

6

Rethinking Financial Regulation: How Confusion Has Prevented Progress

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The failure of financial regulation can, and did, cause significant harm to the economy. I argue that confusion about the nature of the problems in the financial system and about the trade-offs associated with key regulations has prevented progress in making the financial system safer and healthier. This system, little changed since the financial crisis, still endangers and distorts the economy unnecessarily.

In 2007–2009, a crisis that started in the US housing market had powerful ripple effects around the globe. These effects were largely the result of an increase in opacity and interconnectedness, which created powerful contagion mechanisms, transmitting default risks from financial institutions to their direct and indirect counterparties and to the rest of the economy. Concerns with systemic risk led central banks and governments to provide extraordinary and unprecedented support to many financial institutions. Despite this support and continued actions by central banks, the economy has suffered substantial and long-lasting harm. Excessive mortgage lending created a heavy debt burden for households, exacerbating the effects.

If financial crises were like unpreventable natural disasters, we might have to accept them as inevitable. But the extreme fragility of the financial system that gives rise to systemic risk and crises is rooted in the incentives of people within the system and in the failure of regulations to counter these incentives. Beyond the risk of acute crises, the same forces that cause excessive fragility also make the financial system inefficient, distort credit markets, and harm the economy. Much can be done to improve this system. Unfortunately, regulatory reform efforts have been unfocused. Regulations remain inadequate, and their flaws further exacerbate the problems.

Why the System Is So Fragile and Distorted

In taking deposits and issuing short-term debt, banking institutions naturally engage in borrowing. Borrowing creates leverage, which magnifies risk and increases the likelihood of distress, insolvency, and default. Borrowing also gives rise to conflicts of interest. Decisions made by borrowers acting in their own interest may harm creditors and others who have less control. The presence of overhanging debt creates inefficiencies, possibly leading borrowers to make risky value-reducing investments while at the same time passing up worthy investments that do not have enough upside. In banking, such distortions may result in biases in favor of speculative trading or credit card and subprime lending and against creditworthy business loans.

Borrower-creditor conflicts also distort funding decisions. Once debt is in place, borrowers may choose to take on additional debt, even though increasing indebtedness makes distress, default, and bankruptcy more likely and harms creditors. These same conflicts of interest lead managers and shareholders in indebted corporations to resist any actions that would reduce indebtedness and make existing debt safer, such as retaining profits and avoiding payouts to shareholders, selling assets to buy back debt, or issuing new equity to fund new investments. The conflicts of interest again lead to inefficiency, for example by increasing the likelihood that the firm's assets would be depleted by the deadweight costs of bankruptcy. The harm can spill to others.

The tendency for leverage to become addictive is underappreciated and often ignored in the academic literature. In 2015, my colleagues and I (see Admati et al. 2015) examined the bias against reducing leverage and in favor of increasing it attributable to borrower-creditor conflicts of interest, which we termed *the leverage ratchet effect*. We study this effect in the presence of other frictions, including bankruptcy costs, taxes, and asymmetric information, to study corporate leverage adjustments. The analysis is highly relevant for banking.

Although corporate tax codes generally favor debt over equity funding, outside of banking it is rare for healthy corporations to operate with less than 30 percent equity relative to total assets, and some thriving companies borrow very little. Retained profits are a preferred source of funding that does not involve borrowing. The reason is that,

outside of banking, the interest rates creditors charge and the conditions or covenants attached to debt contracts reflect the likelihood of default, bankruptcy costs, and the potential for managerial actions to harm creditors, including by ratcheting up leverage and risk and passing up worthy investments.

Banker-depositor conflicts have always caused excessive fragility in banking. Since banks' assets are often opaque, concerns about the quality of the assets can lead to panics and runs. Such concerns are less likely, however, if banks have significant equity funding from owners or shareholders, which allows them to continue to pay their debts and invest even after losses. In the nineteenth century, when banks in the UK were unlimited-liability partnerships, they routinely funded 50 percent of their investments by equity, and their owners' personal assets could be tapped to pay depositors. Deposit insurance and central bank supports have made depositor runs less likely. At the same time, the use of equity in banking has persistently declined over the last century.

The safety net provided to the financial system has expanded significantly in recent decades. Concerns with systemic risk have created the expectation of supports from central banks and governments. Implicit guarantees have translated to outsized and distortive subsidies to banking institutions and to the entire financial sector. Because of the interconnectedness of the system, bailouts and supports flow from borrowers (institutions and even sovereigns) to their creditors and counterparties. The bailouts of AIG and of the Greek governments provide examples of this effect. Distressed households, however, have not received much direct relief.

The safety net weakens or eliminates creditor discipline, protecting financial institutions from the burden that heavy borrowers and their creditors experience elsewhere. Guarantees perversely feed, enable, and reward the addiction to leverage and risk that accompanies heavy borrowing because of conflicts of interest, as discussed earlier.

Worse, guarantees also enable and encourage inefficient growth, complexity, opacity, and herding behavior, all of which increase systemic risk. The largest and most systemic institutions, which benefit most from implicit guarantees, gain competitive advantage over less privileged companies, and have incentives and ability to grow and expand their scope and scale beyond banking and finance. The expansion of opaque derivatives

markets that enable taking and hiding more risks, often with counterparties within the system, has also contributed to the interconnectedness and fragility of the financial system.

In this situation, regulations must protect the public and correct the distortions, restoring the vanishing market discipline and countering the flawed incentives. Yet financial regulations have not kept up with market developments. Regulations aimed to control the funding mix in banking, so-called capital regulations, still tolerate extremely high levels of indebtedness.

Capital regulations also rely in recent years on a complex system of risk weighting that further distorts investment decisions and increases systemic risk. For example, as the interest rate the Greek government promised prior to its debt restructuring in 2012, sometimes higher than 15 percent, contained significant compensation for default risk, the debt had zero risk weight. Banks could buy Greek debt entirely with borrowed money, benefiting from large spreads until losses arrived, causing some, such as Dexia and the Cypriot banks, to fail. During the financial crisis, many institutions suffered devastating losses from investments that regulators had assumed to be safe but that were actually risky, such as AAA-rated mortgage securities.

Because equity levels in banking remain extremely low overall, banks can use the highly imperfect risk weights to ratchet up their actual leverage and risk while satisfying the regulations. Regulations also allow banks to use their own models to determine the risk weights, which make the weights manipulable.

Compensation practices that encourage risk taking, and significant governance problems, also contribute to the fragility and inefficiency of the financial system. The largest financial institutions are the largest of all corporations by asset size and arguably the most complex. Investors and regulators are unable to understand and evaluate the risks these institutions and the system are exposed to. Repeated scandals involving fraud, manipulation, and other wrongdoing show that boards and executives are unable or unwilling to control the actions of individuals within the institutions.

When risk is taken on, someone must bear the downside. The business of banking has become focused on finding ways to pass downside risk to others and to obscure this fact. A few, mostly within the system, benefit

disproportionately from the upside, while the economy suffers from significant collateral harm. Laws and regulations have failed to address these problems.

The Muddled Debate

All the contagion mechanisms that create systemic risk, including direct contractual dominos, inferences from weakness of one institution about the strength of others, a credit crunch owing to lenders' distress, and the intensity of asset sales in deleveraging, would be alleviated if institutions were more resilient to shocks and able to absorb more losses without becoming distressed. Society stands to benefit greatly from requiring that the funding mix of banking institutions, particularly those considered systemic, includes much more equity. Progress in designing and implementing such regulations, however, has been prevented by confusion and politics.

Prior to the financial crisis, the relevant international agreement for minimal capital regulations, Basel II, allowed banks to reduce their equity levels below 3 percent of their total assets. Many regulated institutions that had satisfied Basel II or even tougher requirements failed, or survived only thanks to massive support from central banks and governments. Basel III, the reformed 2010 international agreement, sets a minimum "leverage ratio" of 3 percent equity relative to total assets. (US regulations require 5 percent for large bank holding companies and 6 percent for deposit-taking institutions.) The remaining regulatory ratios are stated relative to risk-weighted assets. The actual meaning of all these ratios depends on how different assets are accounted for and how risk weights are calculated. Details, including how to treat derivatives and off-balance-sheet commitments, matter greatly.

Bankers and regulators routinely claim that capital levels in banking have increased dramatically, quoting a percentage change relative to previous ratios and ignoring the fact that accounting-based and risk-weight-based capital ratios can be misleadingly reassuring, and that actual indebtedness levels in banking remain inappropriate and dangerous. In a September 14, 2010, column in the *Financial Times* titled "Basel: The Mouse That Didn't Roar," Martin Wolf said cynically, "Tripling the previous requirements sounds tough, but only if one fails to realize that

tripling almost nothing does not give one very much.” With equity levels sometime below 1 percent of total assets under previous requirements, the same is true for a six- or tenfold increase. The question is not the percentage increase relative to previous failed regulations but what is reasonable and desirable, and the costs and benefits of significantly tighter requirements. On these issues, confusion prevails and progress has stalled.

Ahead of Basel III’s approval by G-20 leaders in 2010, I helped organize a letter, signed by twenty academics from finance and banking, which stated: “Basel III proposals fail to eliminate key structural flaws in the current system. Banks’ high leverage, and the resulting fragility and systemic risk, contributed to the near collapse of the financial system. Basel III is far from sufficient to protect the system from recurring crises. If a much larger fraction, at least 15 percent, of banks’ total, non-risk-weighted, assets were funded by equity, the social benefits would be substantial. And the social costs would be minimal, if any.” The figure of 15 percent was meant to indicate that Basel requirements are entirely in the wrong range.¹

The letter, which also pointed out some of the problems with the risk weights system, concluded by stating: “Ensuring that banks are funded with significantly more equity should be a key element of effective bank regulatory reform. Much more equity funding would permit banks to perform all their useful functions and support growth without endangering the financial system by systemic fragility. It would give banks incentives to take better account of risks they take and reduce their incentives to game the system. And it would sharply reduce the likelihood of crises.” Our recommendations, and the more detailed proposals in Admati and Hellwig (2013a, chap. 11), have not been followed.

A large collection of flawed claims by bankers and others, including academics, are brought up to support the mantra in banking that “equity is expensive.” My colleagues and I have classified claims to fallacies (false statements), irrelevant facts (e.g., claims that confuse private and social costs), and myths (implausible theoretical constructions that selectively ignore important parts of reality) (see Admati et al. 2013). The fallacies show confusions about balance sheet mechanics and about basic notions in finance, such as that leverage magnifies risk, that riskier investments generally require higher expected returns, that targeting specific return levels is not the same as creating value for investors, and that rearranging how risk is borne by different investors does not by itself change funding costs.

Misleading jargon also serves to confuse. One fallacy involves insidious confusion about the meaning of the word “capital” in banking, stemming from terms like “capital reserve” and expressions like “hold” or “set aside” capital. Such terminology suggests falsely that bank capital is idle cash reserve. Confusion between private and social costs is reflected in terms like “capital (sur)charge” that falsely suggest a relevant social cost for higher equity requirements.

Banking institutions are better able to serve the economy, providing appropriate and consistent liquidity and credit and other financial services, if they have more equity and less debt funding. The institutions have significant discretion over how they use their funds, and providing blanket subsidies to their *debt* funding is perverse because it increases systemic risk and creates more inefficiencies. Subsidies, if deemed desirable, must not be delivered in ways that harm.

Theoretical models of banking and empirical studies that purport to inform policy often make inappropriate, even fallacious, assumptions, while ignoring key forces such as the inefficiencies and harm from high leverage, poor governance, and flawed regulations. Models that significantly distort reality provide poor policy guidance.

Instead of increasing equity requirements, regulators have recently focused on trying to force large systemic institutions to issue hybrid, debtlike securities that could in principle convert to equity in certain scenarios. These securities are dubbed TLAC (Total Loss Absorbing Capacity), GLAC (Gone-concern Loss Absorbing Capacity), CoCos (contingent convertible capital instruments) or bail-inable debt.

There are numerous problems associated with using hybrid debtlike securities instead of equity. For example, triggering the conversion of these securities to equity or forcing them to absorb losses often requires that someone with authority determine that a large and complex institution is near or at insolvency, which is very difficult. Market instabilities are likely to start in anticipation of any trigger, which may scare policymakers away from forcing the conversion. Indeed, in 2008–2009, none of the hybrid securities that had counted as regulatory capital and that were supposed to absorb losses actually did absorb losses (except at Lehman Brothers), even in institutions that received massive support. It is baffling that regulators believe next time could be different.

Using common equity instead of debtlike hybrid securities is a simpler and more reliable approach to making sure systemic institutions are

better able to absorb their losses without harming the economy.² There is no relevant sense in which hybrid securities, assuming they actually work, are cheaper or better than equity. The fact that the securities become useful in resolution is irrelevant, because if equity were used instead, resolution would be less likely to be needed at all, which is better.

Basic finance suggests that if downside risk is borne by investors and not by taxpayers, rearranging risk among investors does not by itself change funding costs. Shareholders, who are entitled to the upside, are the most natural targets for bearing downside risk, and loss absorption by shareholders does not require unreliable and potentially destabilizing triggers. The rationale for using debtlike securities in capital regulations is based on flawed claims.

Excuses and Politics

Some arguments against financial regulation do not concern the merit of specific tools, but rather raise concerns about the scope and enforcement of regulations. A common claim is that tighter regulations would lead activities to move to the unregulated “shadow banking system,” consisting of money market funds, hedge funds, asset management firms, and other institutions that are regulated differently, or more lightly, than banking institutions.

For laws and regulations to be effective, their design and enforcement must work. The shadow banking system grew and became harmful largely because regulated institutions used it to hide risks. For example, special-purpose vehicles funded almost entirely with debt were sponsored and implicitly guaranteed by regulated institutions. Regulated institutions purchased credit protection from AIG to an extent that the institutions became exposed to AIG’s credit risk, a fact that regulators failed to notice. Accounting rules allow risk exposures to be disguised using off-balance sheet entries and derivatives. The crisis made clear that risk claimed or believed to be eliminated may in fact appear elsewhere. The lesson is that regulators must monitor the system more effectively and do better in enforcing regulations, using their authority to insist that the system become less opaque and to intervene when risks build up.

Shadow banking does not actually operate in the dark. Some institutions or activities may not require much regulation, while others require

better regulation. Money market funds, for example, add fragility to the system and must be regulated more effectively than they are. Turning the shadow banking excuse on its head, the largest banking institutions can be viewed as the most dangerous “shadow hedge funds,” with privileges that enable extreme opacity and leverage. Shining a brighter light on these reckless and dangerous institutions and reducing the excessive risk and costs they impose on the economy would be highly beneficial.

A related and frequently cited argument against regulation is that international coordination, or a “level playing field,” is necessary. In many ways the search for harmonization has led to a race to the bottom in regulation. The flawed notion that countries should support “their” banks in global competition, even at the cost of endangering and harming their citizens, has brought disaster to Ireland, Iceland, and Cyprus.

The Opportunity and the Challenge

The economy suffers when banking institutions are allowed to be persistently distressed and possibly insolvent. Delaying recognition of losses, tolerating and even supporting weak institutions over an extended period, is misguided. Unless their indebtedness is reduced, and with supports always given in the form of debt, banks are less likely to make new loans that help the economy. Their weakness can even interfere with the transmission of central banks’ policies. If an institution is unable to sell shares to investors, it may be too opaque or weak. Instead of the prompt corrective action needed, excessive forbearance has become the norm. The result has been harmful cycles of boom, bust, and crises.

We may be unable to write tractable dynamic stochastic general equilibrium models that properly capture the complex dynamics of systemic risk, and we may not have the data to measure it. Hansen (2013) warned recently: “We should not underestimate the difficulty of measuring systemic risk in a meaningful way.... Caution should prevail about the impact of model misspecification on the measurements and the consequences of those measurements.” It is also difficult to predict whether the next financial crisis will be triggered by interest rates changes, sovereign debt defaults, or a cybersecurity attack. The policy focus must be on making the system more resilient so that shocks are less harmful and less

distorted, so it can serve the economy better. Current regulations do much too little toward these goals, allowing the financial system to remain dangerous and unhealthy.

Perhaps the biggest challenge in financial regulation is the lack of political will. Politicians have other priorities; they seem to view banks more as a source of funding than as a source of risk. The harm from failing to design and enforce effective financial regulation is large but abstract, and there is little personal accountability throughout the system, including for regulators or politicians.

Confusion, however, has also played an important role in preventing progress. When the debate is muddled and the trade-offs are misunderstood by so many, narrow interests are more likely to succeed in affecting policy. Rethinking the issues is therefore important and useful.

Notes

I thank Olivier Blanchard, Martin Hellwig, Paul Pfleiderer, and John Talbott for helpful comments. The material in this chapter is based on Admati and colleagues (2013, 2015), Admati and Hellwig (2013a, 2013b, 2015), and Admati (2014a, 2014b). Hellwig (2014) provides a related and more detailed discussion of systemic risk and macroprudential regulation. Pfleiderer (2014) discusses how models can be misused. Links to most of these references (and more) are available at <http://bankersnewclothes.com> and <https://www.gsb.stanford.edu/faculty-research/excessive-leverage>.

1. “Healthy Banking System in the Goal, Not Profitable Banks,” *Financial Times*, November 9, 2010 (the full text is available at <https://www.gsb.stanford.edu/faculty-research/excessive-leverage/healthy-banking-system-goal>). Among the signatories are Franklin Allen, Markus Brunnermeier, John Cochrane, Eugene Fama, Charles Goodhart, Stewart Myers, Jean Charles Rochet, Stephen Ross, William Sharpe, and Chester Spatt. In an interview, Eugene Fama suggested 50 percent would be appropriate, and John Cochrane in a review of Admati and Hellwig (2013a) in the *Wall Street Journal* on March 1, 2013, captured the key idea, to shift the main loss absorption to investors, by saying that equity should be raised “until it does not matter.” Additional multisignatory letters in February and July 2011 protested allowing banks to resume dividend payments and responded to a flawed commentary by Alan Greenspan, respectively.

2. This point was made in the 2010 letter by twenty academics cited earlier, and discussed in more detail in Admati, DeMarzo, and colleagues (2013, sect. 8) and Admati and Hellwig (2013a, chap. 11).

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