

**PLEASE DON'T THROW ME IN THE BRIAR PATCH: THE FLUMMERY OF
CAPITAL-REQUIREMENT REPAIRS UNDERTAKEN IN RESPONSE TO THE
GREAT FINANCIAL CRISIS***

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Regulators define a bank's capital as the difference between the value of its assets and liabilities. For at least 30 years, authorities in major countries have made bank capital the linchpin of their efforts to steer the financial sector through periodic shocks that threaten industry solvency. Although this linchpin has failed again and again, government financial regulators assure us after each episode that this time they are going to craft an effective capital-requirement mechanism.

Effective renovation begins with a diagnosis of what needs to be fixed. The nature of alleged improvements and responsibility for paying the repair bill should be predicated on an honest assignment of blame for what went wrong. It is hard to be hopeful about the size and incidence of the bill for the latest round of regulatory adjustments. Government and industry mechanics are tinkering with the nuts and bolts of specific requirements when they should be addressing deep-seated incentive defects in the workings and use of the capital-based steering process they are overhauling.

The Great Financial Crisis traces not so much to a breakdown of *rules and requirements* (such as loophole-riddled obligations to disclose adverse movements in a firm's capital position) as to a cumulative decline in the ethical culture of intrafirm supervision and government

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regulatory enforcement. The ease with which regulatory restrictions can be circumvented by financial engineering in good times and the political and economic difficulties of enforcing capital requirements when an important firm or industry sector is failing are at the heart of modern financial crises.

To improve supervision and enforcement requires changes in incentives all along the financial-sector risk-management chain. It is dishonest to pretend that future breakdowns can be avoided merely by patching and strengthening a series of hard-to-enforce balance-sheet requirements and scenario-based “stress tests” that are designed to be applied mainly to the last link in the chain. These formal requirements and tests are the “briar patch” mentioned in the title. Fairness demands that industry have the chance to offer advice on proposed requirements and test procedures during the rule-making process. But industry participation in regulatory decisions goes beyond fairness. In many instances, lobbying pressure exerted by industry managers produces loophole-ridden rules whose very purpose is to make a mockery of the enforcement process. This is a large part of what economists mean by regulatory capture.

What taxpayers need is a system that genuinely *disincentivizes* the pursuit of potentially ruinous tail risk at mega-institutions. To generate effective disincentives requires: (1) revisions in corporate law, in governmental mission statements, training procedures and oaths of office, and (2) a substantial reworking of the ethical cultures that govern the ways in which regulators and managers of regulated financial institutions (“regulatees”) interact (Kane, 2013).

This paper argues that, in the US and Europe, financial regulation has become a rigged game that has the effect of repeatedly victimizing low and middle-income citizens. Delicately negotiated post-crisis changes in the specific rules of this regulatory game promise to generate inefficient compliance costs, to change the adaptive strategies and tactics that regulators and

regulatees employ, and to reformulate the arguments proponents use to depict the purported fairness of the game. But when the dust settles, these changes are not going to give the citizenry either financial stability or a fair deal.

1. How the Rules of the Regulation Game are and are not Changing

The idea that capital requirements can serve as a stabilization tool is based on the presumption that, other things equal, the strength of an institution's hold on economic solvency can be fairly represented by the size of its capital position.

This way of aggregating information posted on a firm's balance sheet seems simple and reliable, but it is neither. It is not simple because accounting principles offer numerous variations in how to decide *which* positions and cash flows are and are not recorded (so-called itemization rules), *when* items may or may not be booked (realization rules), and *how* items that are actually booked may or may not be valued (valuation rules). Accounting capital is not a reliable proxy for a firm's survivability because, as an institution slides toward and then into insolvency, its managers are incentivized to manipulate the ways they apply these rules to hide the extent of their weakness and to shift losses and loss exposures surreptitiously onto its creditors and, through them, onto the government's safety net.

Post-crisis changes in the US regulatory environment are embodied in new rules and regulatory structures. Some are required by the Dodd-Frank Act of 2010 (DFA). Others are mandated by cross-country agreements such as Basel III capital and liquidity requirements and G-20 plans to increase accounting transparency by forcing: (1) "standardizable" bilateral swap contracts to be traded through central clearing parties (CCPs) and (2) transaction values to be reported to newly created data repositories.

I cannot see how the heavily lobbied set of rules and requirements for private institutions that will emerge from this process can ameliorate the all-too-understandable tendencies of *regulators* to relax supervisory vigilance in economic boom times and to offer implicit or explicit credit support to relieve well-founded liquidity pressure on deeply distressed firms [such as the American International Group (AIG) in 2008] when they are politically, economically, or administratively difficult to fail and unwind (DFU). In policy discussions, these tendencies are characterized as the “too complex to supervise” and the “too big to fail” problems.

As shown by the series of events that triggered both Lehman’s bankruptcy and AIG’s rescue, a necessary condition for a distressed firm to fail is for its creditors to believe that its assets either have lost or are losing so much value that the firm will be unable to cover its debts in full. It is convenient to term this condition “insolvency” and to think of the firm’s assets as a collection of loans, mortgages, and tradable securities. Such assets can lose value in two ways. The first way is through markdowns of selected assets caused by actual counterparty defaults. The second and less selective way is through sharp increases in the interest rates payable on newly issued instruments of the same type. In turn, there are two ways in which interest rates on financial assets can increase. In the US savings-and-loan mess, increases in interest rates on new instruments were driven by accelerating inflation. During the Great Financial Crisis, inflation and Treasury interest rates remained low, but increases in the interest rates on newly issued private and municipal instruments were driven by increases in the ex ante compensation required by investors for accepting what everyone saw to be increased tail-risk probabilities of default. Even as Federal Reserve policy drove interest rates on new issues of top-quality mortgages and bonds to very low levels, the equilibrium interest rates at which lower-quality instruments could trade (if they traded at all) rose and stayed high because of perceived increases in credit risk.

In both eras, just because a decline in an institution's asset value passed through the insolvency threshold did not mean that authorities had to close it down immediately or even at all. For the S&L industry and for mega-institutions in the 1970s and 1980s, authorities proved willing to shore up customer funding with explicit and implicit government guarantees of new debt. In the crisis of 2008-2009, the Federal Reserve and the Treasury used previously unimagined lending and cross-country swap programs to replace private funding at domestic and foreign institutions alike.

Whether it is expected to be provided transparently or surreptitiously, anticipated government credit support is --in accounting parlance-- a *contra-liability*. When the solvency threshold is breached, this contra-liability transfers responsibility for covering additional losses to taxpayers. Currently, movements in the value of this contra-liability are neither estimated nor reported on government and mega-institution financial statements. Their lack of visibility makes it hard for the press and citizenry to be aware of how and when subsidizing megabank issuance of new debt and pursuit of tail risk affects taxpayer loss exposure. It also makes it hard for government officials to manage this evolving exposure effectively.

Any guarantee contract has two components: a put and a call. The first is the contra-liability that allows the guaranteed party to "put" responsibility for covering losses that exceed the value of its assets to the guarantor. Of course, no guarantor wants to expose itself to unlimited losses on this put.

For this reason, all guarantee contracts incorporate a stop-loss provision that gives the guarantor a call on the assets of the firm. This call option is a barrier option because the right to stop losses only kicks in as the insolvency threshold is approached or breached.

In the FDIC Improvement Act of 1991, efforts to exercise the government's call are termed "prompt corrective action." For institutions that seemed difficult to fail and unwind, we did not see much prompt corrective action in 2008.

By definition, the government's right to take over a firm's assets will never be exercised in a corporation that is truly and permanently too big or too interconnected to fail. Nonexercise means that the government is effectively ceding the value of its loss-stopping rights to the too-big-to-fail organization's stockholders. The value that this anticipated forbearance gives away improves the risk class and price of such firms' stock.

Figure 1 graphs the behavior of AIG's stock price before, during and after the 2008 crisis. The only time AIG's stock price approached zero –and it do so twice—was when the possibility of a government takeover was being seriously considered, so that the probability of stockholders' continued rescue was falling. When and as authorities renounced this course of action, the stock price surged again because not exercising the call turned ownership of the stop-loss provision back to stockholders.

If bank capital and stress tests are to remain the centerpiece of financial-stability regulation, capital and stress should be calculated net of the current value of this anticipated "taxpayer put." To do this in an accountable fashion, regulators must refocus bank examination procedures to measure the tail risk that passes through to the deposit insurance fund and publish estimates of the subsidy on a regular basis.

Regulators' and citizens' informational disadvantage will always be compounded by the private sector's finely tuned taste for lawful deceit. This permanent disadvantage makes it a mistake for regulators to portray capital requirements as powerful medicine. When and where the medicine of stockholder capital most needs to be injected, it will be replaced by the surging

value of implicit and explicit government guarantees. As concocted in the pharmacies of Basel I and II, capital-requirement vaccine not only failed to prevent the last crisis, the requirement formula encouraged loophole ways of hiding leverage that helped to inflate the shadow-banking and securitization bubbles whose eventual bursting triggered the crisis (Caprio, Demirgüç-Kunt, and Kane, 2010; Admati and Hellwig, 2013).

Basel III and post-crisis stress-tests protocols seek merely to increase the dosage and complexity of previous capital-requirements formulas and to apply the new formula across a broader range of firms. But at the margin, this approach continues to subsidize tail risk at mega-institutions rather than doing something to disincentivize it. Polls show that it is still widely and confidently anticipated that, when ruinous losses materialize in the midst of a spreading crisis, capital-requirement enforcement will be relaxed or even suspended for well-connected giant institutions.

It is often said that badly administered safety nets privatize profits and nationalize losses. The problem of administering capital requirements has two dimensions, neither of which post-crisis reforms adequately address. First, limited liability gives protected firms an incentive to conceal the extent of their leverage and tail-risk exposure from creditors and guarantors alike. The crisis showed that accounting rules and current bank examination procedures give regulators insufficient vision and incentives to recognize and stop this in a timely fashion. Second, thinking of safety-net support as if it were simply a form of “insurance” masks the fact that taxpayer guarantees actually supply loss-absorbing equity capital to any firm that regulators perceive to be difficult to fail and unwind. The perception that an insolvent firm is too difficult to fail allows it to extract implicit guarantees on any and all future debt it might issue. An insurance company does not double and redouble coverage of a fleet of drivers it knows to be behaving recklessly

unless it is paid handsomely and in advance for its services. The cover provided by subjecting reckless pursuit of tail risk at megabanks to insurance law gives DFU institutions a *license* to arbitrage regulators' risk-weighting schemes in hard-to-observe ways that shift responsibility for funding the deepest layers of their tail risk to government guarantees.

For DFU institutions, the corporate norm of maximizing *stockholder* value is inappropriate because it is unfair to taxpayers. Asking value-maximizing firms to post more capital than they want asks them to lower the return on stockholder equity that their pre-request portfolios were built to achieve. As long as taxpayers' equity stake is not specifically protected by corporate law, the resulting disequilibrium tells us that installing tougher capital requirements has the predictable side effect of simultaneously increasing a firm's appetite for tail risk. Over time, this appetite can be satisfied by engineering ways to conceal incremental leverage from authorities and by increasing the average contractual rate of return on (i.e., increasing the average riskiness of) megafirm assets enough to re-establish an equilibrium that victimizes taxpayers but satisfies managers and stockholders.

As Basel III becomes operational, aggressive institutions can and will game the system in this evolutionary manner until it breaks down again. Aided by the best financial, legal, and political minds that money can buy, value-maximizing mega-institutions will abuse taxpayers by ramping up their risk-management skills and expanding their tail risk in increasingly clever and low-cost ways. In the current ethical and informational environments, regulators will find hard to monitor, let alone to discipline this unfolding process. When it comes to controlling regulation-induced risk-taking, regulators need to be trained to understand and to mitigate the ways in which they are bound to be outcoached, outgunned, and playing from behind.

2. Making Potentially Ruinous Risks Less Attractive

Tail risk exists in any enterprise. What is unfortunate is that mega-institution incentives to load up on tail risk are inflamed and reinforced by the reluctance or inability of government lawyers to pursue punishments for reckless managers of key financial firms in open court (as opposed to merely fining their corporate shareholders) and by the presumption that it is ethically okay for managers to maximize firm profits and their own incentive-based compensation *at taxpayers' expense*. These morally questionable regulatory and management principles claim that mega-institution managers owe *fiduciary* duties of loyalty, competence, and care to their stockholders, but that their duties to taxpayers and government supervisors have to be explicitly *covenanted* and enforced. By covenanted duties, I mean obligations established by explicit statutory and regulatory requirements.

Deliberately extracting subsidies from a country's financial safety net is in the final analysis a way for mega-institution executives to pick the pockets of unwary taxpayers. I believe that societal goals of financial stability and fair dealing require the law to define exploitive risk taking as theft and to penalize it appropriately. One way to do this would be to amend corporate law to recognize taxpayer's stake in protected institutions as a form of *loss-absorbing equity funding*.

Classifying taxpayers as equity investors of last resort would clarify that managers owe fiduciary duties toward taxpayers and not just toward stockholders. Traditionally, safety-net credit support has been framed as a combination of loans and payouts from so-called government "insurance" policies. Formally reclassifying taxpayers' loss exposures in difficult-to-fail and unwind firms as equity investments would change taxpayers' legal standing. This standing would recharacterize self-serving tail risk (that seems legal enough when framed as "moral

hazard”) as an inequitable transfer of corporate resources from a disadvantaged class of equityholder to managers and current shareholders. To overcome the temptation to ignore their implicit responsibilities to taxpayers, managers and board members must be made subject to stricter legal liability for neglecting or recklessly managing taxpayers’ equity stake. My recommendation is to reframe the regulatory game by giving taxpayers equal rights with stockholders and assigning managers and directors a duty to measure, disclose, and *service* taxpayers’ stakeholdings fairly.

Before and during past crises, taxpayers would have benefited greatly if authorities had measured bank capital net of the market value of taxpayers’ equity contributions and restricted dividend payouts from undercapitalized banks as soon as such firms showed signs of distress. Refusing to zero in on the shortages of *stockholder-contributed capital* that began to emerge in 2006 and 2007 allowed regulators to permit some of the world’s largest financial institutions to operate for years as zombie firms and to support unwisely their right to pay dividends.

3. A More Promising Path for Reform

Theft is theft. Around the world, the coerced “cover” taxpayers provide is not being priced, published, or serviced. Theft by safety net is not just *de facto* larceny, it is grand larceny. Since modern legal theory treats corporations as persons, financial holding companies could be prosecuted for this crime. In the US, without special dispensation, convicted felons cannot own insured commercial banks, broker-dealers, or futures commission merchants. The threat of felony convictions would dramatically reduce incentives at mega-institutions to game the financial safety net.

To win such a case, prosecutors need only to construct credible interval estimates of the cover a firm extracts from the safety net. *Mens rea* can usually be found by analyzing intrafirm emails, while the interval estimates in question could be computed from option surfaces linked to stock shares and other underlying assets that mega-institutions issue.

I stress “interval estimates” because the use of point estimates is part of what has made capital requirements so ineffective in the past. Statistics tells us that, to support meaningful inference, accountants should be asked to build confidence intervals around the bottom-line values they estimate. In the current information and ethical environments, efforts to regulate point estimates of accounting leverage cannot adequately protect taxpayers from regulation-induced innovation.

Authorities need to put aside their obsession with enforcing overly precise capital-based proxies for systemic risk and instead measure, control, and price the ebb and flow of safety-net benefits directly. This requires: (1) changes in corporate law aimed at establishing an equitable interest for taxpayers in at least the most important of the firms that the financial safety net protects and (2) repurposing regulators as trustees for taxpayer interests, responsible for seeing that taxpayers’ portfolio of equity positions in protected firms is a trust fund that deserves to be accurately valued, reported publicly, and adequately serviced. To carry out this task, regulatory officials need to reorient their training, their examination procedures and bank information systems to focus specifically on tracking the changing value of their portfolio of taxpayer puts and calls and be empowered to sanction *individual managers* who deliberately and materially misrepresent information these systems produce.

Many studies propose operational ways to measure tail risk. Hovakimian, Kane, and Laeven (2012) propose a measure of the quarterly value of taxpayer support that is theoretically

sound and easy to implement using publicly available financial and stock market data. Their methods are rooted in academic literature for modeling credit risk pioneered by Merton (1974). Lehar (2005) and Avesani, Pascual, and Li (2006) focus on the probability of default, and estimate this using CDS, option, and equity market data. Additional measures include: conditional value at risk (CoVaR) proposed by Adrian and Brunnermeier (2010), marginal expected shortfall (MES) proposed by Acharya, Pedersen, Philippon, and Richardson (2010) and extended by Brownlees and Engle (2011), and a network-based systemic risk measure proposed by Cont (2010). Kim and Giesecke (2010) study the term structure of systemic risk and Billio, Getmansky, Lo and Pelizzon (2012) compare several alternative systemic risk measures.

To facilitate the implementation of such measures, financial firms whose assets exceed a specified size threshold (say, \$500 billion) should be obliged to build information systems that surface interval estimates of the value of the taxpayer put they enjoy. Auditors, government monitors, and corporate boards should be charged with double-checking and extracting a fair return on the value of the corresponding trust fund. Regulatory response lags could be reduced if provisional data on earnings and stockholder net worth at these institutions were reported more frequently and if responsible personnel were exposed to meaningful civil and criminal penalties for deliberately misleading regulators. In the interim, authorities around the world should be encouraged to prosecute a few thieving financial holding companies for securities fraud or grand larceny in open court.

At the same time, technologies for calculating interval estimates of expected tail-loss exposure should be expanded and the range of resulting estimates used to proxy systemic risk. If mega-institutions could be incentivized to report conscientiously the value of on-balance-sheet and off-balance-sheet positions weekly to national authorities, rolling regression models using

stock-market and other financial data could be used to estimate and capitalize changes in tail risk and in the flow of safety-net benefits in ways that would allow society's watchdogs to observe -- and regulators to manage-- surges in the value of taxpayers' stake in the safety net in more timely and effective ways.

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FIGURE 1

AIG Stock Never Became Valueless

