.

#### **4. Moving from Settled Theory to a Rethinking of the Critical Elements of Finance**

The agenda championed by the Shadow Committee held sway in the 1990s, opening the way for the deregulated 2000s. Deposit insurance was not eliminated, but restrictions on banking and financial activity were. The notion of self-policing finance was embedded in the proposed shift for global banking guidance, from Basel I to Basel II. Since the mid-1980s, Basel I had imposed uniform asset-based capital requirements on large multinational banks. Under the proposed Basel II rules, ratio tests would be replaced by a requirement that all large banks run their own stress tests about their individual mixtures of derivatives, futures-market commitments etc, to help deal with various worst-case scenarios.

Even while Basel II was being fine-tuned, the shift to a more deregulated regime continued. Indeed, in the 2000s, megabanks were able to create large volumes of collateralized debt obligations in part because they were not counted in calculating required capital. The Financial Services Modernization (Gramm-Leach-Bliley) Act of 1999 also served to blur the lines between commercial and investment banking, and between various lines of financial business. Sub-prime loan and securitization volumes exploded as secondary-market outlets for credit expanded. Most sub-prime loans were made by non-bank lenders, sold to megabanks, and then bundled into securities, many of which were insured through credit-default swaps (CDS). The CDS itself was invented so that its primary issuer, AIG, could avoid the regulatory oversight that would arise were these underwriting arrangements classified as insurance contracts.

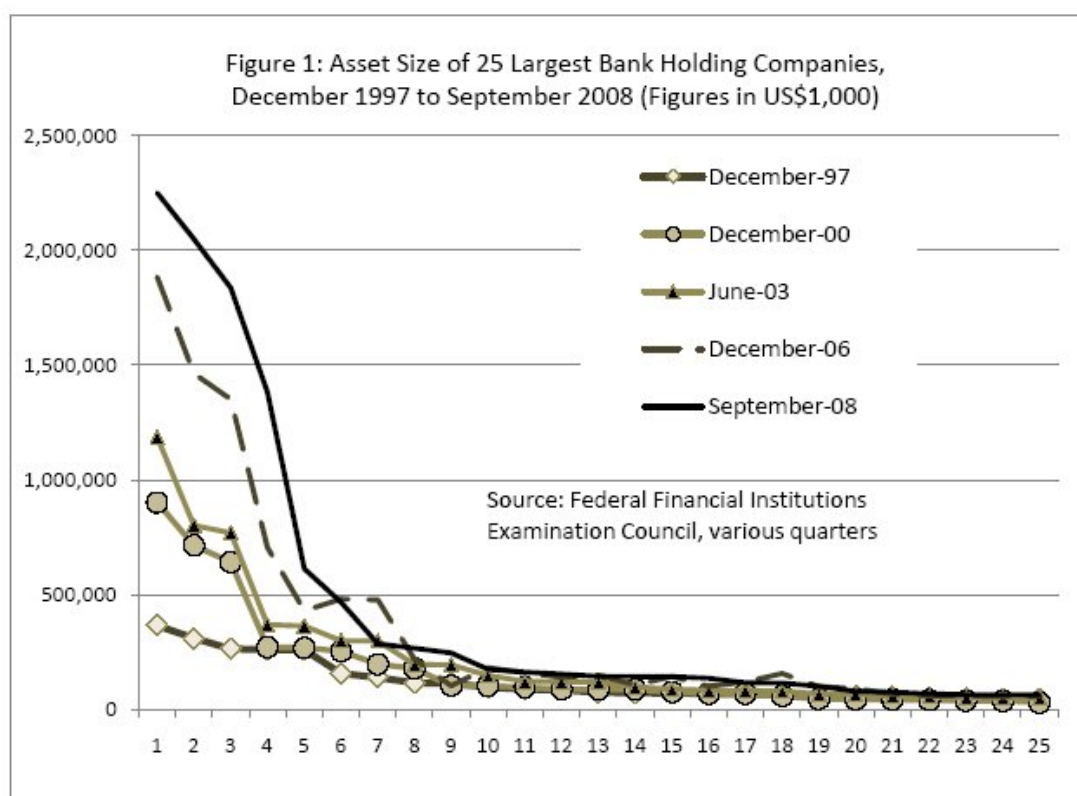
Prudential oversight was clearly lacking in this asset-price build-up and crash—in some sense, by design. The 1999 Act encouraged institutional innovation and line-blurring; Basel II put prudential responsibility in the hands of the megabanks themselves; and megabanks' increasing use of non-bank lenders and funds boosted their earnings. Most megabanks created structured investment vehicles (SIVs), consisting of bundled loans financed by asset-backed commercial paper. They both sold SIVs to generate fees and held them off-balance sheet to boost their revenue flows. That these funds could be regarded as independent of their issuing banks' balance sheets—as having been made without recourse—shows how completely the lessons of the 1980s thrift crisis had been forgotten.

The step-by-step off-loading of default risk onto entities outside of the regulatory scope of the banking authorities came back to haunt U.S. regulators in the sub-prime crisis; so too did the 1999 elimination of the line between commercial banking and other financial activity. In the Long Term Capital Management (LTCM) crisis of 1999, the Federal Reserve was able to call on Wall Street megabanks—especially the then-investment banks—to help restore order. These megabanks had been recruited—strong-armed—into providing the liquidity that permitted LTCM to unwind its oversold position. This was not possible in the sub-prime crisis: many of these same megabanks were now themselves over-exposed in the sub-prime market (and consequently undercapitalized).

So what was missing? Why did the Shadow Commission's belief—reinforced by both theoretical models and empirical results—that deregulated financial firms would be more stable and more efficient than rigidly controlled markets go so badly wrong? In essence, the mistake the Commission and the research cited here made was to assume that the financial system, once liberated, would

behave as financial theory (and specifically, efficient-market theory) expected it to behave. The competition-versus-concentration debate relies on efficient financial-market theory very heavily, if in a veiled way. It is assumed that banking and finance consists of a set of well-defined activities—in particular, the provision of credit (or of insurance) for a set of economic agents that requires this credit to conduct their normal economic activities. Permitting entry by new suppliers and the creation of new instruments adapted to the unique risk—and other characteristics should simply enhance efficiency. Market power may exist, but it has no affectivity.

So economists could rely on their settled views about what banking is, what the motives of bankers are, and the benefits of competition to understand how regulatory policy should adjust. The reference point of economic equilibrium provided a benchmark for understanding what distortions may have arisen. In academic settings, such distortions could be neatly parsed and discussed one at a time.



But this approach—born of nearly 30 years of heavily influencing both debate about the regulatory agenda and the trajectory of applied research—went badly wrong. The one-size-fits-all approach to evaluating banking-system behaviour which developed amidst the Asian crisis desensitized researchers to the remarkable shift in the size-ordering and scale of the most gigantic financial firms.

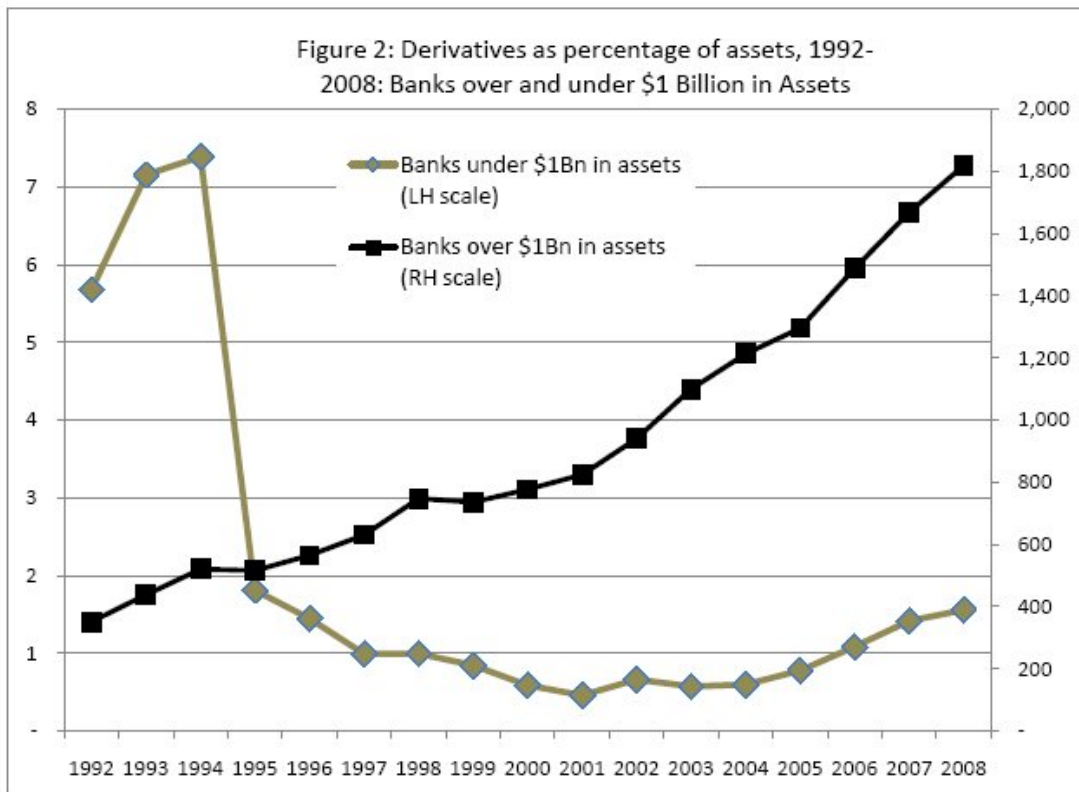


Figure 1 illustrates this shift by depicting the asset size of the 25 largest bank holding companies (BHCs) in a variety of years, ranging from December 1997 to June 2008. That is, the 25 largest BHCs are shown for each year; the population of banks shifts from year to year because of mergers, failures, etc. This graph shows that from the eighth position downward, bank size has remained remarkably constant. But from one to seven, it's clear that a "super-sizing" has occurred. Figure 2 demonstrates another dimension of difference between large and small banks: small banks' derivatives positions have atrophied to nearly nothing; by contrast, large banks' positions in these instruments have exploded in size. Note that large banks have been approaching derivatives positions of 2000 per cent; small banks, 2 per cent.

As Bookstaber (2007) and Sorkin (2009) demonstrated in very different ways, this difference in the scale of some financial firms implied explosive growth in these firms' activities: in the position-taking that linked these activities, in the derivatives positions that hedged or bet on these activities, in the challenge of understanding (much less controlling) their exposures to risk, and ultimately in the challenge of defining whether their interest lay more fundamentally in serving or in exploiting their customers.

Not surprisingly, then, when the dizzyingly complex firms at the top of Wall Street's pyramid began to fail in 2007, as did many of the smaller firms and funds enmeshed in (or created by) these firms' octopus arms, settled theory seemed inadequate to the task. The size and speed of system failure perceived by Treasury and Fed policy insiders, along with the size and speed of the TARP bailout they orchestrated, left the academic literature on how banks fail far behind. The weak results of that bailout have resulted in a sustained reform effort, about which the finance-and-development literature's simple linear distinction between the absence and presence of adequate financial intermediation has nothing to say. Should over-the-counter trading be reined in? Should a "Volcker rule" forbid "banks" from trading on their own account? Should banks fund their own bailout fund? Not only have these issues not been researched, but no economist imagined that the debate about such reforms would occur only after \$700 billion had been channeled to financial institutions, half of which went to the largest mega-banks.



What has emerged in this crisis is an entire architecture of financial dysfunctionalities, which range from the exploitation of the vulnerable to the extraction of rents from the unwary to the ability of well-positioned players to pass risks off onto other parties—ultimately, onto the public. There are so many moral-hazard and adverse-selection dimensions to this crisis that economists prepared to analyze second-best Nash equilibria can easily identify one or another incomplete-market problem whose malfunctioning can readily be seen. What is not so easy is to identify the ways in which the dysfunctionalities and second-best equilibria interact—the broader architecture of system failure. The problem is that fixing any one malady without paying attention to this architecture ensures that the process of flying blind will continue. For example, TBTF ("too-big-to-fail") is certainly one flawed dimension of the US financial system. But "ending" TBTF on the assumption that market forces can handle the fall-out from the crash of any financial institution—from the smallest to the biggest—makes assumptions about the resilience, stability, and scale of the requisite money, bond, derivatives, and equity markets that must be evaluated. The structured complexity of the financial system includes not just spot, futures, and state-contingent transactions markets, but also multiple layers of spatial interaction—global (cross-border) markets, regional/common-zone markets, national markets, and local markets. There are agents playing the markets in each 'location', and authorities at each nexus.

Economists, confronted with this situation, have a choice. They can regard this crisis of finance as continuous with those preceding it, and continue to rely on insights and empirical results derived from settled approaches—that is, they can rely on the sort of theoretical and empirical results set out in section 2 to inform their reactions to the current situation. Alternatively, they can see this crisis as requiring that theoretical understandings and policy responses based on the analytics of imagined equilibrium states be set aside or, at the very least, supplemented.

The latter seems the only coherent path. The Shadow Committee has painted itself into a corner. The market-equilibrium view that constitutes its foundation has been knocked asunder, as has the notion that private ownership is a sufficiently strong interest to look after the long-term welfare of large financial firms. Indeed, the very definition of the term "competitive financial market" is unclear, after it was systematically weakened in defense of megafirms' right to take larger shares in ever more markets.

Challenging the implicitly efficient-market view of most settled research on financial regulation and structure risks a plunge into an intellectual abyss: for what can replace the efficient-markets view? At this stage of events, there is no new imagined ideal system that can serve as an alternate system-design reference point. The idea instead is to confront the real-world system of finance as it is, to understand its real-world impacts on diverse firms and individuals, and to examine how to turn it to socially efficient and economically productive purposes.

## **5. Core Elements of Finance for Re-establishing Coherent Governance**

Four analytical elements that are missing in efficient-market-based thinking about financial governance are readily identified.<sup>7</sup> The first is system complexity and structural interaction. A second dimension, invariably overlooked in analyses that focus on mechanism design and breakdown, is power. It's clear that some players in this matrix of financial interactions have the ability to force action by others, or to extract rents from others, or to rely on the inability of system

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<sup>7</sup> These four themes have many intellectual forebears in classical political economy, New and Post Keynesian economics, and neo-Marxian and post-Walrasian approaches; space constraints preclude a discussion of these lineages here.

logics to find alternative outcomes. In this case, power has payoffs. Again, power operates in different ways and at different levels of the financial system. The way in which the exercise of power has created systemic dysfunctionalities, distorted incentives, and affected crisis-resolution pathways deserves careful study.

The very complexity of interactions—the structural displacement of the borrower-lender-depositor relationship from the centre of the financial circuit to its periphery—means that information and its control or absence becomes a key feature of the crisis scenario. Information problems here involve more than the problem of asymmetric information within pair-wise transactions in the credit market: the inability of one party in this transaction to know the true 'state' of the other party's condition. Instead, information problems involve opacity, secrecy and private arrangements, privileged technical information (that often runs ahead of regulators' oversight capability), and so on. Indeed, the very lack of opacity in the emerging set of securitized financial relations was interpreted by some as equivalent to the creation of a new type of banking (see Dymski 2010). But opacity defeats oversight. In the current efforts at financial reform, the debate over whether derivatives should be exchange-traded involves, in part, the issue of whether a set of regulators or overseers (the "exchange") will have real-time information on open derivatives positions and evolving terms and conditions in markets.

A final core element of the system as it is, then, consists of the beliefs, confidence, and credibility—that is, what Akerlof and Shiller (2009) term the "animal spirits"—of the agents interacting in financial markets. These authors argue that market outcomes are systematically affected by the fact that the agents interacting in markets often misinterpret information, have distorted perceptions, or even react emotionally rather than rationally. So these elements matter, as gaps can readily emerge between what system architects and players intend others to understand and do, and how those others actually see things and react. These problems can be interpreted as arising in one of two ways: they could be rooted in perceptual errors linked to psychological processes (as Tversky and Kahnemann (1981) see it); or they could represent reactions to fundamental uncertainty about the true state of the world (as Minsky (1986) sees it).

Only an analytical approach that takes into account system complexity and structural interaction, power, problems of information, and the problems created by agents' reactions to uncertainty, can comprehend how the financial system is structured, and how it has broken down and malfunctioned.

We leave as an open question whether a subset of these four elements, or only all four together, can suffice for a coherent post-efficient-markets understanding. Two recent volumes have largely focused on the fourth element—the fragility of agents' beliefs and confidence. Akerlof and Shiller (2009) make this the centerpiece of their defense of the role of government in the economy: they argue that central banks' power resides in their ability to stabilize "animal spirits" in financial markets, thus occasionally—and crucially—stabilizing market forces that would otherwise sometimes cascade out of control. They argue that the current crisis requires stronger intervention—direct credit injections, as per TARP. Reinhart and Rogoff (2009) are more circumspect; they straddle the choice posited in Section 4. They argue that the present crisis is continuous with previous crises. However, they omit any reference to efficient financial-market theory, and affirm—without elaboration—the "concept of financial fragility in economies with massive indebtedness" (292). They largely concur with Akerlof and Shiller that breakdowns in beliefs and confidence are at the root of the crisis. But they do not mention, as Akerlof and Shiller do,<sup>8</sup> that this already places them at some distance from equilibrium theorizing.

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<sup>8</sup> See footnote 6 to the "Introduction."

## 6. The Nature of Power in Finance

We elaborate in the remainder of this paper the second of the four elements identified above, one most overlooked in discussions of financial regulation: the problem of power in finance. As seen above, power is invisibly present in analyses of banking concentration, its possible impact frequently discounted. But how does power enter into systems of finance? Is it limited to market concentration, or does it take other forms?

The literature reviewed Section 3 presumes that the answer to the second question is 'yes'; and because financial markets are assumed to be contestable, power is not important in financial dynamics. Here we attempt to differentiate the loci and forms of power that arise in finance, and develop a wider view of how power can affect financial processes and outcomes.<sup>9</sup>

One locus of power occurs in some relations within a time-using economic process, such as a borrower-creditor contract. Another locus of power is transactional, involving only the moment of exchange. A third locus of power is structural. It arises when the outcomes of agents' interactions, whether transactional or time-using, are forced or predetermined by a set of determining parameters.

There are, in turn, several forms of power. Hirschman (1970) suggested one: exit-power. This arises when one agent in a relationship (a credit contract, for example) can leave it without damaging one's net revenue streams, but the other agent in the relationship will indeed suffer an expected loss from such a break. A second form of power arises when one agent in a transaction has private knowledge relevant to the terms and conditions of that transaction, but the other agent does not. A third form of power arises when one agent in a relationship is more—or more powerfully—networked or interconnected with external partners or activities that are economically valuable. In this event, the less powerful agent cannot dissolve his/her relationship with the more networked agent without suffering from reduced access, directly or indirectly, to other valued contacts. Finally, there is asymmetric resilience, which arises when one agent in a relationship has a greater ability to suffer losses or to renew resources. This agent can then 'outlast' the other in any war of attrition.

The loci and forms of power interact. In a time-using locus, positional power can arise, as one agent can bargain harder (extract more rent) than the other, knowing the latter has no exit option. In a purely transactional frame, arbitrage power can arise, due to the fact that one agent is interconnected with a network that has the capacity to exploit a price differential, while another, less-networked agent lacks that capacity. Further, the forms of power can often offset one another. For example, in a sub-prime loan contract, the borrower may have informational power vis-à-vis her own creditworthiness; but the lender may have exit-power in that the borrower is socially isolated and can identify no other lender options.

In received versions of financial theory, power is seldom if ever discussed directly. The power problematic that is discussed involves the borrower-lender relation. Typically, it is hypothesized that both lender and borrower may have exit options, but the borrower implicitly has positional power because of an informational advantage. This advantage may arise due either to borrower intentions (moral hazard) or capacity (adverse selection). Moral hazard may also arise when a bank is willing to take more risks than its depositors would be comfortable, but deposit insurance has made those depositors risk-indifferent. Much, if not most, discussions of regulatory reform—say, by the Shadow Committee—center on the need to structure regulations so that owners' interests in maximizing the value of their banking firm (its asset price), and not governmental decrees or imperatives, can guide

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<sup>9</sup> This analysis is indebted to the pioneering work of Greider (2010) and Epstein (1992) on the role of power in finance.

financial institution to efficient credit and resource allocation. These discussions have led to policy change. Activity deregulation for banks and thrifts in the 1980s and 1990s, for example, should have provided financial firms' owners with the means to discipline their banking firms' activities by subjecting them to competition (the highest-return activities grow most).

But deregulation did not lead to this outcome. One reason is that large banks' links to the borrower-lender relationship underwent a complete transformation. Once this happened, efforts to reduce the adverse impact of moral hazard within the borrower-lender relation per se were superseded and displaced to other loci that were outside of bank regulators' purview. In particular, the rise of the "originate-and-distribute" lending model repositioned the megabanks that bundled and sold collateralized-debt obligations vis-a-vis the borrower-lender relation. These megabanks were no longer in the position of "lender"; instead, they were in the position of facilitating the activity of loan networks in which they were not positioned as the ultimate lender to borrowers approved for credit.

Two forms of network-based power arose in this new lending model. One involved positional power within the networks that recruited and then ultimately funded (or denied) borrowers. This positional power occurred at two choke points. One involved the link between the loan brokers, finance-company workers, and loan officers who proposed loan packages to prospective borrowers. Insofar as these borrowers were savvy and well-capitalized, they could obtain fair loan offers. But borrowers who lacked capital, and/or were from populations or areas that had been historically denied access to fair-market credit, could be offered exploitative terms and conditions. A second choke point arose because megabanks controlled access to secondary markets for the lenders and loan brokers that offered them loans. This was underlined by megabanks' informational advantages about underwriters' and loan distributors' risk-tolerance levels.

In turn, megabanks' power within the lending network also facilitated two types of transactions-based arbitrage power. First, they could share in the rents that lenders extracted from borrowers by charging high fees for providing securitization, underwriting, and/or servicing for these loans. Second, they could exploit interest-rate differences in different locales at the same point in time, so as to earn arbitrage-based income. In effect, the creation of structured investment vehicles involved the exercise of network power involving access to investors and insurers, access to liquidity, and trading capacity. In effect, this arbitrage power resulted from megabanks' positional power within the lending network. Note that this is also a way of characterizing the carry trade.

Of course, Goldman Sachs and other investment banks came up with arbitrage- and positional-power strategies for revenue-making that were far more complex than this baseline scenario. Suffice it to say that the impact of the "originate and distribute" model was, among other things, to create new potential sources of power for megabanks with access to the distribution and other networks required. This power could generate substantial revenues when asymmetries of information or exit-options were there to be exploited. And it should not be forgotten that at the heart of the sub-prime lending boom was the systematic financial exploitation of socially-excluded individuals and communities (California Reinvestment Coalition 2010; Dymski 2010).

## **7. The Governance of Power in Finance after the Sub-prime Crisis: Some Considerations**

Stiglitz (2010) defines the factors that govern regulation in any set of markets: market failure, market irrationality, and distributive justice. The position of the Shadow Committee vis-a-vis reform of financial regulation is that these considerations are largely irrelevant in resolving the crisis of housing finance and banking. The Shadow Committee has been participating in the 2010 Congressional debates on the possible reform of financial regulation; it weighed in against the

imposition of further regulatory constraints or fees on financial institutions, especially megabanks.<sup>10</sup> Individual members of the Shadow Committee have gone further and argued that excessive governmental regulations and intrusions into financial markets were the root cause of the sub-prime crisis (Dymski 2010).

This view is rejected here, based on an evaluation of the relevance of each of the criteria cited by Stiglitz. The absence of adequate controls over non-bank lending and over the securitization of credit, for example, clearly permitted a virus-like transmission of market irrationality, resulting both in the housing bubble and in the huge stock of zero-down-payment and negative-cash-flow mortgage loans. Further, distributive justice would have been furthered had the Community Reinvestment Act been used to stem the flow of exploitative sub-prime loans.<sup>11</sup>

But the criterion that deserves special attention in the wake of the sub-prime crisis is the first cited by Stiglitz—market failure. Market failure arises, of course, when all the benefits of a good are not captured in a private-market transaction, or when some of the costs of a good's production are not borne by the parties to the transaction. Elinor Ostrom (1990) won the 2009 Nobel Prize in Economics for pointing out that "tragedy of the commons" situations, wherein agents overuse an unpriced asset until it is depleted, can be overcome through appropriate governance.

Arguably, one of the problems that gave rise to the sub-prime crisis was the failure of the system of financial governance to adequately regulate the exercise of power in finance, and to prevent a "tragedy of the commons" abuse of a key public-good resource in the financial sector. The resource in question is liquidity—access to ready, short-term funding at a dependable price in the financial market. The "originate-and-distribute" model operates by offloading securitized debt from banks' balance sheets—where this debt is at least partially financed by depositors—to the open financial market, where it is financed by short-term borrowing. As noted above, the asset-backed commercial paper market was a dominant source of finance for securitized mortgage debt (until that market crashed in September 2007).

In principle, if the same volume of loans were financed by depositors in one financial system and by short-term commercial paper in another, there might be little to choose between the two. But the accrual of arbitrage-power by megabanks in the network of markets that supported the "originate-and-distribute" model—and in particular, the lack of recourse on the part of borrowers and lenders who wanted access to that model—led to a situation in which all the incentives were to increase fee-based income by generating ever more credit through this mechanism. A housing bubble arose as ever more people were lured into accepting potentially ruinous mortgage loans so as to buy homes. And debt-to-income ratios rose precipitously throughout the economy, as the network servicing the securitization machine accommodated the inclusion of ever more types of household and business debt. Accompanying the growth of these out-of-control spot-market transactions, of course, was an even greater explosion of off-balance sheet derivatives activities (see Figure 2 above), which further increased the drain on available liquidity. Needless to say, hyper-leverage of the megabanks—especially the large investment banks and hedge funds—necessitated these firms' excessive reliance on available liquidity.<sup>12</sup>

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<sup>10</sup> One example among many is Shadow Financial Regulatory Committee (2010).

<sup>11</sup> Dymski (2010) summarizes studies that counter the notion that the Community Reinvestment Act was among the causes of the sub-prime crisis.

<sup>12</sup> To recognize limits to liquidity is not an assertion that liquidity has an absolute bound. Like Minsky (1986), we can consider liquidity as variable, subject to the beliefs and fears throughout the financial system.

In effect, the brave new system of finance displaced and multiplied moral hazard problems, while decentering credit creation in a way that put this multiplying moral hazard outside the reach of established—bank-centered—channels of financial regulation. Firms participating in "originate-and-distribute" networks engaged in arbitrage-based activities that offloaded substantial amounts of risk. Risk-tolerant megabanks staked out positions in this new system by drawing so heavily on markets with "commons" characteristics as to abuse their limits. And all this was insured by insurers—notably AIG—that made insurance "bets" based on the assumption that there was a stable distribution of risk in these evolving and ever-more stressed markets. In effect, the "originate-and-distribute" model gave rise to a cascade of interlinked, hierarchically-distributed principal-agent problems which largely escaped regulatory notice, much less control. Excessive leverage and greed by the megabanks at the heart of the new credit network eventually eroded the resilience of the liquid markets on which they depended, even while stripping away the tolerance for risk and willingness to 'go long' and 'believe in the borrower' that make credit markets work.

These dynamics pushed people on both sides of the borrower-lender relation, in ways quite different than anticipated in the simple theory of financial intermediation that most policy analysts and empirical work in this area clings to. The end result is a deterioration of the willingness and ability of the financial system to provide any real functionality to the real economy, even while its activities and its revenues consume ever more of national income.

## **8. Restoring effective regulation**

As was seen in the discussion in Section 2, regulators have not regarded either the governance of power in finance or the protection of the public-good character of liquidity as within their areas of responsibility. The language of financial regulation has been formulated very close to the idealized model of efficient financial markets, without taking into consideration the characteristics of the real-world model of finance that came into maturity in the early 2000s and then crashed in the late 2000s. This must now change. The term "concentration" can no longer stand in for "power"; and the governance of power in finance has to become an explicit objective of financial regulation. If the megabanks are not forced by Act of Congress to shrink to a manageable size, then the links between individual megabanks' network power and the actual networks that lie at the heart of financial markets will be too tight to unwind. In this event, "too big to fail" is a reality. The Shadow Committee's unconvincing distinction between concentration and competition in banking markets serves only to illustrate how little stomach its members have for policies that would indeed ensure that no banks are too big to fail.

The only thing that will ensure a socially efficient and economically productive financial system is dedicated regulation that takes power asymmetries, "commons" dimensions of financial markets, and social justice criteria into full consideration. This is a huge challenge, especially because the U.S.'s privileged position in the neoliberal order—its steady surplus on capital account combined with the dollar's privileged status as a reserve currency—dissuaded regulators from insisting too much on prudential behaviour by the banks they were charged with overseeing.<sup>13</sup> The neoliberal era has given rise to many structural imbalances, which in turn have been exploited by firms with arbitrage power. Given that structural imbalances cannot be wished away, the arbitrage activity that feeds on these imbalances must be reduced.<sup>14</sup> A further possible complication is that regulatory actions aimed at reining in financial institutions' risk-taking will in many cases have implications for the overall pace of macroeconomic activity, insofar as these actions may slow or quicken the pace of loan-making.

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<sup>13</sup> This argument is made in Dymski (2009).

<sup>14</sup> Consider the carry trade. The very presence of an uneven global map of economic crisis—some countries whose low interest rates reflect a desperation for stimulus, and other countries whose crises have forced them to restrict credit and raise rates—encourages the symbiotic growth of arbitrageurs who feed on both sides of this macroeconomic misery.

But it is one thing to have a dysfunctional financial system, and quite another to have a substitute system ready to do better what was not done well before. This does not mean laying down arms before the executive officers of megabanks who see it as their right to operate as "principals" on their own behalf while accepting public subsidies and guarantees reserved for "intermediaries" operating on behalf of their depositors. It will, however, require a reframing of the terms and conditions of financial regulation. It is high time to displace the efficient-markets ideal as a guide to what it is about the financial system that must be controlled or overseen; it is time to recognize the deep implications of unchecked power in finance, and for restoring the terms and conditions of public governance so as to renew the economic functionality and social efficiency of the system of finance. An energetic debate about how to govern finance has been initiated, and must continue. This cannot be a polite conversation: it must be real.

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