47 After the fall: regulatory lessons from the global financial crisis

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47.1 INTRODUCTION

The global financial crisis of 2007–09 was the most devastating economic collapse since the Great Depression. The bursting of the American real estate bubble and a rising tide of defaults on subprime mortgages underlying complex debt securities triggered the rapid collapse of major American banks, a global run on the shadow banking system, and international market crashes and banking crises. The contagion of financial panic spread from the American financial sector through the international financial system and into the "real" economy with breathtaking speed. Only unprecedented governmental and central bank interventions around the world bailed out major financial institutions and averted an imminent second Great Depression. But the crisis crippled the international financial system and left the global economy mired in the Great Recession.

Pervasive regulatory failures created the pre-conditions for the crisis and fueled its catastrophic depth and scope.[1] The abject and multi-faceted failure of the American regulatory state was a product of the neoliberal turn in American economic and regulatory policy embraced by both the Republican and Democratic parties. During the past 25 years, political and financial elites increasingly embraced theories of regulatory pathologies and idealized self-regulating markets that denigrated government and law and lauded the market and private sector. This ideational dimension of neoliberalism eventually led erstwhile regulators to favor the policy preferences of large, internationalized financial institutions in pursuing policies of deregulation and self-regulation.[2] The neoliberal policy trajectory frequently constrained, impaired, and eroded financial regulation, even as it privileged, enriched, and empowered the financial sector.

Theories of agency capture, bureaucratic inefficiency, and regulatory rent-seeking provided critical intellectual support for anti-regulation and pro-market policy agendas. Preoccupation with government failure, however, favored deregulation, "light-touch" regulation, and self-regulation that ultimately made state failure a self-fulfilling prophecy and serious market failures inevitable. Compounding this irony, the global financial crisis, made possible by political attacks and limits on financial regulation, supplied abundant evidence to support theories criticizing the regulatory state as ineffective, captured, or corrupt.

In short, the crisis was not a random, extreme "black swan" market event.[3] The structural causes of the crisis originated in policy decisions that reflected both the growing political influence of large financial institutions and a widespread faith in the self-regulating capacity of financial markets and the financial sector. This merger of power and faith produced a toxic combination of pro-financier politics, neoliberal ideology,

weak regulation, unrestrained opportunism, and market failures that inexorably drove the financial system toward collapse.

Not only was the American financial system and neoliberal approach to financial regulation the proximate origin of the crisis, but it also influenced financial system and regulatory reforms in other countries, which facilitated global contagion. Neoliberal economic and policy ideas also influenced many Western European policy and regulatory reforms designed, in part, to promote a pan-European market-based financial system, but national regulatory capacity lagged the growth of financial markets and the development of new instruments. American and European regulators failed to recognize or respond to the growing risks created by the explosive growth of securitized debt and derivatives markets, and unbridled financial globalization that produced a largely unregulated and opaque global shadow banking system.[4] These risks multiplied amid institutionalized blindness and denial as a global debt bubble of historic proportions inflated and burst to unleash a cascade of collapsing financial markets and institutions.

47.2 THEORIES REGULATION AND REGULATORY FAILURE

Most prominent theories of regulation (and regulatory failure) recognize the import of principal–agent conflicts, collective action problems, market failures, and negative externalities drawn from economic theory.[5] "Public interest" and "private interest" theories, however, differ fundamentally in their accounts of the purposes and interests served by regulation, and therefore in their assessment of the regulatory state. Public interest theories argue that regulation plays a necessary and beneficial role in addressing problems of collective action, transaction costs, negative externalities, public goods, and other forms of market failure (Breyer 1982; Sunstein 1990, chap. 2). Such arguments proceed from the observation that the world bears little similarity to the one described by the austere but unrealistic assumptions and perfectly functioning markets of neoclassical economics. The abstract universe of neoclassical economic theory is defined and governed by clear preferences, complete information, perfectly rational calculation of utility and efficiency maximization, and zero transaction costs. In a world defined by these assumptions, regulation is unnecessary and optimal social and economic outcomes are achieved through private bargaining and market transactions (with a critical legal role reserved for property and contract rights).

The real world, however, is one of ambiguous and multivalent preferences, conflicts of interest, imperfect (or asymmetrical) information, cognitive limitations and biases, bounded rationality, and ubiquitous – and often steep – transaction costs. The inherent costs, limitations, and deficiencies of private bargaining help explain the consequent prevalence and destructive effects of market failures. These less than ideal conditions justify regulatory institutions and constraints on individual and collective behavior as the necessary and inevitable price of a modern market economy – necessary not only to curb inefficient and welfare destroying behavior, but also to enable and sustain productive economic activities and efficient markets. To achieve these ends, regulatory institutions also must have sufficient capacity, in terms of authority, expertise, structure, and autonomy, for effective rulemaking and enforcement, and to continually adapt and respond to evolving efforts to circumvent their strictures or compromise their functional integrity.

Since the 1970s, private interest theories critical of regulation and favoring private bargaining and market transactions largely unfettered by legal rules have been increasingly influential in policy debates, particularly with respect to financial regulation. Theoretical critiques of regulation contend that regulatory intervention generally detracts from the superior efficiency of private ordering through markets and contracting, and that regulatory capture by powerful interest groups poses greater threats to aggregate welfare than (and may cause) market failure. Theories of regulatory capture and government failure extend the logic of rent-seeking, conflicts of interest, and market failure to the state. Following Stigler's (1971) seminal work on the subject, the economic, or special interest, theory of regulation has focused on how wealthy, well-organized groups secure favorable laws and regulatory policies and rules – and frustrate democratic accountability, market competition, and public interest theories of regulation.[6] The self-interested behavior of elected politicians, state bureaucrats, and interest groups inevitably leads to the appropriation of state power by private interests to achieve their particularistic ends at public expense. Public power is subject to, and constituted by, the same failures and pathologies that pervade private transactions and markets. The difference is that regulatory capture poses far greater social costs and political dangers by simultaneously warping state power for predatory and extractive rent-seeking, rendering it less democratically accountable, and thereby entrenching the power and privileged status of private interests by insulating them from effective legal constraints and often from market competition. The centralization and expansion of governmental power embodied in the regulatory state intensifies these risks of rent-seeking by making influence over law and policy more valuable.

Both views capture critically important functions and effects of economic regulation, yet each poses inescapable dilemmas of policy and institutional design. Public interest theories are quite correct that the rise of the regulatory state reflects the requisite institutional and legal underpinnings of a developed market economy. But, by expanding the reach and power of the state, development of modern regulation magnifies the risks identified by private interest theories that it will fail to supply or actively erode the foundations of functional markets. If public interest theories may display excessive optimism about the performance of regulatory rules and institutions, private interest theories tend to unduly denigrate their necessity and have legitimated neoliberal political agendas of deregulation and regulatory erosion that furthered the capture and corruption they decry. The global financial crisis, and its origins in the United States in particular, provides stark evidence of these paradoxes.

47.3 FINANCIAL SYSTEM FRAGILITY AND REGULATORY RESPONSES

Financial systems can be as threatening as they are essential to the functioning of a modern market economy. The financial system performs the vital functions of aggregating savings, creating credit, and allocating investment capital on which the rest of the economy relies. Yet the structural characteristics of modern financial systems drive them to become dangerously unstable and destructively extractive. The mechanisms of private ordering – contract, market incentives, and informal norms – either generate or fail to

ameliorate the principal–agent and collective action problems that riddle the financial system: conflicts of interest, asymmetric and incomplete information, cognitive limitations and biases of individuals, irrational herd behavior, and the potentially huge negative externalities of financial crises.

Conflicts of interest coupled with imperfect and asymmetric information plague modern finance. They reinforce and exacerbate each other to magnify the risks of governance and market failures in the financial sector. Conflicts of interest within financial institutions, markets, and transactions increase the risks of opportunistic rent-seeking and misappropriation by strategically located insiders.[7] Information asymmetries that flow from the complexity and frequent opacity of modern finance further increase agency and transaction costs, uncertainty, and risk at the transactional, corporate, and systemic levels.[8] Banking poses particularly acute risks of panics and contagion because of its defining characteristics of high leverage and the financing of long-term liabilities with short-term assets (i.e., large loan portfolios backed by a smaller base of demand deposits, leading to problems of time inconsistency). This capital structure magnified uncertainty over the solvency of banks and created perverse incentives among individual depositors that triggered the classic collective action problem of bank runs that turned fears of insolvency and the loss of savings into a self-fulfilling prophecy at the first hint of real or imagined financial trouble (Diamond and Dybvig 1983).

Securities markets, often viewed as alternatives to traditional bank lending, also display high levels of volatility and instability. Depending on their structure, asset composition, transparency, or liquidity, these markets can spread risk or amplify it. Leaving aside complications introduced by illiquid markets, computerized trading, and systematic manipulation of material information, these markets have been recurrently buffeted by unpredictable and unsustainable feedback loops of irrational exuberance and panic as the mass psychology of collective hubris, greed, and fear overtakes economic fundamentals as determinants of market prices. The interconnectedness of financial institutions and securities markets poses dangers of contagion that not only amplify firm-level risks of financial institution failures, but also transform them into categorically more serious systemic and macroeconomic risks.

Absent effective regulation and state guarantees, the ever-present risks of severe governance and market failures render financial systems highly susceptible to manipulation, rent-seeking, speculative booms and bubbles, panics and crashes, and bank runs (Diamond and Dybvig 1983; Reinhart and Rogoff 2009). Therefore state policies in support of financial system stability, including deposit insurance, guarantees of financial assets, and central bank lender of last resort facilities, have become nearly universal underpinnings for modern financial systems. Securities regulation, encompassing financial disclosure, accounting, and market transparency rules, has become increasingly important world-wide as a means of protecting investors and stabilizing securities markets by addressing informational market failures. Private ratings agencies like Moody's and Standard & Poor's came to play major (and deeply problematic) informational and gatekeeper roles, often mandated by law, particularly in debt markets.

Yet the unintended consequences of financial regulation pose additional serious policy dilemmas. No government can allow the domestic financial system to collapse and thus court broader economic devastation; yet state intervention to preserve systemic trust and stability creates problems of moral hazard that can exacerbate its self-destructive

tendencies. Insuring deposits or other obligations of financial institutions via explicit or implicit public guarantees magnifies systemic risk incentivizing greater risk-taking among bankers and financiers. Similarly, securities regulation deliberately induces increased investor confidence and market development, but also may increase risk tolerance and speculation to dangerous levels. Accordingly, state intervention to enhance trust, confidence, and stability may beget further intervention through prudential regulation and oversight of financial institutions (e.g., bank capital, leverage ratios, risk management, and auditing rules/standards), along with more stringent, prescriptive, and expansive forms of securities, financial market, and corporate governance regulation to contain these firm-level and systemic moral hazards.

Post-New Deal financial regulation in the United States stabilized the financial system by containing the kind of systemic market and governance failures that precipitated financial collapse and produced the Great Depression. The creation of the Federal Deposit Insurance Corporation (FDIC) to insure bank deposits prevented bank runs, while prudential banking regulation reduced risks of bank failures. The Glass–Steagall Act's separation of depository banking from securities-related business lines insulated the traditional core of the financial system from speculative excesses, while limiting moral hazards and the residual risks borne by the public. Securities regulation and corporate governance law improved financial disclosure, market transparency, and investor protection. Most Western European countries during the post-war era eschewed both deposit insurance and financial market segmentation, and instead adopted a mix of prudential banking regulation, industrial policies and other forms of state control over finance, and weak securities market regulation. These divergent approaches produced different kinds of financial institutions and systems. The American regime fostered an increasingly innovative and dynamic market-driven financial system within the constraints of the regulatory state. Glass–Steagall's prohibition of universal banking promoted market-oriented functional specialization and innovations in services and products by financial institutions within market segments. In contrast, the general European approach to financial system regulation and economic governance tended to entrench bank-based financial systems and dampen the development of financial markets. It fostered universal banking across market segments and favored cautious relational lending practices over market-driven financial services and proprietary trading.

During the last quarter-century, dramatic changes in the American and European financial systems and regulatory regimes undermined their hard-won systemic stability and functionality. Since the 1980s, the prevailing dynamics of American interest group and partisan politics, informed by an ascendant neoliberal ideology, systematically weakened the post-New Deal regulatory regime and strengthened the political and economic position of the financial sector. During the same period, British regulatory and economic policies spurred financial sector development as London came to rival Wall Street as an international financial hub. During the 1990s and continuing into the mid-2000s, many Western European countries began to implement more market-friendly forms of financial regulation in pursuit of higher growth.[9] Facing intensifying demands from shareholders and competition from the American and British financial institutions, many large European banks adopted more market-oriented and international business models in search of higher returns. Notwithstanding cross-national variations in regulatory reforms, the diffusion of pro-finance and pro-market regulatory agendas during the

1990s valorized the financial sector and the development of securities markets as the key to economic dynamism and growth (see Tiberghien 2007; Cioffi 2010). However, these policy agendas also reflected skepticism towards regulation and an idealization of private ordering through contract and self-regulating markets that allowed the systemic risks inherent in banking and finance to proliferate and intensify.

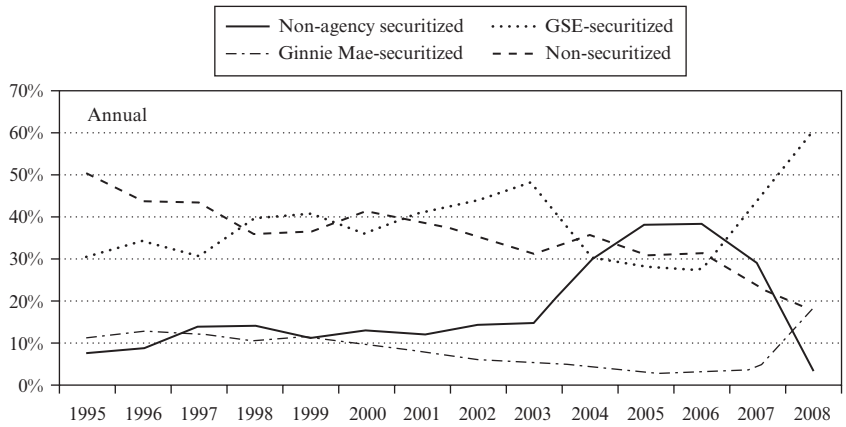
47.4 THE AMERICAN BUBBLE MACHINE AND THE POLITICS OF REGULATORY FAILURE

47.4.1 The Debt Securitization Cycle and Regulatory Arbitrage

The global financial crisis revealed egregious failures of financial sector regulation in most industrialized countries, but those in the United States were by far the most important. Since the 1980s, deep and enduring dynamics of American political economic development fostered the financialization of the American economy and an increasing reliance on soaring levels of private debt to fuel consumption and investment growth (Cioffi 2010). This transformation of the American political economy and the global financial crisis it spawned were enabled by and inseparable from politically driven deregulation and corrosive regulatory dysfunction. The global financial crisis emanated from the unregulated and least regulated parts of the American financial system: subprime mortgage lending; credit rating agencies; leverage ratios and capital requirements; and the "shadow" banking system's investment banks, their off-balance sheet "special purpose vehicles" (SPVs), hedge funds, securitized debt instruments, and derivatives. At each point, regulation failed and private opportunism flourished.

Mortgage securitization required a constant circulation of capital through a cycle in which brokers made home loans and sold the mortgages to investment banks for repackaging into debt securities, and the banks marketed the securities to investors. The proceeds from this chain of transactions helped finance the next round of lending and securitization, while the profits attracted more capital and participants. By examining how each component of this cycle functioned as part of the whole, and then how the cycle was embedded in the wider web of financial relationships and markets, one can see more clearly how securitization mutated into a recursive process that massively inflated asset prices and amplified systemic risk. Viewing securitization as the product of multiple mutually dependent parts also reveals how comprehensively regulation failed. Effective regulation at any point in the securitization cycle could have prevented, or at least curtailed, its pathogenic development and the incalculable damage it wrought.

During the early 2000s, American financial institutions began a widespread adoption of an "originate and distribute" mortgage lending and securitization business model (see Fender and Mitchell 2009). The strategy exploited – and required – lax federal financial regulation and the Federal Reserve's prolonged low interest rate policies. In response to a series of foreign and domestic financial crises from 1994 through 2002, the Fed under Alan Greenspan repeatedly slashed interest rates to historically low levels to increase market liquidity and reinflate the economy. However, unlike a direct Keynesian stimulus of consumer demand or business investment, the strategy stimulated demand indirectly by increasing private debt and inflating asset bubbles. As private lending inflated the



Source: Financial Crisis Inquiry Commission (2010).

Figure 47.1 Share of residential mortgage originations and securitization, 1995–2008.

subprime mortgage bubble after 2003 (see Figure 47.1), the Fed refused to use its regulatory powers to curb predatory or excessively risky mortgage lending or deploy prudential regulatory oversight to ensure adequate bank capital levels and contain systemic risk. It would not even acknowledge the *existence* of an asset bubble.

Beyond the Fed, the fragmentation of banking and financial market regulation left gaps in the law and allowed financial institutions to pursue "regulatory arbitrage" by strategically organizing their corporate structures and financial products to evade regulation or to choose the most lenient regulator possible.[10] For example, AIG and Countrywide maneuvered themselves into oversight by the notoriously lax Office of Thrift Supervision. Much of the shadow banking system and the complex securities it created arose from strategies to avoid regulation and oversight. The boom in derivatives in part reflected the fact that they were unregulated, despite being designed in many cases to mimic or replicate regulated securities or insurance policies. The rapidly growing and immensely lucrative hedge fund segment of the shadow banking system was left almost entirely unregulated – a status its principals and political allies fought fiercely to preserve (with the aid of court rulings by an increasingly conservative federal judiciary). This structure also incentivized a perverse "race to the bottom" by regulators eager to protect turf and, in the case of the Office of Thrift Supervision and Office of the Comptroller of the Currency, maximize fees paid by regulated entities. Interest group politics and the interests of congressional committees in retaining oversight jurisdiction (and thus campaign contributions) insulated these ineffective overseers from abolition or consolidation.

47.4.2 Shell Games: The Mechanics of Securitization, the Leverage, and the Failure of Disclosure

The Fed's rejection of regulation and continued low interest rates fostered mutually reinforcing real estate and securitization bubbles. Figures 47.2 and 47.3 sketch the basic steps

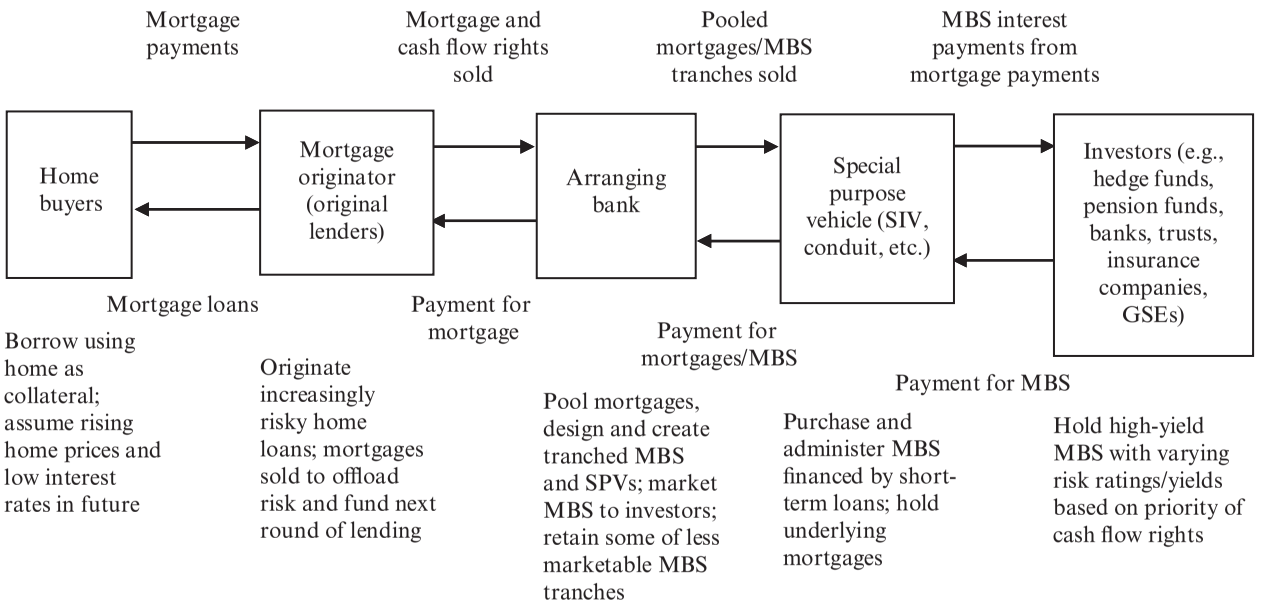
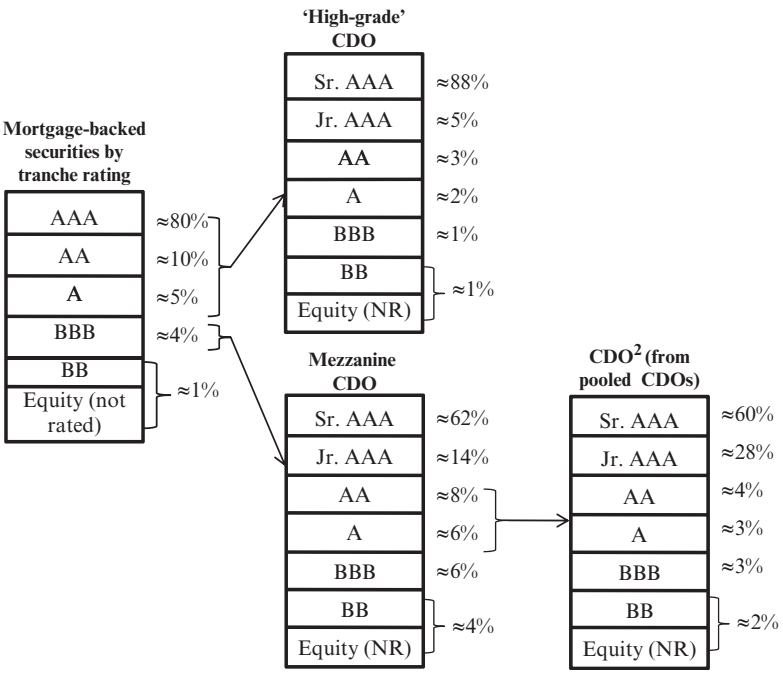


Figure 47.2 Securitization and distribution of subprime mortgage-backed securities (MBS).



Source: IMF (2008: 60).

Figure 47.3 Stylized CDO formation and structure.

and relationships in mortgage securitizations. Mortgage lenders (originators) immediately sold the loans they issued to an investment bank (the arranger), which pooled and securitized them by slicing the cash flow rights into "tranches" of mortgage-backed securities (MBSs) (Figure 47.2). The priority of cash flow rights to the underlying mortgage payments defines these tranches, with the lower tranches posing higher risks of default rated lower and paying higher interest rates.[11] Lower tranche MBSs (e.g., rated less than AAA, and often at "junk" status – less than BBB– or Baa3) were then pooled and their cash flows sliced once again into tranches of collateralized debt obligations (CDOs) with senior tranches once again rated AAA.[12]

Arranging banks moved the MBSs and CDOs off their books by creating highly leveraged SPVs called "structured investment vehicles" (SIVs) and "conduits" (shell corporations or trusts ostensibly legally separate from the arranging bank) to purchase them and then sell the tranched securities to investors. They also engaged in second-order securitizations by bundling lower tranches of multiple CDOs into *another* SPV and marketed them as an even more complex, opaque, and highly leveraged "CDO squared."[13] In each stage of securitization, the "senior" tranche, often over 80 or even 90 percent of securities created, were rated AAA by the ratings agencies, suggesting that they were as safe as government bonds.

SIVs and conduits financed purchases of the arranging banks' long-term CDO assets by heavy short-term borrowing. By offsetting long-term assets (unsold or retained MBSs

or CDOs) with short-term liabilities (typically commercial paper financing), these SPVs took on the crisis-prone characteristics of banks, but without the effective prudential regulation and deposit insurance that had prevented bank runs since the Great Depression. Yet SIVs and conduits often remained tethered to the banks that created them by guaranteed credit lines that, in a crisis, could push their huge debts back onto bank balance sheets with potentially devastating results.

The banks designed the structure of the securitization process and the new financial instruments to circumvent the disclosure regime imposed by securities law by exploiting loopholes in accounting rules and prudential banking regulation. They used SIVs and derivatives to scrub residual MBS and CDO risks from their balance sheets and game the calculation of risk-based capital requirements under the Basel Accords. Theoretically, provisions of the Sarbanes–Oxley Act of 2002 (SOx) and regulatory reforms adopted by the SEC and Public Company Accounting Oversight Board (PCAOB) prohibited the use of off-balance sheet vehicles to hide liabilities and financial risks after similar subterfuges played a role in Enron's notorious accounting frauds and bankruptcy. Critics had attacked SOx and the PCAOB relentlessly for burdening business, but the compliance costs of those reforms paled beside the price of their ineffectiveness in preventing a recurrence of accounting abuses.

The steady erosion and repeal of the Glass–Steagall Act's separation of commercial and investment banking worsened the increasing concentration of risk in the banking sector. Large numbers of Democrats also joined Republicans in accepting, and at times championing, the deregulation of banking and securities business. The Clinton administration and a large majority of Democrats in Congress supported the final repeal of Glass–Steagall by the Gramm–Leach–Bliley Act of 1999. However, the increase in systemic risks had been largely enabled prior to Glass–Steagall's formal repeal by its long and deliberate erosion spearheaded by the Federal Reserve, albeit with the support from the Treasury and other banking regulators under both Republican and Democratic administrations. The consequent emergence of an American variant of universal banking allowed traditional banks to become far more involved in the creation, marketing, and purchase of exotic debt securities than would have been permitted under the New Deal regulatory regime.

The prevalence of deregulation and "light touch" regulatory approaches also reflected a widely held belief in the self-regulating capacities of markets and firms that eroded disclosure and accounting standards over time. A critical and disastrous example of what economist Willem Buiter (2008) has called "cognitive capture" was policy decisions that allowed financial institutions to increase leverage, the amount of debt relative to equity, which magnifies returns per share but also magnifies losses and risk of default. The Federal Reserve had allowed banks to use derivatives hedging to reduce capital requirements since 1996, inviting "balance sheet arbitrage," and permitted them to use bubble-inflated mark-to-market values as well as valuation models that routinely overstated the value of illiquid debt securities (mark-to-make believe).[14]

In 2004, the SEC took the lead in relaxing leverage limitations on investment banks (Buiter 2008). Striking a political deal to avert stricter EU regulation of American investment banks, the banks agreed to voluntarily submit to limited SEC monitoring in exchange for the ability to use their own quantitative risk models to calculate capital requirements and thus increase leverage levels – a form of self-regulation without the check or balance of formal enforcement power (Labaton 2008). In an indication of how

influential the neoliberal vision of markets and financial firms had become, the vote was unanimous and uncontroversial, garnering the support of commissioners known as zealous regulators (Labaton 2008). Afterward, average leverage ratios among major American investment banks and hedge funds nearly tripled from under 10:1 to approximately 27:1 at the height of the real estate and CDO bubble – meaning that a 4 percent decline in asset value would wipe out the equity, and the solvency, of the average institution (see Tett 2009: 134).

At the same time, traditional securities regulation by the SEC, once a jewel of the post-New Deal regulatory state, eroded by neglect and design. Under chairman Christopher Cox, SEC enforcement actions declined at an accelerating rate from 2005 to 2008 as lengthy, burdensome, and contentious authorization and review processes discouraged investigations of large financial institutions (Scannell and Craig 2008; Adler 2009; see generally GAO 2009). The dollar value of SEC penalties fell 39 percent in 2006, 48 percent in 2007, and 49 percent in 2008 (Farrell 2009). The number of enforcement attorneys declined over 11 percent during this period (Farrell 2009; GAO 2009). The agency's monitoring of investment banks was hopelessly understaffed and lax. As financial institutions enhanced bubble-driven profits through leverage, the post-New Deal regime of prudential and disclosure regulation gave way to a new opaque financial system increasingly prone to crisis and collapse.

47.4.3 The Ratings Game

The financial alchemy of securitization depended on the assistance of ratings agencies to make the "senior" tranches marketable. Since the mid-1970s, the three dominant ratings agencies, Standard & Poor's, Moody's, and Fitch, have been recognized by the Securities and Exchange Commission as "nationally recognized statistical rating organizations" (NRSROs). Since the 1970s, federal regulators empowered NRSROs as market gatekeepers, and created a de facto regulatory cartel, whose ratings determined the capital requirements of broker-dealers and the eligibility of securities for purchase by savings and loans associations, credit unions, and federally regulated pension funds. The NRSROs remained almost entirely unregulated, even after their egregious ratings failures during the stock market bubble of the 1990s.[15]

Ratings were indispensable to the creation and marketing of complex debt securities that were difficult if not impossible for purchasers to value independently. They transmuted high-risk mortgages into nominally risk-free high-yield investments. This financial alchemy, however, was the product of flawed risk models and glaring conflicts of interest created by the issuer banks' selection of the NRSRO and of its fees. Payment of fees up front left the NRSROs with no residual risk to discourage unduly high ratings; payments calculated on the volume of rated securities sold encouraged them. Beholden to the banks, the NRSROs routinely underestimated default risks and gave AAA ratings to the vast majority of MBS and CDO issues. Miraculously, these AAA securities were rated as far safer than the mortgage debt underlying them, yet were protected from default by ever-thinner layers of higher-risk equity and lower tranche securities (see Nadauld and Sherlund 2009). With this seal of approval, regulated financial institutions and pension funds could buy the securities, opening up huge markets for arranging banks and sowing the global financial system with undisclosed and underpriced risk.

47.4.4 Derivatives Unbound and the Explosion of Credit Default Swaps

Credit default swaps (CDSs) provided the final essential ingredient of the CDO boom and the financial crisis that followed. These derivatives served as a form of unregulated insurance on securitized debt instruments, including CDOs. In exchange for regular cash payments, the seller of the CDS protection compensated the buyer for the loss of the CDO's value in the event of default or other contractually specified conditions.

Derivatives, including CDSs, had been *preemptively deregulated* under American law – and with the complicity of Democrats in the Clinton White House and Congress. Republicans had long championed financial deregulation, but the Democratic Party embraced much of the cause during the early 1990s. During the Clinton administration, Greenspan, Treasury Secretary Robert Rubin, and then-Assistant Treasury Secretary Lawrence Summers thwarted an attempt to regulate derivatives by Brooksley Born, then chair of the Commodities Futures Trading Commission (Faiola et al. 2008). Countering warnings that the unregulated marketing and trading of derivatives posed enormous potential systemic risks, they argued that regulation would hamper beneficial financial innovations, and that the self-interest of sophisticated parties along with the efficiency of global markets would provide adequate self-regulation (Faiola et al 2008; see, e.g., Greenspan 2002). Phil Gramm, then the powerful Republican chairman of the Senate Banking Committee and a fierce anti-regulation ideologue, drafted the Commodity Futures Modernization Act of 2000, which foreclosed virtually all future regulation of derivatives and passed with barely a murmur of dissent from the Clinton administration and congressional Democrats (Lipton 2008; Lipton and Labaton 2008). In less than a decade, unregulated derivatives would become a multi-*trillion* dollar market.

As "over the counter" (OTC) securities not traded on any regulated exchange with transparent pricing, CDSs and the CDOs underlying them were far removed from regulatory oversight, disclosure rules, or prudential regulation. They were intrinsically difficult to value, and no one knew with confidence who held them and in what amounts. These characteristics made the CDS business immensely profitable – and dangerous. The London-based financial products unit of AIG, the world's largest insurance company, became the world's largest CDS issuer in the CDO market.[16] AIG's CDS "coverage" of debt securities enabled big banks to avoid booking additional capital reserves against this growing share of their balance sheets, giving them another means to increase leverage (Nocera 2009). Freed from regulation, CDS issuers like AIG were not required to set aside reserves to cover potential claims or collateral calls in the event of defaults, price declines, or ratings downgrades. In the regulatory netherworld of derivatives, investors could place immense and highly leveraged bets on the CDO market through "naked CDS" issues (protection bought by a party that did not own the "insured" assets) and "synthetic CDOs" consisting solely of derivatives designed to mimic the CDO cash flow payments to investors coupled with naked CDSs held by parties betting that CDOs would default.[17] (See Figure 47.3.)

CDSs unleashed a massive increase in financial speculation as parties on either side of CDS trades placed, in the aggregate, trillions of dollars' worth of undisclosed and often unhedged bets on the future value of CDOs. Absent disclosure regulation, the opacity of these CDS positions markets both obscured and magnified systemic risk by creating impenetrable uncertainty over the size and location of potential liabilities. By the end of

the boom, the nominal (face) value of CDS issues exceeded the value of CDOs by an estimated ratio of 10:1. The mutation of CDSs into synthetic CDOs kept the securitization bubble growing by allowing banks (most notoriously Goldman Sachs) to collude with hedge funds in creating securities designed to default and trigger huge payouts to funds shorting the precarious MBS and CDO markets.

47.4.5 The Securitization Cycle and the Web of Conflicts

Each of the components discussed above fit together to create a lending–securitization cycle (represented by the cash flow arrows in Figure 47.2) that inflated the real estate bubble and drove the massive expansion of credit and leverage within the shadow banking system. The cycle was self-perpetuating so long as surging investor demand and a global financial system awash in cheap credit provided the capital to channel back into mortgage lending. Figure 47.4 illustrates part of the broader web of relationships in which the securitization cycle was situated. None of the parties linked in the securitization web acknowledged, and many never understood, the dangers posed by an increasingly obvious real estate bubble. The securitization cycle depended on, and the "value at risk" models used by the banks and ratings agencies assumed, continually rising real estate prices that kept mortgage default rates low. Many parties maintained an illusory sense of security based on blind faith in the financial alchemy of securitization, flawed risk management models, erroneous debt ratings, and the risk-spreading properties of derivatives. Others within the securitization cycle opportunistically exploited the conflicts of interest and information asymmetries within the complex tangle of counterparty relationships.

The ubiquity of severe conflicts of interest was a striking characteristic of the securitization web, as was the absence of transparency characterizing so many of these relationships. The product of spontaneous private ordering (no central party designed and assembled all these pieces), this elaborate financial subsystem appears designed for market failure and collapse. Mortgage lenders had an incentive to debase lending standards for loans they sold off immediately. The arranging banks externalized part of their risk by selling off MBSs and CDOs as quickly as possible with the aid of inflated debt ratings, courtesy of compromised rating agencies. They obscured the location and size of their growing residual exposure to these securities through SIVs or CDS hedging, and often marketed securities around the world through off-shore subsidiaries that further insulated them from regulatory oversight.

The securitization cycle also subsumed and destabilized the traditional banking sector. Bankers and fund managers took advantage of cheap credit and relied on implausibly high debt ratings in buying MBSs and CDOs for high yields and to boost returns through increased leverage, deliberately or unwittingly exposing their investors, depositors, beneficiaries, and the public to immense risks. The end of the legal separation of commercial and investment banking in the US allowed large commercial banks with investment banking units to join in the securitization boom, but the costs of this moral hazard could and would be externalized onto taxpayers. European universal banks, turning away from traditional relational banking, sought higher returns and profits in the new financial marketplace, but many had insufficient expertise to discern and manage the risks that entailed.

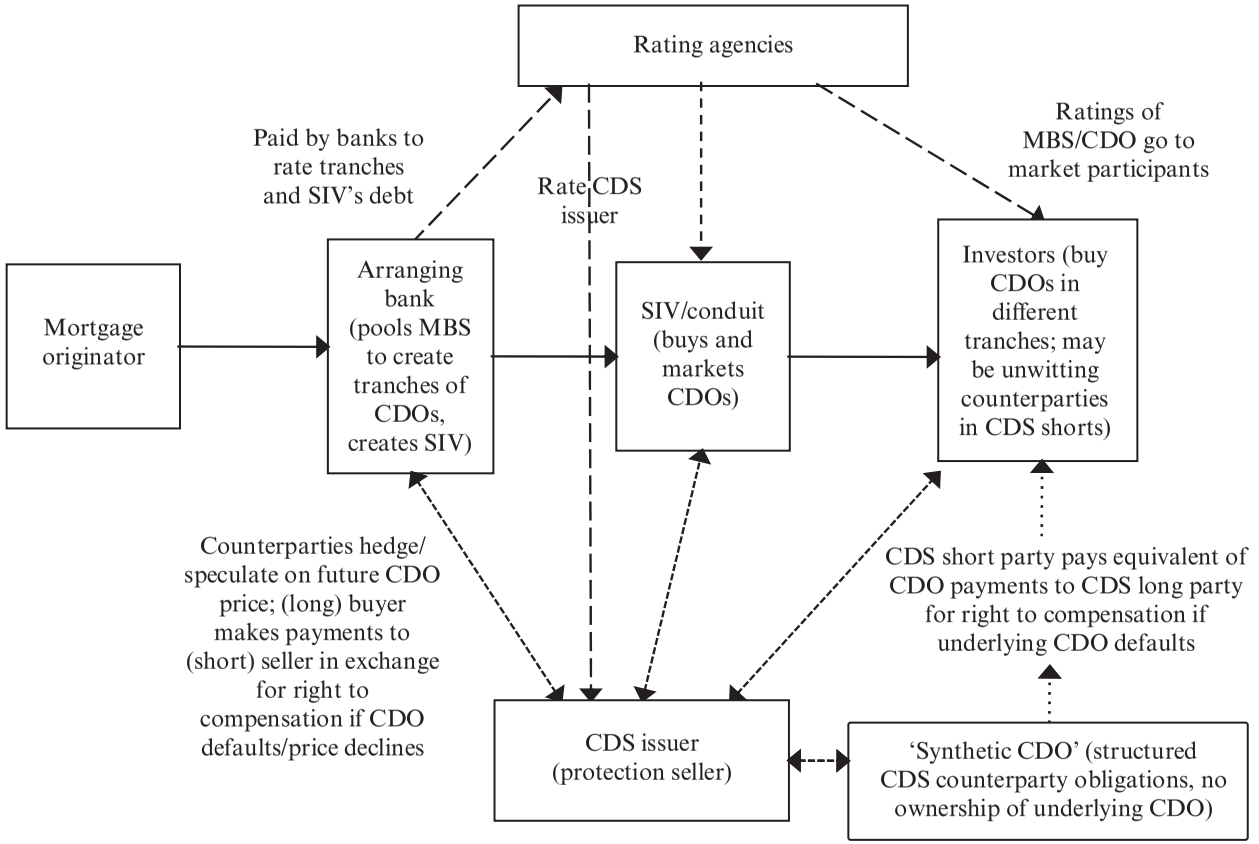


Figure 47.4 The CDO and CDS securitization weh – main participants and relationships.

Regulation could have curtailed or broken the securitization cycle by addressing the opacity, misrepresentations, conflicts of interest, and predatory behavior pervading the shadow banking system, thereby reducing the capital flows and weakening the forces that inflated the real estate and credit bubbles. And, at every point, regulation failed. Even with effective regulation there may have been a housing boom, but the regulatory failures that enabled leverage, speculation, and systemic risks to soar turned the inevitable bust into a global financial catastrophe.

47.5 ARCHITECTURE OF COLLAPSE: A BRIEF SUMMARY OF THE FINANCIAL CRISIS OF 2007–09

The financial crisis that culminated in the panic of September–October 2008 had been looming since early 2007. Subprime mortgage lending stalled in 2006. After mortgage defaults started to rise in late 2006 the MBS and CDO markets began to implode in the summer of 2007. Soaring subprime default rates during 2007 and 2008 triggered a worsening credit crunch that, in turn, produced an intensifying liquidity crisis in the subprime mortgage and securitized debt markets. Without the continual recycling and growth of credit and debt that drove the lending–securitization cycle, the grossly inflated prices and markets for real estate, subprime mortgages, MBSs, and CDOs collapsed. In March 2008, Bear Stearns' heavy losses on and exposure to CDOs precipitated a panic that left it insolvent within days.[18] Fearing systemic contagion, the Federal Reserve Bank of New York arranged Bear's purchase by JPMorgan Chase by guaranteeing $30 billion of the failed firm's toxic assets.

Lehman Brothers, one of the world's largest and most globally interconnected investment banks, had suffered vast – and largely undisclosed – losses on MBSs and related derivatives. Fatally misjudging the market and political realities, its senior managers, along with many of the bank's counterparties and other market participants, hoped for a merger with another bank or a government bailout. Senior officials of the US Treasury and Federal Reserve were deeply troubled by the moral hazards of a second bailout and chastened by the breadth and intensity of public hostility towards the Bear Stearns bailout (see Solomon et al. 2008). Their faith in rational self-interest and efficient markets led them to bet that major banks, counterparties, and investors had unwound or hedged their exposure to a potential Lehman bankruptcy. They withheld government intervention and let Lehman Brothers fail (see Reddy and Hilsenrath 2008; Solomon et al. 2008).

Lehman Brothers' collapse in mid-September 2008 set off a global financial panic and a cascade of financial catastrophes. Market participants knew enormous bad debts and risk exposures lurked throughout the global financial system, but had no idea where they were located or which institutions would be next to fall. Large, interconnected, and overleveraged financial institutions and investment funds suffered immense losses on accumulated securities holdings; they could find no buyers at precisely the moment they most desperately needed to sell assets to rebuild capital cushions and loss reserves. Mark-to-market accounting rules helped inflate the asset bubble on the way up; they now accelerated the crash by forcing financial institutions to book huge losses as investors and institutions hoarded cash and liquid assets. Panic and mistrust seized the core of

the banking system, accompanied by a global chain reaction of deleveraging as liquidity disappeared, counterparty risks soared, and credit contracted. The credit crunch froze short-term interbank lending and rendered otherwise solvent institutions incapable of financing continuing operations. The evaporation of short-term finance accelerated the systemic collapse by forcing the liabilities of highly levered SIVs and conduits back onto arranging bank balance sheets.

The massive wave of MBS and CDO defaults triggered billions in CDS and bond insurance claims. Bond default claims brought the major bond insurers to the verge of bankruptcy. CDS claims magnified the scale of the losses and threatened AIG and some of the world's largest financial institutions with insolvency. The reckless CDS speculation exemplified by AIG had concentrated, amplified, and globalized systemic risk (see Nocera 2009; Tett 2009).[19] AIG had retained nearly three trillion dollars of CDS exposure – one trillion of it to a dozen of the world's largest financial institutions. Some 300 billion dollars of exposure was to European banks that had hedged their own risks and used CDSs to reduce their "regulatory capital" (i.e., increase their leverage even more than US banks) and likely could not have survived a collapse of AIG. Not willing to risk another round of panic and contagion, the Treasury and Federal Reserve nationalized AIG, along with Fannie Mae and Freddie Mac.

Within weeks, the global financial panic transformed the American and European political economies. Bank of America bought Merrill Lynch at a distress price in a government-brokered deal. The Treasury and Federal Reserve nationalized AIG, Fannie Mae, and Freddie Mac, and bailed out Citigroup and Bank of America. Goldman Sachs and Morgan Stanley were unable to continue as investment banks and became bank-holding companies to qualify for government bailout funds. As the November presidential election loomed, the Bush administration relied primarily on Democratic support to pass the controversial $700 billion Troubled Asset Relief Program (TARP). Even more controversially, the government paid off CDS claims against AIG at 100 cents on the dollar – without transparency or accountability – to provide an additional unrecoverable $80 billion "backdoor bailout" to some of the world's major financial institutions (Walsh 2009).[20]

These were merely the most visible forms of government intervention on an extraordinary scale (Montgomery and Kane 2008). Unprecedented and controversial federal lending and asset guarantees, much of it by the Federal Reserve, propped up the entire shattered financial system by supporting the very institutions that had caused the collapse. As of September 2009, the American government's support for the financial sector totaled $545.3 billion in expenditures (of which $72.9 billion had been repaid) and another $23.7 *trillion* in asset guarantees (representing nominal asset value, not the likely real costs) (SIGTARP 2009a: 137–8, Table 3.4, 2009b: 31; IMF 2009).[21] European governments, beginning with the Irish, moved to halt a run on their banking systems and extended deposit insurance for the first time, and exposed government budgets to potentially huge liabilities. They were forced to grant asset guarantees and bailouts to many of their banks, and nationalized a score of others (a step the US refused to take). The European Central Bank and Bank of England also engaged in vast lending and liquidity operations to prop up European banks. In addition to the immediate economic carnage, the crisis was a nightmare of moral hazard. "Too big to fail" was now an officially confirmed reality.

47.6 THE POST-CRISIS POLITICS OF REFORM

In the immediate aftermath of the global financial crisis and the collapse of Wall Street, there was a near universal expectation that a revival of the regulatory state would rapidly transform financial sectors and markets around the world. It is now far from clear that the American or European political systems are capable of undertaking such fundamental structural and regulatory reforms. The Obama administration refused to seriously consider nationalizing major financial institutions, and it was noticeably reluctant to endorse far-reaching financial system reforms.[22] Hampered by the fragmented structure of the EU and the severity of the Eurozone sovereign debt crisis, the pace of European reforms is even slower, with major reforms still in planning.

Congress finally passed a financial reform bill, the Dodd–Frank Act, in July 2010. Some of the most important proposals were blocked or enfeebled during the legislative process: the regulatory reduction in excessive leverage and the size of too-big-to-fail banks, a ban on proprietary trading by banks, derivatives regulation, regulatory oversight and control of systemic risk, resolution authority to process the bankruptcies of large systemically sensitive financial institutions, and the creation of a strong independent consumer financial protection agency. Consolidation and rationalization of federal regulatory authority was jettisoned in favor of strengthening the role of the Federal Reserve in financial regulation. The regulatory politics of finance capitalism during the past 25 years created the conditions for this crisis. Yet, in the absence of structural reform of the financial system, the financial sector, and the regulatory state, the reforms emerging from the post-crisis political environment rely on the competence, integrity, and functional capacity of regulators.

To some extent, the sluggish pace and meandering path of reform reflect a political paradox of the financial crisis: the financial sector's *economic* weakness shielded it at precisely the moment when it was *politically* weakest. The magnitude of the crisis made the financial sector's rescue more pressing than its fundamental reform. But the sluggish pace and compromised character of financial system reform also reflected the dysfunctional state of American politics in an era of increasingly bitter partisan conflict, corporate political influence, and a crisis of confidence, if not legitimacy, in government integrity and competence. Even under conditions of popular outrage against the financial sector, government's capacity to act in response to an extraordinary crisis has, to date, proved inadequate to achieve fundamental reform of a financial system that had fundamentally failed.

Saved by vast infusions of public funds and assets guarantees, the bailout expanded the size and political power of the largest financial institutions, and they have fought to shape regulatory reform when they could not kill it. Even in a weakened state, the financial sector remains a powerful force in American politics, and its interests are most intense when fighting reforms threatening the most profitable business activities of surviving financial institutions that have grown larger through public subsidies. In 2009, the six largest American banks held assets worth over 60 percent of GDP (up from less than 20 percent in 1995) and two-thirds of all deposits (Faiola et al. 2008; Cho 2009; Johnson and Kwak 2010: 203, fig. 7-1). Explicit or implicit federal recognition of these institutions as too-big-to-fail lowered their costs of capital, setting the stage for further sectoral concentration.[23]

Neoliberal finance capitalism has mutated into an inversion of the liberal market ideal. American finance capitalism now embodies a fusion of public and private power corrosive to democratic governance and posing a demonstrable threat to economic stability (see generally Johnson and Kwak 2010; Smith 2010). In Europe, the crisis of the shadow banking system became a solvency crisis in the traditional banking system, and the bad debts of large private banks have shifted implicitly, if not explicitly, onto the state. In Europe this banking crisis is at the core of the ongoing sovereign debt crisis that threatens the future of the euro and perhaps the EU. The corrosive perception of state capture by the financial sector is a portent of an intensifying legitimacy crisis afflicting American and European politics across the political spectrum. Financial collapse exposed massive regulatory failures and revealed the intellectual, ideological, and economic bankruptcy of the neoliberal variant of finance capitalism. Should the reform of financial regulation prove inadequate to prevent another serious crisis, the next catastrophic bankruptcy may be that of political economic order.

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NOTES

1. The argument here is that regulatory failures were a necessary, not a sufficient, condition for the crisis. Monetary and macroeconomic policies, trade and balance of payments imbalances, and intensifying income and wealth inequality also played critically important roles, but are beyond the scope of this chapter.
2. I am not arguing that the financial elite sought a pure laissez-faire economic order. They often favor regulation that serves their economic interests (e.g., rules designed to enhance depositor and investor confidence and otherwise promote the growth of financial services, securities markets, and financial returns) (Cioffi 2010).
3. Taleb (2008) argues that widespread underestimation of the frequency of financial crises may increase their likelihood by encouraging herding or clustering of behaviors that increase systemic vulnerability and risk.
4. Notably, Japan and other East Asian banking systems, having been chastened by their financial crises during the 1990s, were less exposed to the securitized debt and derivatives markets that precipitated the financial crisis.
5. This discussion is largely restricted to economic theories of regulation, but even those that advance non-economic goals and justifications for regulation (e.g., Sunstein 1990) resort to economic concepts and theoretical argumentation.
6. For an overview of private interest and public choice theories, see Sunstein (1990, chap. 2); Croley (1998).
7. Framing these problems as conflicts of interest rather than principal–agent problems avoids the normative and empirical difficulties of determining who is a principal and who is an agent.
8. These levels encompass the most important relationships within the financial system: borrowers and lenders, shareholders and managers, managers and employees engaged in complex transactions involving vast sums of money, and among investors and financial intermediaries (e.g., investment bankers and other advisors, fund managers, brokers, or traders).
9. The EU's single market agenda also generated political pressures for reform, but EU policy is constrained by member state preferences, and regulatory reforms at the national level often anticipated or exceeded liberalizing EU financial market directives.
10. Financial institutions could be regulated, in whole or in part, by the Federal Reserve, the Office of Thrift Supervision, the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation,

the Securities and Exchange Commission, the Commodity Futures Trading Commission, and state law (which was often preempted by more permissive federal regulation).

11. For the development of this securitization model, see generally Tett (2009); Smith (2010).
12. This discussion necessarily simplifies the extraordinarily complex and diverse structural features of securitization and "structured finance." It also glosses over terminological inconsistencies common in practice.
13. Moreover, CDOs encompass a much wider array of securitized debt instruments, ranging from private equity loans to credit card debt. The crash in mortgage-backed CDOs also undermined the markets for these instruments, intensifying and broadening the credit crunch.
14. These asset classification and valuation standards were codified in FASB's Federal Accounting Standard 157, revised and renamed as FASB Topic 820 in January 2010.
15. NRSROs were also insulated from regulation by court opinions ruling that debt ratings are protected opinions under the First Amendment, shielding them from liability even if grossly negligent.
16. For an analysis of AIG's CDS business, see generally Dennis and O'Harrow 2008; O'Harrow and Dennis 2008a, 2008b; Sjostrom (2009).
17. Incredible as it seems in hindsight, "synthetic" CDOs were first developed to satisfy excess investor demand for CDOs limited by the supply of subprime mortgages.
18. In August 2007, monetary interventions by the Fed and the European Central Bank contained a prior panic triggered by large subprime-related losses suffered by Bear Stearns and BNP Paribas hedge funds.
19. Advocates of deregulated derivatives markets had claimed that they spread risk efficiently among sophisticated parties according to their ability and inclination to bear it, thus contributing to financial system stability. A long line of critics had countered that derivatives were too complex to be understood by even sophisticated financiers and fostered dangerous levels of systemic opacity and potential volatility. The events of late 2008 proved the critics correct.
20. A partial list of AIG bailout recipients includes (in billions): Goldman Sachs ($12.9), Société Générale ($12), Deutsche Bank ($12), Barclays ($8.5), Merrill Lynch ($6.8), Bank of America ($5.2), UBS ($5), Citigroup ($2.3) and Wachovia ($1.5) (Walsh, 2009).
21. The IMF's (2009) estimate of the ultimate costs was still $3.68 trillion ($1.85 trillion in asset purchase commitments; $1.83 trillion in guarantee commitments).
22. AIG and the public–private hybrid mortgage guarantor agencies Fannie Mae and Freddie Mac were notable exceptions to the non-nationalization policy, for reasons that are still hotly debated.
23. In 2007, large American banks (in excess of $100 billion in assets) paid 0.08 percent less interest in borrowing costs than smaller rivals; by late 2009 that advantage had quadrupled to 0.34 percent (Cho 2009, using FDIC figures).

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