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Systemic Harms and Shareholder Value

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Abstract

The financial crisis has demonstrated serious flaws in the corporate governance of systemically important financial firms. In particular, the norm that managers should seek to maximize shareholder value, as measured by the stock price, proves to be a faulty guide for managerial action in systemically important firms. This is not only because the failure of such firms will have spillovers that defy the cost-internalization of the tort system, but alsobecausethese spilloverswill harmtheirownmajoritarian shareholders. Theinterests of diversified shareholders fundamentally diverge from the interests of managers and other controllers because the failure of a systemically important financial firm will produce losses throughout a diversified portfolio, not just own-firm losses. Among the consequences: the business judgment rule protection that makes sense for officers and directors of a non-financial firm leads to excessive risk-taking in a systemically important financial firm. To encourage appropriate modification of incentives, we propose officer and director liability rules as a complement to (and substitute for) the prescriptive rules that have emerged from the financial crisis.

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SYSTEMIC HARMS AND SHAREHOLDER VALUE

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ABSTRACT

The financial crisis has demonstrated serious flaws in the corporate governance of systemically important financial firms. In particular, the norm that managers should seek to maximize shareholder value, as measured by the stock price, proves to be a faulty guide for managerial action in systemically important firms. This is not only because the failure of such firms will have spillovers that defy the cost-internalization of the tort system, but also because these spillovers will harm their own majoritarian shareholders. The interests of diversified shareholders fundamentally diverge from the interests of managers and other controllers because the failure of a systemically important financial firm will produce losses throughout a diversified portfolio, not just own-firm losses. Among the consequences: the business judgment rule protection that makes sense for officers and directors of a non-financial firm leads to excessive risk-taking in a systemically important financial firm. To encourage appropriate modification of incentives, we propose officer and director liability rules as a complement to (and substitute for) the prescriptive rules that have emerged from the financial crisis.

1. INTRODUCTION

The generally accepted framework for analyzing corporate law and governance implies that those running a corporation should seek to maximize the value of

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shareholders' claims, as measured by the stock price. Where shareholders are numerous and widely dispersed, they have little incentive to engage actively in the firm's decision making. The standard concern of corporate governance is that the firm will consequently be run in the interests of its managers, rather than its shareholders. A range of mechanisms encourage managers instead to make decisions as diversified shareholders would, were these shareholders not beset by collective action problems.

If the firm had only one shareholder, there would be no coordination costs. The actions that a sole owner would want therefore form a heuristic for desirable managerial conduct. A sole owner would want to maximize the value of their claims. Corporate governance mechanisms thus encourage managers to maximize the value of shareholders' claims. Shares in widely held firms are traded on capital markets, which—if they are informationally efficient—function to aggregate into the stock price all publicly available information relevant to the value of diversified shareholders' claims.[1] This provides a useful way to implement the maximization of the value of shareholders' claims: that is, to encourage managers to maximize the share price. The share price increases in response to activities that increase the value of shareholders' claims, as a sole owner would wish.

Unlike a sole owner, the portfolios of diversified shareholders are insulated from the effects of idiosyncratic (firm-specific) risks. Diversified shareholders consequently want the firm to take more risks than would a sole owner. Managers are undiversified, because they have human capital tied up with their firm. Corporate governance mechanisms consequently encourage managers to take risks as if they were diversified. Because participants in the market are typically diversified, prices will reflect their preferences as to risk—that is, they will not take into account idiosyncratic risk. In short, given efficient capital markets, focusing managers' efforts on share price maximization will reduce agency costs whilst at the same time ensuring the firm's decisions are made without regard to idiosyncratic risk.

U.S. corporate governance consequently seeks to focus managers' incentives on maximizing the stock price. For example, policy thinking about executive pay and the market for corporate control is largely premised on tying managerial welfare to the performance of the share price (Jensen & Murphy 1990; Bebchuk & Fried 2004, pp. 15–22). We refer to managerial *practice* intended

1 To the extent that the stock market is not informationally efficient, it may be possible for managers to do a better job of maximizing the value of the shareholders' residual claims by other means than maximizing the stock price. The debate about this issue, which has been widely canvassed elsewhere, does not form part of the critique in this article. See eg Gilson & Kraakman (1988); Stout (2002); Fisch (2003); Stout (2012, pp. 63–73).

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to maximize the stock price as shareholder value maximization, or "SVM" for short; to corporate governance *mechanisms* that encourage this as "SVM mechanisms", and the consensus that managers *ought* to do this as the "SVM norm".

By mitigating internal agency costs, SVM also tends to enhance social welfare in a large range of circumstances.[2] This is most obvious if the firm's activities have no adverse impact on third parties. However, where a firm's activities do have adverse impacts on third parties, a range of legal mechanisms—contracts, liability rules and regulation—act to ensure these costs are internalized into the firm's profit function. Where these internalization mechanisms function effectively, then shareholders ultimately bear the social costs of harmful activities, just as would a sole owner. Consequently SVM mechanisms, by aligning the interests of managers with shareholders', operate virtuously to encourage managers to take social costs into account.

This attractive result as regards social costs depends on the internalization mechanisms actually doing their job. If the firm's owners don't bear the full social costs of their activities, then SVM will encourage managers to act in a way that increases social costs. It's not news that these internalization mechanisms do not function perfectly. Yet the accommodation generally made by those studying corporate governance is to observe that any such failure implies a weakness of these internalization mechanisms, not the idea of SVM. SVM offers many benefits in terms of managerial accountability, and if problems of internalization can be solved by enhanced external measures, these are clearly preferable.

In our view, the recent financial crisis calls this accommodation into question as regards financial firms whose activities are systemically important. We make three claims. First, the extent to which traditional private law mechanisms—in particular, the law of tort—fail to internalize systemic harms has been underappreciated. The activities of large financial institutions can cause economic losses to large numbers of parties through indirect and diffuse causal channels. But tort law is primarily concerned with direct physical harms: purely financial or "economic" losses are generally not recoverable. Moreover, because there is a causal relationship between financial-firm bankruptcy and systemic losses, *ex post* liability for the firm is not an effective internalization tool. For a firm to face liability only in states of the world in which it is bankrupt will undermine liability's deterrent effect. What is worse, such deterrence is undermined by the likelihood of government bailouts calculated to *avoid* financial firm bankruptcies and consequent realization of systemic harms. Consequently private law

2 A point famously made by Milton Friedman (1970).

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does not do an "imperfect job" of internalizing systemic harms; it does no job at all.

Where private law is unable to do the work of internalization, it is generally thought that regulation is a desirable response (e.g., Shavell 2004, pp. 92–101). Our second claim is that SVM mechanisms create incentives for firms systematically to undermine the efficacy of regulatory internalization. Rather than innovation that reduces the social costs of one's activities in accordance with regulatory strictures, the cheapest way to maximize shareholder returns may be to exercise political influence to achieve a lower rate of regulatory "tax". The upshot is that whatever the extent of the work that may be done by regulation, SVM will tend systematically to undermine it.

The case of banks illustrates dramatically the problems of SVM in relation to systemic harms. The failure of a bank can trigger harms both to other banks and to nonfinancial firms that might have used it as a source of credit. Thus bank risk-taking has a systematic, as opposed to idiosyncratic (firm-specific), character. Yet bank executives who had the strongest incentives to maximize the value of bank shares—as reflected in stock-based compensation, oversight by independent directors, and shareholder power—worked at the firms that took the greatest risks and suffered the greatest losses (Pathan 2009; Fortin, Goldberg, & Roth 2010; Beltratti & Stulz 2012; Erkens Hing, & Matos 2012). And regulators' ability to control such activity was undermined by sophisticated exploitation of regulatory gaps and well-organized lobbying from the banking sector.

Financial regulation has been strengthened, and regulators better resourced, around the world. We do not doubt that this will improve matters to some extent. However, the structural problems we identify remain: tort law contributes nothing to control this tendency and SVM pushes managers hard to undermine regulation. Hence in our view it is unsafe to rely on regulation alone.

To augment regulatory changes, we propose a modification to the corporate governance of systemic firms. Because SVM generates particularly pernicious incentives as regards systemic harms, we argue that the mechanisms encouraging it should be relaxed for such firms.[3] Relaxing SVM mechanisms would

3 In so doing, we regard some early policy responses to the financial crisis, which assumed that problems arose because managers of financial firms were not sufficiently focused on SVM, to have been misdirected. The Dodd-Frank Act, for example, contains various corporate governance provisions, including authorization for SEC adoption of rules expanding shareholder access to the management proxy and provision for a shareholder advisory vote on executive compensation, so-called "say on pay", §§ 971, 951, Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1375, 1915, 1899 (2010). Similarly, the UK government-commissioned review by Sir Derek Walker (2009) of bank corporate governance concluded that greater engagement by shareholders was desirable.

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reduce managers' incentives to maximize profits, and as a result, impose less social costs. According to the standard accommodation, this would come at the expense of increased agency costs between managers and shareholders. Our third claim is that, where the harms are *systemic*, relaxing the SVM norm does not increase agency costs. This is because the firm's majoritarian diversified shareholders would prefer that the managers did not impose systemic externalities. The SVM norm presupposes that investors can diversify away risks associated with the project choices of individual firms and consequently that the share price is the sole benchmark of shareholder utility. The undiversifiable component of an investor's portfolio risk—that is, "market risk"—is taken to be exogenous to individual firms' activities. However, if the failure of one firm's projects may impose costs on other firms generally then this increases the correlation of investors' returns, and consequently the undiversifiable portion of their risk. For this to be the case, the externalities associated with the firm's projects must have a sufficiently general character as to affect the economy at large, rather than a few specific firms, and so not be amenable to diversification. Costs to *other* firms will not be fully reflected in the share price of the individual firm selecting the project. Consequently share price maximization can in the presence of systemic externalities lead to reduced portfolio returns to investors. In relation to projects with such potential consequences, diversified investors should not want managers to single-mindedly maximize share prices. As a result, a system in which "shareholder value" is interpreted as share price maximization is *not* aligning managers' interests with those of diversified shareholders, at least as regards systemic risks.

We make the case for the imposition of liability rules for directors and officers of banks. Such liability, appropriately structured, makes agents behave in a more risk-averse fashion, which the conventional wisdom underpinning the business judgment rule suggests is contrary to the interests of diversified shareholders. Our analysis reveals that when a firm's actions affect *systemic* risk, the conventional wisdom is reversed: diversified shareholders want managers to take *less* risk. This undercuts the case for business judgment protection. We argue that director and officer liability has a potentially useful role to play in circumscribing the limits of SVM. Such liability would be owed to the firm, and could be triggered by a derivative action following the occurrence of significant losses.

A particular merit of this proposal is that imposition of liability in the form we suggest does not presuppose, or itself trigger, the bankruptcy of the firm. The bankruptcy of a systemically important firm may be an event that causes systemic losses. Consequently politicians are willing to spend large amounts of public funds in order to avoid the bankruptcy of such firms. A liability regime that could only be triggered by, or which itself caused, such a bankruptcy would

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have its deterrent effect undermined by the probability that a bailout of some sort would be engineered. Our proposal is for liability that is triggered by significant losses *to the firm*—and thereby to its shareholders—to which directors' and/or officers' misconduct contributed. Diversified shareholders thus act as a proxy for society in enforcing claims against those making the firm's decisions. The liability regime would deter risk-taking that might endanger the firm's financial health.

The rest of this article is structured as follows. In Section 2, we motivate the discussion by describing how large financial firms can generate systemic harms, with reference to the recent financial crisis. Section 3 considers how the usual mechanisms for controlling externalities fail to function in relation to systemic financial firms. Section 4 then shows how the pursuit of SVM, in the presence of systemic financial externalities, may diverge from the interests of diversified shareholders. Section 5 considers whether financial firms are unique in posing these problems. In Section 6, we turn to possible solutions, making the case for a duty of care in relation to controllers of systemic financial firms as a complement to ongoing regulatory changes. Section 7 sketches the contours of such a regime, and Section 8 concludes.

At the outset, we should emphasize that we are far surer of the significance of the problem we document than we are of the efficacy of our proposed solutions, which we present primarily as a heuristic framework for debate.

2. FINANCIAL FIRMS AND SYSTEMIC HARMS

Our inquiry is motivated by the recent financial crisis, which starkly showed the potential for banks' activities to impose losses on society. These losses are characteristically widely diffused, indirect and in aggregate very large. They are "systemic" in the sense that they adversely impact a wide cross-section of actors in the economic system.

The most obvious occasion for triggering such losses is bank failure. In the first instance, this is because of the possibility of contagion to other financial firms—that is, the failure of one triggers the failure of others. Banks are structurally vulnerable, even fragile, because their business model depends on managing ("transforming") the mismatch between deposits, which must be low-risk and highly liquid, and illiquid loans to higher risk borrowers (Mishkin 2010, Ch 10; Gordon & Muller 2011, pp. 158–166). Of course banks actively manage this mismatch, but they are vulnerable to events that trigger a sudden increase in demand for liquidity, or a decline in the value of their liquid assets, which in each case can trigger financial distress (Freixas & Rochet 2008, Ch 7). Many nonbank financial institutions face similar structural fragility: it is present

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whenever the firm's business finances long-term (high-risk) assets with short-term (low-risk) debt. We will throughout refer to "banks" and "financial institutions" interchangeably, and the analysis applies to any financial firm that shares this structural fragility.

Problems at one bank are often transmitted to others, a process known as *contagion*. It is most pronounced for other financial firms that are highly connected to a failed institution (Kaufman 1994; Dumontaux & Pop 2013), and that are themselves particularly fragile (Swary 1986; Brewer et al. 2003; cf. Wall & Peterson 1990). An obvious channel is through direct connections between balance sheets, where liabilities of one institution are assets of others, which become devalued on its financial distress (Schwarcz 2008, p. 247). Contagion can also be driven by correlation in investment strategies. Fire-sale liquidation of assets by a distressed firm depresses their market value and hurts the balance sheets of other firms holding the same asset class (Acharya 2009). Contagion can also occur across the liabilities side of firms' balance sheets, where short-term funders (e.g. depositors) infer from the failure of one bank that others with similar business models are also likely to face difficulties, provoking a run on them too (Chari & Jagannathan 1988; Gorton 1988). These channels can interact with one another to compound their effects (Haldane & May 2011).

Contagion between financial institutions is problematic for society, because these firms perform pivotal functions for the "real" economy. Commercial banks not only supply credit but also act as repositories of human capital for making effective lending decisions and monitoring the performance of debtors. Failure of a large bank can disrupt these activities and leave would-be borrowers without substitutes. Good business projects go unfunded, or face premature liquidation (Bernanke 1983).[4] A large empirical literature seeks to quantify these financial distress costs, which is summarized in Table 1.[5] Commercial banks also contribute to the payments system, a crucial piece of infrastructure for the economy (Independent Commission on Banking 2011, 3.20-21, 5.7). Similarly, investment banks perform a screening function for underwriting clients, who consequently suffer losses if these banks fail (Fernando, May, & Megginson 2012).

The combination of fragility, contagion, and importance for the real economy means that bank failure can create externalities: social losses exceed those suffered by bank investors. We take a "systemic" institution to be one whose

4 The identification of this "credit channel" through which banks add value was one of the contributions upon which Ben Bernanke, Chairman of the Federal Reserve Board of Governors during the financial crisis, made his name as an academic economist.

5 While the majority of studies report significant costs associated with bank failure along the lines described in the text, a minority do not.

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Table 1. Prior Literature investigating real economy impact of bank failures

Study	Event	Period	Effect?
Slovin et al (1993)	Continental Illinois failure	1984	Borrowers suffered negative stock price impact.
Gibson (1995)	Financial distress of Japanese banks	1991–1992	Borrowers reduced investment.
Yamori & Murakami (1999)	Failure of Hokkaido Takusyoku Bank, 17th largest bank in Japan	1997	Borrowers suffered negative stock price impact, most pronounced for those most reliant on the bank.
Kang & Stulz (2000)	Japanese financial crisis	1990–1993	Firms more reliant on bank borrowing had weaker performance and made less investment.
Bae et al (2002)	Shocks to Korean banks during Asian financial crisis	1997–1998	Borrowers suffered negative stock price impact, most pronounced for weaker banks and weaker borrowers.
Ongena et al (2003)	Norwegian financial crisis	1988–1991	Borrowers suffered only small and temporary negative stock price impact.
Djankov et al (2005)	Failure of Indonesian, Korean and Thai banks during Asian financial crisis	1997–1998	Borrowers suffered negative stock price impact.
Duchin et al (2010)	US financial crisis	2008	Corporate investment declined, most pronounced for firms with little cash and high short term debt.
Ivashina & Scharfstein (2010)	US Financial crisis	2008–2009	Banks contract lending, especially those with lower deposit bases; firms with credit cut reduce investment.
Kahle & Stulz (2013)	US financial crisis	2008–2009	Contraction in investment by firms, equally pronounced for those which were and were not reliant on credit pre-crisis.

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failure could through these channels cause significant externalities. For example, the market capitalization of Lehman Bros, Inc. peaked on January 29, 2007 at approximately $60 billion, and the high-water market capitalization of all the US "crisis banks"—those that either failed or required assistance to survive—totaled approximately $1.2 trillion.[6] These numbers put an upper bound on the value of the firms to shareholders. They are large sums, yet the fallout from the crisis was much larger. One measure is the cost of subsequent rescue efforts: this indicates how much policymakers were willing to spend to avoid what they believed would be even greater social losses. Table 2 summarizes commitments made by the US government to the financial sector over 2008–2009. Whilst many of these were not called upon in full, the USA suffered *net* fiscal outlays from the various programs amounting to 3.6 percent of GDP, or $5 trillion (Schildbach 2010, pp. 3–4). And despite these efforts, the US economy contracted by 3.5 percent in the immediately following year 2009, down from growth of 2.8 percent in 2007—a loss equivalent to approximately $9 trillion (International Monetary Fund 2011, p. 2). These sums of course do not count costs incurred elsewhere around the world: government commitments to support the financial sector peaked at an astonishing 70 percent of GDP in the UK (Bank of England 2009, p. 6), and averaged 40 percent of GDP across the EU (European Commission 2011, p. 2). While these figures obviously can be no more than a rough approximation of social cost, the gulf between social and private losses is clear.

We might be tempted to dismiss these social costs as mere "pecuniary" externalities; that is, consequences of one firm's actions that impact solely on the prices of factors of production (namely, capital) for other firms (Scitovsky 1954). Ordinarily, pecuniary externalities are left out of account in assessing social welfare, because they cancel out in aggregate: one firm's loss is ordinarily a competitor's gain. However, the effect we are emphasizing is not *simply* a change in the cost of capital; rather it is an adverse impact on the financial system's ability to overcome information asymmetries in the allocation of capital (Greenwald & Stiglitz 1986). It not only increases prices but induces greater inaccuracy in the rationing of credit. This has the propensity to make both lenders and (would-be) borrowers worse off.

6 The "crisis banks" failed, merged to avoid failure, or received special emergency assistance, and consisted of Citigroup, AIG, Bank of America, Lehman Brothers, Bear Stearns, Merrill Lynch, Goldman Sachs, Morgan Stanley, Wachovia, and Washington Mutual (Calomiris & Herring 2011). Stock market capitalization is derived from Wolfram Alpha, Yahoo! Finance, and author computations from 10-Ks. This "high-water" mark sums the highest market capitalization reached by each of the crisis banks during the 2006–2008 period, not the highest collective market capitalization of the group at any point during that period. It overstates the collective shareholder stake and thus understates the private benefit/social cost mismatch.

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Table 2. US financial sector relief commitments, 2008–2009

Agency / Program	Beneficiary	Mechanism	Amount committed
Federal Reserve	Credit market participants	Loans and guarantees	$7.7 trillion
FDIC	Banks and bank holding companies	Deposit and loan guarantees	$1.7 trillion
Treasury	Money market mutual funds	Guarantees to shareholders	$1.6 trillion
Congress / TARP	Banks and bank holding companies; automobile companies	Equity investments and loans	$700 million
Total commitments			$11.7 trillion

Sources: Kuntz & Ivry (2011); Congressional Oversight Panel (2011, pp. 25–37); Authors' calculations based on Investment Company Institute (2007, Table 38).

It is tolerably clear that the difficulties banks found themselves in by the fall of 2008 were the consequence of the pursuit of high-risk, high-return strategies by bank executives. Such strategies earn good returns for shareholders, but by raising the volatility of the firm's cashflows, also increase the risk of its failure, which triggers the externalities we have described. Why did the mechanisms ordinarily deployed to control externalities fail to do so for financial firms?

3. CONTROLLING EXTERNALITIES FROM SYSTEMICALLY IMPORTANT FIRMS

The consensus view is that the appropriate techniques for controlling externalities are themselves *external* to firms: that is, they do not involve any modification to internal corporate governance commitments. We will consider here three such mechanisms: contracts, liability rules, and regulation. Provided they impound the true social costs of a firm's activities into its cashflows, then SVM will harness managers' efforts to achieve socially optimal outcomes. Given the desirable properties of SVM in controlling agency costs for shareholders, this seems a powerful argument against interference with core corporate governance commitments. Unfortunately, the ability of external mechanisms to impound social costs into systemically important financial firms' profit functions turns out to have been highly incomplete. More troublingly still, SVM in some cases actually tends to *undermine* the efficacy of these mechanisms.

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3.1 Contractual Internalization

Ronald Coase (1960) famously pointed out that in many cases, supposed "externalities" can in fact be impounded into a firm's cashflows by contract. In the context of banks, bondholders and other creditors can adjust the pricing of their loans according to the expected risk of the bank's default (Calomiris & Carlson 2014). This forces the bank to take into account expected costs to creditors. However, retail depositors typically do a poor job in pricing risk *ex ante*.[7] As a consequence, the USA like many other countries operates a system of deposit insurance, whereby individual depositors have their claims against banks insured by a regulatory agency, the Federal Deposit Insurance Corporation (FDIC). In the event of bank failure, the agency pays out to the depositors and is subrogated to their claims against the bank. However, the "premium" paid to the agency for insuring deposits often does not reflect the risk of a particular bank's default.[8] Thus neither retail depositors, nor deposit insurers who fill their shoes, seem able effectively to contract so that banks internalize the costs their default would impose on depositors. Moreover, and crucially, costs of bank failure also fall heavily on parties who do not—and cannot—contract with the bank. Anyone who relies on the payments system, or who might in the future wish to obtain credit, can suffer losses from bank failure. The failure of a systemically important bank, as noted previously, may affect other banks far beyond the extent of counterparty relationships.

A well-meaning desire to mitigate such social losses leads governments to provide "bailouts" for troubled financial institutions. However, this exacerbates the problem of creditor moral hazard. The effect of bailouts is to provide *ex post* insurance to nondepositor creditors of banks. Such creditors anticipate the provision of insurance, even if no explicit guarantees are made, in turn reducing the borrowing costs systemically important banks have to pay to engage in risk-taking. Indeed, it is now a familiar argument that bank mergers were strongly motivated to attain "Too Big to Fail" status, to get this funding discount (Noss & Sowerbutts 2012; cf. Roe 2014). Consequently, even those creditors who would be able to cause banks to internalize part of the social costs of their risk-taking will fail to do so. The expectation of insurance undermines even the partial internalization that would otherwise occur via contract.

7 Indeed, the nature of the credit transformation process makes it very difficult for depositors to evaluate and price the bank's risk *ex ante*. Part of the bank's added value to the credit transformation process is its expert assessment of projects in circumstances in which market-based pricing would lead to substantial discounts.

8 The likely reasons for this are explained *infra*, section 3.3.

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3.2 Liability Rules: Tort Law

Tort liability is thought to function in a complementary way to contractual allocation of costs. The dominant analytic move in private law is to view tort as filling gaps where contractual resolution is not feasible *ex ante* (Calabresi 1971). Given the considerable difficulties with contractual internalization, we might imagine a role for tort liability as an alternative way of internalizing losses associated with bank failure. It turns out, however, that tort law does no useful work in internalizing systemic harms.

Tort law's general restriction on liability for "pure economic" (indirect) losses is an obvious problem (Bernstein 1998). This rule imposes a bar on recovery for losses caused otherwise than as a direct result of physical harm to persons or property.[9] Take the case of an oil spill: businesses whose property is physically contaminated are able to recover for business profits lost in direct consequence. For example, a beachfront hotel might find ingress of oil into its swimming pool, necessitating a period of closure to permit cleanup. The lost profits for this period of closure might be recoverable as well as the direct costs of the cleanup. However, those whose property is not physically harmed are ordinarily unable to recover lost profits. For example, a hotel operating several streets back from the beachfront, which experiences no direct contamination, nevertheless suffers a sharp fall in profits because holidaymakers avoid the area en masse having seen the oil spill on television.[10] Applied to the financial sector, the economic loss rule bars any liability grounded on (in)actions at financial firms leading to lost contracting opportunities. There is no physical harm, only economic.

Whether it is desirable for the economic loss rule to restrict recoveries for systemic harms seems doubtful.[11] But the difficulties of using tort liability to control systemic financial harms go deeper than this rule. An underlying problem is that systemic financial harms are typically triggered by the bankruptcy of a financial firm. If *bankruptcy* is the causal event, then the subsequent imposition of liability will make no difference to the firm's incentives in non-bankruptcy states—liability is only triggered when the firm is already

9 *Cattle v. Stockton Waterworks Co* (1875) 10 QB 453, 457–458; *Robins Dry Dock & Repair Co v. Flint*, 275 US 303 (1927); *Union Oil Co v. Oppen*, 501 F 2d 558 (9th Cir. 1974).

10 BP agreed to take on liabilities for such indirect harm in settlement of regulatory penalties and possible punitive damages in connection with the Deep Horizon/ Gulf Coast oil spill. But all parties have understood the extraordinary nature of BP's bargain. See *In re: Deepwater Horizon v. BP Exploration & Production, Inc*, 710 F.3d 338 (5th Cir. 2014) (latest appellate review and affirmation of broad settlement implementation).

11 The standard justification is that economic losses are usually pecuniary externalities: one party's loss is another's gain (Bishop 1982; Goldberg 1994). However, this justification probably does not hold for systemic harms (Schweizer 2007).

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judgment-proof.[12] We might ponder the wisdom of the rules that grant bank shareholders limited liability (Hansmann & Kraakman 1991); indeed, "double liability" was the norm in many states until the 1930s (Macey & Miller 1992; Esty 1998), though the historical UK experience suggests that unlimited shareholder liability may have retarded the availability of credit for economic expansion (Haldane 2011b). But shareholder personal liability can be triggered only if the firm actually goes bankrupt. And precisely because systemic firm bankruptcy is a trigger for contagion, political actors have powerful incentives to intervene with preemptive bailouts. Even if one firm is permitted to go bankrupt, political and regulatory actors will strenuously intervene to avoid the failure of other firms. Consequently, even if liability could be imposed on shareholders in bankruptcy as a theoretical matter, deterrence would be undermined by the expectation of government intervention.

3.3 Regulation

The third well-known response to the problem of social costs posits that regulators should impose a penalty or tax on an activity that generates negative externalities, such that the full social cost of its activities are imposed upon the firm (Pigou 1920, pp. 168–171). In the presence of appropriately-priced Pigouvian taxes, then the firm has incentives either to reduce the level of the activity in question, or to take precautions against harm up to the extent to which they are socially cost-justified. Under such circumstances, SVM operates virtuously. Because social costs have been factored into the firm's bottom line, then the share price will reflect residual returns *after* social costs are taken into account. SVM therefore focuses managers' attention on ways of reducing the social cost of the activities in question.[13]

More precisely, SVM focuses managers' attention on ways of reducing the regulatory burden that the firm incurs on its activities, much like the firm would seek to minimize any other tax. One approach is to innovate new ways of performing the activity in question that yield lower social costs. This both reduces social costs and increases shareholder profits, so is clearly desirable. Proponents of regulation commonly assume such innovation to be a desirable side-effect of the imposition of Pigouvian taxes. However, there are other ways to enhance shareholder value, which are not socially desirable.

12 Squire (2010) offers an analysis of this feature of financial firm bankruptcy in relation to incentives to shift risks to creditors.

13 We speak of "Pigouvian taxes" broadly to include regulations that impose costs on the firm by ruling out its preferred conduct in light of the potential risks of social harm. Because of the difficulties with harm computation and single firm Pigouvian tax assessments, rules have become a complement as well as a substitute to increased capital requirements that may read more directly as a tax.

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One alternative is for the firm to exploit differences between textbook and real-world regulators, which generate what we term "regulatory slack". These differences include the under-specification of regulatory norms, which leave space for discretionary action by firms; under-enforcement owing to scarcity of regulatory resources; and information asymmetries between managers and regulators regarding the firm's conduct, which favor the firm over regulators.[14] In other words, weaknesses in the implementation of real-world regulation leave gaps in the types of activities priced into the regulatory tax. A firm pursuing SVM now has a choice: either innovate new processes (as conventional theory implies) or reorient its activities so that they fall more squarely within the gaps. Of course if regulatory arbitrage, rather than innovation, is pursued, then the social costs of the firm's activities are not internalized.

The financial crisis provides many examples of regulatory slack. For example, US banks have long been subject to minimum capital requirements based on both risk-weighted assets and a minimum leverage ratio of Tier 1 capital (Carnell, Macey, & Miller 2013, pp. 215–232; Tarullo 2011). Firms exploited these regulations in many ways: "risk weighting" was flouted by loading up on the riskiest assets within a risk class (Le Lesle & Avramova 2012; Sas & Sy 2012); leverage was flouted by the creation of entities that qualified as "off balance sheet" for accounting purposes but were supported by the bank's explicit and implicit guarantees (US Treasury 2013); capital was degraded by the use of various hybrid securities that were less dilutive to common shareholders but did not sustain investor confidence in a crisis.[15]

Whether arbitrage will be pursued will depend on its costs to the firm, relative to innovation. In this context, SVM mechanisms actually give managers of widely held firms *worse* incentives than those of sole owners under equivalent circumstances. This is because SVM is implemented in a way that seeks to

14 A related concern is that regulators have inferior knowledge to firms as to sources of systemic risk, an information asymmetry that firms may exploit. For example, the Basel II accord permitted banks to use "advanced methods" to compute own-firm risk-weighted assets to compute required capital on the basis of in-house measures of riskiness. As respects trading assets, this relied on the Value at Risk ("VAR") framework. VAR is a measure of the maximum potential exposure of a portfolio over a specified period of time and within a specified confidence interval (Jorion 2007, pp. 62–63), VAR began life as a helpful rule of thumb for asset managers, but as a way of calculating capital charges, it became a way of exploiting regulatory slack. Because VAR only captures losses within the confidence interval, expected return for a given capital charge can be maximized by taking on long-tail risk, which only materializes outside the confidence interval (Haldane 2011, esp charts 3 and 4).

15 This is because other instruments, variants of preferred stock or subordinated debt, could provide loss absorbency only on a "gone concern" basis; because they were senior to common stock, they could be written down only after the common had been completely wiped out (Geithner 2014, 138, 550).

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encourage managerial risk-taking. Pushing against regulatory boundaries is risky. A sole owner, whose investment in the firm was not diversified, would be less willing to take such risks than managers incentivized per SVM.

We might therefore seize on a policy response of minimizing regulatory slack: channeling resources toward regulation so as to eliminate gaps and increase enforcement intensity. But this would overlook the corrosive impact of SVM on the regulatory design process itself. Firms focused on minimizing their regulatory costs can do so not only by exploiting slack within the current regulatory set-up, but by influencing the production and enforcement of regulation so as to increase the effective amount of slack. Firms are not just regulatory "price-takers"; they can try to change regulatory prices. Moreover, as systemically important firms tend to be large, the resources available to those running the firm to try to influence regulators are considerable. The constitutional framework partially determines the extent to which firms are able to exert influence of this sort—encompassing political donations,[16] lobbying campaigns, sponsorship of directed research, revolving door employment opportunities for regulators and aggressive legal challenges to regulatory decisions, to name but a few. Thus the firm has an additional choice when it comes to cost-minimization: influence. This is borne out by Coates' (2012) study of political contributions by public companies: firms in regulated industries spend more on political contributions than those in other industries, and the size of such contributions, for regulated firms, is positively correlated with shareholders' returns.

While it may be impossible to say *a priori* which of these strategies will be cost-minimizing for the firm, there are strong reasons for thinking that influence is often likely to dominate. If the firm invests in innovation, it will then be exposed to the risk of renegotiation or recalculation by the regulator, whereby an *ex post* increase in the level of regulatory tax will reduce the net returns to shareholders. If the firm cannot be certain *ex ante* that such renegotiation will not occur, then it will be hard to price the expected returns to investment in innovation. Investments in influencing the regulator will be much easier to price, however, because to the extent to which they are successful, they will give the firm certainty over the likely regulatory costs *ex post*. In other words, it is likely that a firm committed to minimizing its regulatory costs will always want to pursue a strategy of influencing the regulator. The closer the focus on cost-minimization, which SVM encourages, the more severe we may expect this corrosion of regulatory pricing of social cost to become.

16 *See Citizens United v. Federal Election Commission*, 558 U.S. 310 (2010).

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To summarize: private law mechanisms for controlling externalities fare poorly where systemic risk is concerned, because of the propensity of governments to bail out troubled firms. Regulatory constraints therefore have to carry extra heavy freight; yet they are systematically corroded by SVM. This poses the question whether SVM is an appropriate framework for the governance of systemically important financial firms.

4. SYSTEMIC EXTERNALITIES AND SHAREHOLDER VALUE

The case for implementation of SVM in corporate governance rests on its utility in rendering managers accountable to shareholders. For most firms, this case is very strong. Left to their own devices, managers would likely prefer to run firms in accordance with their own interests, rather than those of shareholders. Where the firm's activities involve potential externalities, it is conventionally assumed that the costs of these activities are internalized into the firm's profit function through the mechanisms described in Section 3. To the extent that these mechanisms do not function perfectly, the standard view of corporate governance sees the relationship between externalities and shareholder value as a trade-off. Tying managerial returns to stock price performance as a means of controlling managerial agency costs is thought to generate greater value for shareholders than the collateral increase in externalities. For systemic harms, given the size of social losses and the weakness of ordinary control mechanisms, it seems optimistic to assume this condition is met. Nevertheless, an advocate of SVM might assert that this is an empirical question; without further evidence no case is made out for relaxing SVM. This section responds by challenging the "benefit" component of the trade-off: we show that in the presence of systemic externalities, SVM *does not in fact promote the interests of the majority of shareholders*. Rather, SVM tends to harm the interests of both diversified shareholders *and* society. As a result, there is a powerful case for the modification of internal corporate governance arrangements where systemic externalities are present.

4.1 Maximizing the stock price

A central tenet of modern portfolio theory is that diversification reduces portfolio risk. By spreading capital across many uncorrelated investments comprising a portfolio, idiosyncratic risks associated with individual investments can be eliminated at the portfolio level. Investors consequently need only to be compensated for bearing market risk. It has long been understood that limited liability for shareholders fosters diversification in this way and

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consequently lowers overall risk-bearing costs for firms (Easterbrook & Fischel 1991, pp. 41–44).

One of the most important ideas in modern corporate governance—that it is desirable to encourage managerial risk-taking—is based on this premise. Diversified shareholders may be expected to behave, as regards decisions over idiosyncratic risks, as though they are risk-neutral. Consequently, the stock price, which reflects their demand function, will respond to changes in the firm's expected returns but not to idiosyncratic risks. Individual managers running firms, however, are likely to have significant amounts of undiversified human capital tied up in the firm. Thus managers may be expected to exhibit greater risk aversion than diversified shareholders would prefer. Negative outcomes may lead to managerial termination (in part because outsiders' inability to distinguish between a good bet gone bad and a bad bet from the outset) or even the firm's bankruptcy. This creates a problem: managers may shun higher net present value (NPV) projects because their returns are more volatile.

Modern thinking on corporate governance focuses on particular mechanisms to address the mismatch of risk preferences between diversified shareholders and managers, with the goal of giving managers incentives not to pass up positive NPV projects because of risk aversion. The way in which this is implemented has two aspects. First, managers are given a "carrot" in the form of equity-linked compensation, especially stock options. Options increase managers' returns in good states of the world, but cost them nothing in bad states of the world. They consequently encourage managers to focus more on good outcomes, and less on bad, thereby reducing risk aversion (Jensen and Murphy 1990). Of course, the lack of diversification means that it is relatively expensive—in terms of the dollar sums that must be paid to executives—to overcome risk aversion in this way (Conyon, Core, & Guay 2009).

Second, directors and officers are given a shield from liability for breach of their duty of care through the "business judgment rule". This provides that where a business decision is taken in good faith on the basis of adequate information, it will not be open to challenge in a shareholder suit unless the decision resulted in "waste"—dissipation of corporate assets so egregious that no decision maker could plausibly have justified it in good faith.[17] This provides downside protection against good bets gone bad. The rationale for the business judgment rule is frequently stated as being to mitigate the problem of

17 See, e.g. ALI Principles of Corporate Governance, § 4.01. The rule is sometimes styled as a "presumption" that directors have met their burden of good faith and due inquiry unless plaintiff can show evidence to the contrary.

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managerial risk-aversion we have just described, framed in terms of the interests of diversified shareholder.

Chancellor Allen explained the rationale as follows in the Delaware case of *Gagliardi v. Trifoods International, Inc.*:[18]

> "Shareholders don't want (or shouldn't rationally want) directors to be risk averse. Shareholders' investment interests, across the full range of their diversifiable equity investments, will be maximized if corporate directors and managers honestly assess risk and reward and accept for the corporation the highest risk adjusted returns available that are above the firm's cost of capital . . . . But directors will tend to deviate from this rational acceptance of corporate risk *if* in authorizing the corporation to undertake a risky investment, the directors must assume some degree of personal risk relating to *ex post facto* claims of derivative liability for any resulting corporate loss."

Judge Winter also sounded this theme as well in the well-known US Court of Appeals case, *Joy v. North*:[19]

> "[B]ecause potential profit often corresponds to the potential risk, it is very much in the interest of shareholders that the law not create incentives for overly cautious corporate decisions. Some opportunities offer great profits at the risk of very substantial losses, while the alternatives offer less risk of loss but also less potential profit. Shareholders can reduce the volatility of risk by diversifying their holdings. In the case of the diversified shareholder, the seemingly more risky alternatives may well be the best choice since great losses in some stocks will over time be offset by even greater gains in others. Given mutual funds and similar forms of diversified investment, courts need not bend over backwards to give special protection to shareholders who refuse to reduce the volatility of risk by not diversifying. A rule which penalizes the choice of seemingly riskier alternatives thus may not be in the interest of shareholders generally."

The point of the business judgment rule is not to sanction negligence. Rather, the rule is premised on the view that the encouragement of business risk-taking requires acceptance of the inevitability of business failures and that a liability

18 683 A. 2d 1049 at 1052-3 (Del. Ch. 1996).

19 692 F.2d 880, 886 (2d Cir. 1982), cert den. 460 U.S. 1051 (1983) (footnotes omitted). It is noteworthy that Chancellor Allen explicitly embraced this understanding of the basis for the business judgment rule. *See In re Caremark Int'l Deriv. Litig.*, 698 A.2d 959, 967 n. 16 (Del. Ch. 1996).

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rule premised on negligence will result in hindsight bias determinations of negligence. Thus as Chancellor Allen concludes in *Gagliardi*:

> "If . . . corporate directors were to be found liable for a corporate loss from a risky project on the ground that the investment was too risky (foolishly risky! stupidly risky! egregiously risky!—you supply the adverb), their liability would be joint and several for the whole loss (with I suppose a right of contribution). Given the scale of operation of modern public corporations, this stupefying disjunction between risk and reward for corporate directors threatens undesirable effects. Given this disjunction, only a very small probability of director liability based on "negligence", "inattention", "waste", etc., could induce a board to avoid authorizing risky investment projects to any extent! Obviously, it is in the shareholders' economic interest to offer sufficient protection to directors from liability for negligence, etc., to allow directors to conclude that, as a practical matter, there is no risk that, if they act in good faith and meet minimal proceduralist standards of attention, they can face liability as a result of a business loss."[20]

In sum, the structure of corporate governance arrangements, at least in the USA, is explicitly directed towards encouraging managers to undertake the highest-NPV projects available to them, regardless of their level of risk. More specifically, the use of options as a "carrot" coupled with the absence of any liability "stick" encourages managers to focus on activities that will increase the stock price over the time horizon of their option.

4.2 Market Risk

The foregoing framework assumes that the risks related to particular projects among which managers choose are idiosyncratic (Easterbrook & Fischel 1991, p. 99). This assumption is invalid, however, if some projects have the potential to contribute to market risk. "Market risk" is the component of portfolio risk which cannot be avoided by diversification (Brealey et al. 2011, p. 156). We normally assume that while individual firms' returns are affected by market risk, the success or failure of their projects does not have any impact on the aggregate market risk. In other words, market risk reflects exogenous macroeconomic volatility, which affects firms, but not vice versa. The intuition behind this is that if a project (or firm) fails, this will only affect that firm, or at

20 683 A.2d at 1052-53. Similar thinking grounded the adoption in Delaware and elsewhere of permissive exculpation statutes (e.g. Del. Gen. Corp. L. § 102(b)(7)) for breach of the duty of care following *Smith v. Van Gorkom* 488 A. 2d 858 (Del. 1985).

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worst, a few others sufficiently proximate to the activity in question to suffer loss. Indeed, the failure of one firm may strengthen the market position of rivals.

However, if a bad state realization causes sufficiently widespread losses to other firms, then it is better understood as affecting market risk. Consequently investors will be unable to diversify this away. The financial sector provides an intuitive example. The closure, even temporarily, of a bank involved in the payments system would lead to widespread social costs being borne by other users of the payments system.[21] Such costs would be felt by firms generally, and hence increasing the risk of an individual bank's failure will impose expected costs on other firms generally, and likely increase the volatility of their returns. Thus activities that increase the risk of bank failure would both lower expected returns and increase volatility for the market as a whole.

The consequence of this is to damage the interests of a diversified shareholder in two ways. First, genuinely systemic harm will reduce expected returns across such a wide cross-section of firms as to undermine diversification.[22] Second, the additional market risk will increase the expected premium required to compensate for such risk. The combined effect will be to reduce stock prices throughout the diversified portfolio and to impose losses on diversified shareholders that far exceed the losses on the failed bank. Critically, the expected single-firm gains associated with ratcheting up the risk-taking by the bank will be swamped by the expected increase in portfolio-wide losses that such risk-taking would entail.

The consequences of an exclusive focus on SVM in a systemically important firm can be illustrated with a simple numerical example. The example illustrates the conflict of interest between a manager (or other controller) with incentives to maximize the share price and the diversified shareholders. Take the case of a systemically important firm ("Bank") with an equity value of $1 million, divided between a Manager (M) holding $500,000 in equity and Diversified Shareholders (DS) holding $500,000. DS also hold $100 million of equity in a portfolio of other firms. Assume M can cause Bank to pursue a risky strategy. This has a 90 percent chance of success, in which case it yields a payoff of $333,000, but carries a 10 percent chance of causing the Bank's failure, with a

21 For example, the UK's Royal Bank of Scotland suffered a software malfunction which caused its payments processing to shut down transactions for over 17 million accounts for three days in June 2012 (Masters, Moore, & Pickard. 2012).

22 To be sure, some firms will do better as consumers substitute into cheaper goods, but the economic contraction will produce many more losers than winners.

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loss of the entire equity value.[23] The expected within-firm payoff from this strategy to Bank's shareholders as a group is $200,000.[24]

Now let's see how systemic risk drives a wedge between M and DS. The project's expected return to M is $100,000, reflecting her 50 per cent ownership of Bank. But DS, unlike M, hold shares in other firms. Assume now that if Bank fails, it triggers a systemic shock that causes a general decline in market values of 10 percent. DS, unlike M, will bear losses associated with that systemic effect. The expected return for DS from M's pursuit of the risky strategy is thus −$900,000, aggregating expected gains of $100,000 on their investment in Bank, and expected losses of $1,000,000 on their diversified portfolio.[25]

The example shows that expected gains from M's single-minded focus effort to maximize the value of Bank's stock can be swamped, from the perspective of DS, by a systemic effect of the Bank's failure. The example makes simplifying assumptions, of course, but without loss of generality: if additional expected returns from risk-taking are high enough, managers (or other controllers) will find it rational to pursue risk-taking that diversified shareholders would find irrational.[26] Compensation mechanisms that governance theory has generally embraced—high-powered incentives to overcome managerial risk-aversion, payoff structures that strip out the effects of market risk—exacerbate the conflict between managers and shareholders in the systemically important financial firm.

A focus on Bank's stock price alone will not take expected systemic costs of its activities into account. If Bank's activities increase its cashflows, its stock price will rise regardless of the costs these activities may impose on DS. If DS hold stock in Bank, their expected return is −$900,000. If they forego the opportunity to hold this stock, their expected return is −$1 million. DS are better off holding stock in Bank than not doing so. If DS hold no stock in Bank, they face the downside of potential systemic distress costs but none of the benefit of successful risk taking. Consequently, we would expect Bank's stock price to rise even as it embarks on systemic risk-taking. Stock prices impound own-firm expected returns from increased risk-taking, but not the potential harms to

23 Since our point is to focus on the conflict within shareholder groups, we ignore possible creditor losses.

24 The arithmetic: $(0.9 \times 333{,}000) + (0.1 \times -1{,}000{,}000) = 200{,}000$.

25 The arithmetic: $(0.5 \times 200{,}000) - (0.1 \times 0.1(100{,}000{,}000) = -\$900{,}000$.

26 Our numerical example does not take into account the effect of managerial risk aversion, which would cause M to discount expected returns from a risky project. But this simply increases the size of the expected return necessary to induce M to pursue the risky project. Managerial risk-aversion may produce more selective risk-taking but it does not address the fundamental wedge between the own-firm payoffs to managers and portfolio pay-offs to diversified shareholders.

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other firms. Thus for systemically important firms, encouraging managers to take more risks achieves precisely the opposite result to that which is ordinarily desirable.

Another way to frame the point is this: for the typical non-financial firm, the concept of "excessive" risk-taking has little meaning from the shareholder perspective. So long as the firm is taking its highest-NPV projects, diversified shareholders (or shareholders who could be diversified) should be satisfied, even if the firm is not successful. The portfolio of firms following such a strategy should outperform a portfolio of "safer" firms. For systemically important financial firms, the matter is quite different. To be sure, risk-taking is inevitable, but "excessive" risk-taking is meaningful and objectionable, from the diversified shareholder perspective. This is because the failure of a systemically important firm produces losses across the portfolio.

So, where systemic harms are concerned, diversified shareholders may prefer that the bank pursue more conservative projects, while managers with high-powered incentives (or undiversified controllers) would prefer the bank pursue more risky projects. Startlingly, this result is an outright reversal of the ordinary framework for corporate governance. Diversified shareholders, instead of wanting managers to take *more* risk than the latter are wont to do, actually want them to take *less* risk.

These theoretical claims are consistent with empirical research associating greater risk-taking prior to the financial crisis with the existence of a controlling shareholder (Laeven & Levine 2009; Beltratti & Stulz 2012, pp. 14–15), and more intense CEO incentives to increase stock price with greater bank losses during the financial crisis (Fahlenbrach & Stulz 2011, pp. 18–20). The literature also reports a link between weak managerial insulation from shareholders with losses during the financial crisis (Beltratti & Stulz 2012, pp. 10–13; Ferreira et al. 2013). This is also consistent with our theory if, as seems plausible, weak managerial insulation disproportionately empowers concentrated shareholders, who face lower coordination costs.[27]

5. WHAT ABOUT NONFINANCIAL FIRMS?

Our discussion has focused on the financial sector. Other scholars have argued that SVM gives rise to more widespread problems (e.g. Stout 2012; Mayer 2013). In this section, we ask whether the problem we identify generalizes to nonfinancial firms. In the presence of effective external mechanisms for internalizing social costs, SVM functions virtuously to promote the interests of

27 See *infra*, Section 6.2.

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society. Where these external mechanisms do not function well, then the social utility of SVM becomes harder to determine *a priori*. It depends on the relative size of the benefits of controlling within-firm agency costs and the costs of externalities. Yet where the externalities are systemic in character, then this tradeoff disappears: SVM no longer benefits diversified shareholders, and so is *a priori* problematic.

On our analysis, systemic externalities arise where a firm's activities create a risk of very large losses that are widely distributed throughout the economy and of which a large component is indirect.[28] A widespread impact—affecting many different parties—makes Coasean contracting hard to implement, and indirect losses are not well catered to by the law of torts. Consequently regulatory mechanisms are used to deter excessive risk taking and the imposition of probabilistic social harm, the efficacy of which is undermined by SVM. Very large, widely distributed losses are likely to have an adverse impact on diversified shareholders' portfolios.

One can easily think of harms matching these criteria that might be caused by nonfinancial firms. Emissions from a nuclear plant or a deep-sea oil well are two plausible examples. There are, however, important differences between these cases and systemic financial firms. First, tort law does do significant work to internalize social costs where there is some component of direct harm.[29] And any harm that is sufficiently widespread as to be spoken of as "systemic", but which involves a component of direct harm, will trigger a very large aggregate liability. Second, for nonfinancial systemic harms, the bankruptcy of the firm would not trigger the systemic loss: given the existence of some element of direct harm, the direction of causality is likely to run the other way. These elements suggest that private law liability has a meaningful role to play in relation to nonfinancial systemic harms.

A third difference concerns the role of government. Where the harm in question is systemic, it will be large enough to have political implications. We may expect government to mobilize to remedy the problem. If the harm is caused by the bankruptcy of the firm, as with financial firms, this mobilization will consist of actions designed to avoid bankruptcy from occurring: bailouts. But if the harm has been caused by a firm that is not bankrupt, then the mobilization may be expected to include actions that threaten to bankrupt the firm. For example, following BP's *Deepwater Horizon* disaster in the Gulf of

28 Activities that generate such externalities with high probability are unlikely to be tolerated at all; consequently we are concerned with activities that generate *risks* of such externalities, where the degree of risk is a function of the way in which the activity is performed.

29 One type of nonfinancial activity that could give rise to purely economic losses would be the production of dysfunctional software.

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Mexico, the US government let it be known that the firm might not expect to continue to hold licenses to drill in US territory in the future. It seems highly likely that this was the concern that lead BP to accede to the US government's "request" that it "voluntarily" set up a trust fund to compensate all victims for all losses, economic or otherwise. BP's Annual Report for 2013 recognized total charges of $42.7bn for costs to the firm associated with the disaster (BP plc 2014, p. 40). These two types of government intervention have opposite effects on incentives. Bail-outs reduce the effective liability borne by shareholders, whereas license removal threats raise the effective liability to the value of the firm's operations in the jurisdiction.

In sum, whilst a case can be made that SVM tends to exacerbate externalities in nonfinancial firms, the implications depend on careful scrutiny of relative costs and benefits. In this respect, financial firms really are different. The causal link between bankruptcy and systemic harm, and the perverse incentives created by government bail-outs, mean that an *a priori* case for relaxing SVM can be made.

6. CORPORATE GOVERNANCE SOLUTIONS

In the absence of effective constraints on the internalization of social costs by financial firms, the interests of diversified shareholders and controllers (managers and concentrated owners) diverge over the appropriate level of risk-taking for activities capable of giving rise to systemic harms. Encouraging managers to focus on SVM will consequently result in excessive risk-taking not only from the standpoint of third parties, but also as regards the interests of diversified shareholders. Relaxing SVM in such circumstances does not engender the conflict between agency costs and externalities its defenders normally identify. We should make clear that we do not advocate the abandonment of all accountability of managers to shareholders. We say nothing about appointment and voting rights, for example. Rather, we seek to identify discrete changes to the existing corporate governance framework which are calculated to reduce the intensity with which managers focus on the stock price. In this section, we canvass ways in which this might be done.

6.1 Regulation of Executive Pay?

A relaxation of SVM for systemically important financial firms has already begun to happen through regulatory initiatives in relation to executive pay. A range of policy proposals have sought to modify executive compensation in financial institutions so as ameliorate incentives (e.g. Bebchuk & Spamann 2009; Bhagat & Romano 2009). Ideas of this type have been taken up by

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regulators around the world: in April 2009, G20 representatives agreed to a set of guidelines detailing how national financial regulators should align performance-related pay with the long term and risk-adjusted performance of financial firms (Financial Stability Forum 2009). A key component is to restrict managers' ability to cash out equity-linked compensation in the short run, effectively forcing managers to post this as a bond for continued good performance. The European Union has gone further in seeking to weaken managerial incentives to increase shareholder value, by imposing a cap on the ratio of variable to fixed executive compensation.[30]

We do not doubt that changes to executive pay have the potential to reduce systemic externalities, and we support the general thrust of these reforms. But we are skeptical whether, by themselves, they are enough. The rules impose the same model on all applicable firms, which is problematic if—as seems likely—firms vary as regards which governance structures are appropriate.[31] At the same time, if regulators do not understand the workings of financial firms as well as insiders—also plausible—incompleteness in the specification of the rules seems likely, giving rise to regulatory slack and opportunities for arbitrage. A straightforward proposal such as to tie managerial pay to bond performance as well as stock performance, for example, runs into the immediate problem that in ordinary times bond values are much more influenced by market-wide interest rate changes than own-firm credit risk changes, and that an already-fragile alternative measure of single-firm credit risk, credit default swap spreads, will be undercut by use as a regulatory device (Lucas 1976). While in the short run public outcry may be enough to secure the implementation of some headline rules, we may expect their application to be systematically weakened over time through concerted influence by the regulated firms (Culpepper 2010; Coffee 2012).

These limitations can readily be illustrated by the implementation of regulatory prescriptions regarding compensation practices. The G20 Principles, for example, require performance-related pay to vary with *ex post* realizations of risk outcomes, over a sufficiently long period of time. In relation to senior executives, this takes the form of a requirement that 40–60 percent of variable pay be deferred for a period of at least three years (Financial Stability Board 2009, p. 3). It is unclear what magic lies in these particular numbers. And consistently with our observations about regulatory influence, the rules

30 CRD IV, Art 94. Murphy (2013) argues the EU rule will have the unintended consequence of actually increasing incentives for risk-taking.

31 Indeed, it may be that incentives facing employees below senior ranks are crucial (Acharya, Litov, & Sepe 2013).

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applying these guidelines in the USA have been held up by industry lobbying and inter-agency wrangling such that no effective changes have yet been implemented.[32] Similarly, media reports suggest the EU bonus cap rules are being circumvented by firms paying "allowances" that the rules class as "fixed" compensation but which are in fact variable (Schäfer & Arnold, 2014).

6.2 Shareholder Democracy?

Some might say the clash of shareholder interests in relation to systemic harms points to a straightforward governance solution: since diversified shareholders typically constitute the majoritarian owners of the firms in question, should shareholder democracy not produce checks on excessive risk-taking by managers? In this regard, the "re-concentration" of diffuse share ownership into the hands of institutional investors should increase the potency of shareholder voice (Black 1992; Gilson & Gordon 2013), and the recent adoption of mandatory "say on pay" by the Dodd-Frank Act should offer a ready-made channel for the exertion of influence.[33] Thinking of this sort also underpinned the UK's Walker Review, which recommended facilitating increased shareholder oversight for financial institutions (Walker 2009, pp. 82–87).

Although superficially promising, a strategy of governance reform through shareholder self-help at the firm level is unlikely to be sufficient to check excessive risk-taking by systemic firms. First, diversified shareholders typically hold their shares through institutional investor intermediaries, whose governance activism will be constrained by what one of us has termed the "agency costs of agency capitalism" (Gilson & Gordon 2013). This refers to self-interested behavior by intermediaries who are typically evaluated by relative, rather than absolute, performance. Such intermediaries ordinarily have little incentive to intervene in the governance of portfolio firms, because to do so would incur private costs yet confer a benefit on their investment management competitors who also hold the same stock—a classic free-rider problem. While intermediaries cannot avoid the systemic risk associated with a financial firm simply by selling the shares in question (unlike in the case of an under-performing nonfinancial firm), relative performance evaluation still creates a collective action problem. Systemic risks will harm their competitors' portfolios as well as their own, and so intermediaries' incentives to intervene will be muted. Indeed, as we

32 Dodd-Frank Act § 956; US Treasury Department et al, "Incentive-Based Compensation Arrangements; Proposed Rule", 76 Fed Reg 21169 (2011). These proposals rely heavily on compensation deferral strategies whose actual effects, as Jackson & Honigsberg (2014) point out, may be highly sensitive to contractual detail.

33 Dodd-Frank Act § 951, 124 Stat. 1375, 1899 (2010) codified as Securities Exchange Act of 1934 § 14A.

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argue above, intermediaries will face incentives to bid up the shares of risk-taking financial firms.[34]

Second, the structure of governance activism almost invariably produces pressure for improved stock price performance at the governance target.[35] Much firm-specific governance energy comes from blockholders with large enough stakes to justify independent activism that may mobilize a latent majority (Kahan & Rock 2007). But blockholders, who reduce diversification in the assembly of their block, generally focus attention on maximizing the share price of the particular firm, prodding management in that direction (Brav et al. 2008; Bebchuk, Brav, & Jiang 2014). This is how the blockholder earns returns from its activism and achieves compensation for bearing undiversified risk. Ordinarily, in the case of nonfinancial firms, blockholder interests are aligned with the diversified shareholders. In the case of systemic financial firms, however, the antagonism of interests means that what is ordinarily virtuous may become a vice for diversified shareholders.

That said, there may be grounds for institutional investors to influence governance in systemic firms through political, rather than firm-level, channels (Black 1992; Armour 2009). Coordination through institutional investors' associations can lower the costs of collective action in the political arena. Such associations may be capable of forming a useful counterweight to financial sector lobbying, although evidence of collective asset manager lobbying in favor of more stringent systemic risk controls in the post-financial crisis period has so far been scant.

6.3 Liability Rules

In light of our hesitancy regarding the success of either or both of the foregoing mechanisms—compensation constraints and revived shareholder democracy–it is desirable to consider others. A third possibility would be personal liability for those who control and monitor the strategy of systemically important firms. This is the inverse of regulating executive pay: rather than reducing the size of the "carrot", it introduces a "stick" to generate countervailing incentives. Liability of this sort could complement other measures by adding three distinct and beneficial features.

34 See *supra* text accompanying note 27.

35 Indeed, this seems to be the early pattern in shareholder voting on "say on pay". Thomas, Palmiter, & Cotter (2012) suggest that the results of the first year suggest most management pay proposals pass easily except at poorly performing companies, and Cuñat, Giné, & Guadelupe (2013) report an increase in share price performance triggered by voluntary adoption of a "say on pay" mechanism in the years immediately before the provision became mandatory.

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First, and unlike rules about executive pay, liability rules would create a role for court-developed standards in the governance of such firms. Liability standards avoid the problems described in Section 3.3, which undermine regulatory rules. Because compliance with standards is fleshed out *ex post* by courts, problems of arbitrage can be mitigated.

Second, judicially crafted standards are less open to subversion by industry influence than regulatory prescriptions. Judges can only propound new precedents in light of cases brought before them; combined with standing rules this provides some sort of check on the extent to which a judicial standard can be subverted by lobbying. This is not to say that litigation is immune from industry influence; rather, that it is *relatively* robust.

Third, because enforcement is in the hands of private plaintiffs, rather than regulators, opportunities for lobbying to undermine its efficacy are much reduced. Private plaintiffs in shareholder litigation are widely dispersed, and so more difficult for lobbyists to reach than centralized regulators. Moreover, private plaintiffs—and their lawyers—have much more direct incentives to trigger enforcement than public agencies, because they keep the rewards of successful litigation (Hay & Shleifer 1998).

To be sure, judges—even those who specialize in corporate law—probably lack expertise when it comes to systemic risk, as compared with regulators. Hence we do not propose replacing regulatory controls with judicial ones. Rather, we suggest liability rules as an additional mechanism to relax SVM in systemic firms. To the extent that regulatory interventions to control systemic risk are successful, there should be little cause for *ex post* liability. And to the extent that regulators' ability to exert such control is undermined, inexpert judicial control will be the only variety available. Judicial control may be less precise than regulators, but it is more robust to lobbying. Our claim is that judicially crafted liability rules could usefully complement the regulatory changes already being implemented.

Director liability is not an innovation in the control of risk-taking by financial institutions; rather, it has a long history in helping to overcome the characteristic fragility of banks and the contagion risks from single bank failure. Until federal deposit insurance became entrenched as a stability-provider, US bank directors faced liability to creditors (particularly depositors) in insolvency under the so-called "trust fund" doctrine. In the well-known 1940 decision of *Litwin v. Allen*, the New York Supreme Court held that:

> "[D]irectors are liable for negligence in the performance of their duties. Not being insurers, directors are not liable for errors of judgment or for mistakes while acting with reasonable skill and

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> prudence . . . . *Undoubtedly, a director of a bank is held to stricter accountability than the director of an ordinary business corporation. A director of a bank is entrusted with the funds of depositors, and the stockholders look to him for protection from the imposition of personal liability.*"[36] (emphasis added).

The 1880 New York Court of Appeals case *Hun v. Cary*,[37] which held bank directors liable on a negligence standard, focused on the particular vulnerability of bank depositors:

> "[T]he degree of care required depends upon the subjects to which it is to be supplied . . . . What would be slight neglect in the care exercised in the affairs of a turnpike corporation, or even of a manufacturing corporation, might be gross neglect in care exercised in the management of a savings bank entrusted with the savings of a multitude of poor people, depending for its life upon credit and *liable to be wrecked by a breath of suspicion.*"[38] (emphasis added).

The stability-enhancing mechanism of common law bank-director liability faded in importance after the adoption of the Federal Deposit Insurance of 1933. A state law retreat on negligence liability followed, sometimes through explicitly targeted protection for bank officers and directors;[39] in other cases as part of an omnibus retreat on director liability for breaches of the duty of care.[40] In the case of Delaware, most notably, bank directors were the inadvertent beneficiaries of the statutory liability opt-out adopted after *Smith v. Van Gorkom*.[41]

36 *Litwin v. Allen* 25 NYS 2d 667, 678 (NY Sup.1940).

37 *Hun v. Cary*, 82 N.Y. 65 (NY 1880).

38 82 N.Y. at 71 (citation omitted). Former Delaware Supreme Court Justice Henry Ridgely Horsey traces the notion of corporate directors' duty of care to English trust and agency law from the 18th century, but argues that, while this fiduciary duty was accepted in the USA by the 19th century, the duty was actually confined to directors of banks and other financial institutions (Horsey 1994).

39 E.g. for Florida, with a large number of bank failures, *see FDIC v. Stahl*, 89 F.3d 1510, 1516-18 (11th Cir. 1996) followed by the enactment of Fla. Stat. § 607.0830.

40 See, e.g. Del. Gen. Corp. L. § 102(b)(7), adopted in 1986; Model Bus. Corp Act § 2.02 (b)(4), adopted in 1990.

41 *Smith v. Van Gorkom*, 488 A.2d 858 (Del. 1985) (liability for gross negligence imposed on directors of a non-financial corporation). Our examination of the legislative history of DGCL § 102(b)(7) has not unearthed any evidence that the position of bank directors was ever considered in the process leading up to this change. Nevertheless the statute, generally applicable to all Delaware stock corporations, proved capacious enough to provide bank directors a liability shield and the Delaware courts have not scrutinized the matter further. See *In re Citigroup Inc. Shareholder Derivative Litigation*, 964 A.2d. 106, 124–125 (Del. Ch. 2009).

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Here is the point: we have come to realize that the FDIC's capacity to protect against systemic risk from bank failure runs out in the case of a very large financial firm. In the mid-20th century deposit insurance offered sufficient stability because of the diffuse structure of the banking system and the deposit-like nature of most banking liabilities. Today, much greater concentration in banking and a shift in the nature of financial-institution liabilities means that the failure of a large financial firm may harm not only the shareholders and creditors of the particular firm but also other firms and the financial system more generally. This revives the case for director-negligence liability as a method of constraining bank risk-taking, not limited to cases of bank failure but rather addressed to cases in which a large financial institution suffers losses of a magnitude and kind that could threaten the institution's stability.

We sketch what such a liability regime might look like in Section 7.

7. RISK OVERSIGHT LIABILITY IN SYSTEMIC FIRMS

Our proposal, in brief, is as follows. First, a review framework in which managers have a duty to address the conflicts of interest embedded in high-powered performance incentives through obtaining board-level review of risk-taking that may give rise to systemic harms, effectuated through a risk-committee process, akin to a "special committee" process in other areas of significant conflict. Second, an oversight framework in which the board has oversight responsibility for the level of risk-taking by the firm, including risk-taking in operations as well as strategy, not just its compliance with applicable legal norms. Third, a standard of liability that is negligence-based, because the risk-neutral heuristic associated with the business judgment rule is inappropriate where systemic risks are concerned. We refer in the discussion to aspects of Delaware law in order to illustrate how judge-made law could accommodate this type of mechanism, but the framework could also be implemented by Federal courts, as we explain in section 7.7.

The goal of such a reform is deterrence: to induce board "ownership" of the firm's risk, so that the board will take charge of understanding the level of risk-taking, and, where necessary, curb it. This is what "risk oversight" means. On our analysis, "excessive" risk-taking is a meaningful conception in the case of a systemically important financial firm. The challenge is to operationalize the concept. Board-level accountability is an important element in establishing and adhering to appropriate risk parameters.

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7.1 Which Defendants?

We focus attention on those controlling a corporation, because of the divergence between the interests of controllers and diversified shareholders in the case of systemic externalities. As such our proposal differs from much earlier work on corporate externalities—and indeed other work on corporate governance and banking—which focuses on potential liability of shareholders (Hansmann & Kraakman 1991; Macey & Miller 1992).

It is helpful to reflect on the classes of person involved in corporate governance. *Officers* are executives, tasked with making decisions about the running of the company. They consequently have the power to initiate corporate decision-making. They also typically face high-powered incentives derived from variable compensation determined by reference to the share price. *Directors*, in contrast, are tasked with acting as monitors of the performance of the officers. Their engagement generally takes the form of veto rights, through board decision-making on proposals initiated by executives; monitoring of performance reporting, and oversight of compensation and retention-decisions for senior managers. Although the directors' pay may include some stock-based compensation, the overall package is not high-powered like managers'. Their incentives are comparatively low-powered, driven by personal integrity and reputational concerns (Kraakman et al 2009, p. 43). Directors may also be officers, although in recent years the roles have become increasingly specialized, with the typical corporate board containing only one officer, the CEO (Gordon 2007, p. 1476).

The position of *controlling shareholders* also deserves attention. We take "controlling" to mean having enough voting power to steer the outcome of a shareholder vote. While such persons do not enjoy formal day-to-day control rights, they do control the identity of the board, and through them, the executives. As a result they will enjoy informal veto rights over many decisions (Shleifer & Vishny 1997, pp. 754–755). They will be motivated by high-powered incentives stemming from their share ownership stake.[42] Although the law establishes various presumptive thresholds for "control", whether a particular firm has a controlling shareholder often turns on questions of fact.[43]

These categories of person between them face two different types of governance problem, which in turn track two different types of liability standard. On the one hand, *officers* with equity pay and *controlling shareholders* may face a conflict of interest as regards systemic externalities. Their personal financial

42 These incentives may be attenuated by "private benefits" derived from control of the firm, to the extent that they do not move in tandem with the stock price.

43 See e.g. Bank Holding Company Act, §§ 2 (A),(C); 3 (25% voting power of "any class of voting securities" gives control; owner of less than 5% presumptively does not have control), codified at 12 U.S.C. § 1841(a).

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interest lies in maximizing the stock price. Yet where systemic externalities are concerned, share price maximization is not in diversified shareholders' interests. Consequently risk appetite in systemic firms can be seen as a duty of loyalty problem, akin to other conflicts of interest between controllers and diversified shareholders.

On the other hand, *directors* do not face direct financial conflicts. Rather, they face more genteel pressures of camaraderie and community between themselves and officers, which may have a subtly corrosive effect on their ability to monitor and exert oversight. Moreover, where controlling shareholders are in place, or where executives have *de facto* control of the directorial nomination process, then the directors will be pre-selected as individuals willing to toe the line in accordance with the wishes of the firm's real controller. Even absent these handicaps, directors lack strong incentives to take adequate care in the oversight of the decisions of executives. Because directors' incentives are not direct financial ones, the obligation they face is best characterized as one of *due care*.[44]

7.2 Risk-Taking and the Duty of Loyalty

In corporations, conflicts of interest are acceptable on the part of those running the company provided that appropriate procedural and substantive safeguards are met. The key procedural safeguards are 2-fold: first, full disclosure about the conflicted transaction by the insiders and second, approval by the independent directors or an independent board committee, tasked with determining whether the proposed transaction serves the interests of the unaffiliated shareholders. The greater the conflict, the more onerous the job of the independents, and the more carefully the court will examine the process and the outcome.[45]

For activities that could engender systemic externalities, controllers may prefer more of the activity to be undertaken, or with less precaution, than diversified shareholders. Consequently decisions relating to such activities may deserve to be treated like other conflicts of interest. This should entail

44 This is reflected in the focus on direct financial interest in determining whether a director is "disinterested" for purposes of invoking the business judgment rule (Gordon 2007, pp. 1482–1484).

45 *Zapata Corp. v. Maldonado*, 430 A.2d 779 (Del. 1981) (special litigation committee reviewing derivative action); *Weinberger v. UOP,* 457 A.2d 701 (Del. 1983); *Kahn v. Lynch Communication Sys., Inc.,* 638 A.2d 1115 (1994) (parent-subsidiary mergers). Cf. *Kahn v. M&F Worldwide Corp.*, 88 A.3d 635 (Del. 2014) (procedural safeguards that achieve near-functional equivalence to arm's length bargaining may call for business judgment review even in parent-subsidiary merger). However, in cases where controlling shareholders are not on both sides, Delaware courts defer to independent directors' business judgment, see *Teachers' Retirement Sys. of La. v. Aidinoff*, 900 A.2d 654, 669-70 (Del. Ch. 2006).

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both full disclosure by the managers of the risks and genuine review by an independent risk committee of the board. Should risk-taking lead to a loss to the firm, then the court should be willing to consider the independence and diligence of the risk committee's review of the challenged strategy. The consequence of inadequate disclosure about the strategy or the committee's failure to conduct an adequate review should be a standard remedy for "unsanitized" conflicted transactions: disgorgement of gains made through the conflict. For management, this would encompass equity-based pay; for controlling shareholders, it would comprise dividends or capital gains, in each case to the extent their value was enhanced by the risk-taking strategy. The regime thereby creates a powerful incentive for managers (and controlling shareholders) to take risk management seriously. It also gives a deterrent incentive that is precisely correlated with the size of the conflict of interest.

7.3 Risk-Taking and Duties of Care

Turning now to directors: they will not themselves be responsible for the operational decisions that trigger excessive levels of risk. Rather, their role will be in high-level oversight of the firm's operations; appointing managers and setting incentive arrangements; review and approval of strategy. Consequently the relevant category of liability would most likely be for what has come to be known as "oversight". Here liability is imposed not for having made inappropriate decisions regarding risk-taking, but rather for having delegated these decisions to others and failed to oversee their decision-making. In the well-known *Caremark* decision, Chancellor Allen remarked that directors have a continuing duty to ensure that "monitoring systems are in place".[46]

However, the duty articulated in *Caremark* has been taken to apply only in a very limited way. It is framed in subjective terms: the board are under an obligation to make no more than a "good faith attempt" to ensure that a monitoring system is in place, and only face liability if they have "utterly failed" to implement oversight, or "consciously failed" to monitor activity.[47] Moreover, it has been understood solely in terms of the monitoring of activities that might lead to a breach of applicable statutory or regulatory standards,[48] and does not extend to oversight of the firm's business strategy.[49] In any event,

46 *In re Caremark Int'l Inc. Derivative Litig.*, 698 A.2d 959 (Del. Ch. 1996).

47 *Stone v. Ritter*, 911 A.2d 362, 370 (Del. Sup. 2006).

48 Although arguably Chancellor Allen originally envisaged a wider scope than this. See *Caremark*, *supra* note 40, at 969–970.

49 *In re Citigroup Inc. Shareholder Derivative Litig.*, 964 A.2d 106 (Del. Ch. 2009).

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state law attempts to articulate a more onerous liability standard would be thwarted by statutory provision for exculpation of directors from liability for breach of duty of care.[50]

Framing monitoring obligations as parasitic upon corporate regulatory obligations is in keeping with the standard account of how corporate externalities are controlled. If corporate regulatory obligations were set so as to internalize social costs, then tasking the board to monitor compliance would encourage activity that should increase the probability of compliance (Arlen & Kraakman 1997). And by cabining the board's particularized monitoring responsibility to the domain of regulatory compliance, the *Caremark* duty seeks to preserve the traditional business judgment rule. This framing assumes regulatory obligations are set appropriately to internalize social costs; and second, that the business judgment rule rests on a sound policy basis. Neither is valid where systemic risks are concerned.

Consequently, it is desirable for a duty to monitor to be applied in wider circumstances and to a higher standard.[51] The obligation could be framed as being to oversee systems to assess potential downside consequences of the firm's business strategies—that is, its "risks"—including operational and other risks to execution of those strategies within pre-determined risk-parameters, and to factor these into its decision making.[52] The scope should be independent of regulatory norms to which the firm might otherwise be subject. This tells boards that compliance with regulation is not necessarily enough to ensure freedom from potential liability. Such a stance is desirable if there may be regulatory slack. It reserves to the courts power to assess *ex post* whether or not risk-oversight systems were adequate, regardless of the level of regulatory compliance. To make such an exercise meaningful, it would need to be coupled with negligence-based liability for directors, because a knowledge-based standard would exonerate directors who kept their heads in the sand. Implementation would thus necessitate a Federal liability regime, or assurance that banks and other systemically important financial firms do not take advantage of exculpation provisions such as Delaware's section 102(b)(7).

Diverse matters could test whether the board brought appropriate risk management oversight to bear. Examples drawn from recent events would include

50 Del. Gen. Corp. L. § 102(b)(7).

51 In our view, the opinion in *Citigroup* (*supra* note 43) was a missed opportunity to do this.

52 The "enterprise risk management" literature sometimes distinguishes between the board's monitoring of the firm's "risk appetite" vs. "risk control systems," (Tarullo 2014), and otherwise subdivides the strategic vs. operational elements of risk management (Wilson 2013; Davies 2013).

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large-scale trading losses, improvident mergers and acquisition activity, funding strategies that expose the firm to excessive run-risk, victimization of the firm by customer fraud, and loose internal controls that permit risk-taking beyond agreed upon risk limits. Financial firms are in the business of risk-taking (Tarullo 2014). In bringing risk management oversight to bear, it is surely the board's responsibility to identify those risks which are of a magnitude and kind as to threaten the firm's stability. Engaging seriously in oversight of all these dimensions would also tend to challenge the notion that independent directors should not be employees of the firm (Armour, Gilson, & Gordon 2014). Risk oversight is likely to be a full-time job, but not one that would create a conflict of interest in its performance.

How should a court go about making an assessment as to whether the board has breached its fiduciary duties? Evidence as to industry practice would be a starting point, but compliance with industry norms should not guarantee that directors had met the required standard. All industry participants might suffer from similar conflicts, in which case industry practice will be deficient (Epstein 1992, pp. 25–28).[53] The question to which the court should address itself is the level of oversight precaution which would be thought desirable by diversified shareholders.

We ordinarily think in terms of breach of the duty of care generating a liability for loss. However, given that systemic losses cannot readily be quantified, setting (or capping) liability for duty of care by reference to directors' earnings—similar to what would be the case for duty of loyalty claims—has desirable properties.[54] It removes incentives to arbitrage role description that might otherwise exist, and closes off the possibility of contracting around potential liability by increasing pay. Moreover, it will in most cases strike a balance between the desire to enhance deterrence while avoiding strong disincentives to director service by the most qualified.[55]

53 In this regard, judicial hindsight bias (see *supra* text to note 21) becomes a virtue, rather than a vice, of such liability. Precisely because industry practice is likely to be deficient, what may have appeared to participants at the time to be "reasonable" is unlikely to be a sound guide as to the optimal level of care.

54 Delaware Courts have in some cases sanctioned a gain-based, rather than loss-based, remedy for breach of duty of care. See, e.g. *Cede v. Technicolor,* 663 A.2d 1156 (Del. 1995).

55 To avoid disincentive to service as a director of a systemically important financial institution, some may think it necessary to impose a limit on earnings "look-back", on the view that directors will not indefinitely retain earnings against a possible future accounting. For example, in the ALI's Principles of Corporate Governance, the reporters' initial suggestion was that directors face liability for breach of the duty care, but subject to a cap of three years' directors' fees. This suggestion was swept away by the complete exculpation permitted by Del. Gen. Corp. L. § 102(b)(7) and similar statutes but could well have a place here.

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It would also be necessary to restrict the extent to which firms may insure directors and officers against such liability.[56] The practical effect of making directors liable by reference to earnings could be achieved either by an uninsurable liability defined by reference to earnings, or an insurable liability that might exceed earnings with a mandatory excess defined by reference to earnings. We would not propose any change to the practice of companies to insuring or indemnify directors against the *costs* of litigation (as opposed to the amount of any damages)—in order to permit them to defend against nuisance suits.

7.4 Which Firms?

Our proposal would be appropriate for financial firms whose activities are *capable* of imposing systemic losses. The set of such firms could be defined by reference to regulatory designation—for example, a decision by the US Financial Stability Oversight Council that a financial firm is "systemically important", or the G-20's Financial Stability Board that a financial institution is "globally systemically important"—a so-called "G-SIFI" (listed in Financial Stability Board 2011, p. 3). Alternatively, the scope of the set of firms to which the duty applies could be left to judicial precedent. Among the directors' duties could be the determination whether the firm is "systemically important". Piggybacking on regulatory designation has the advantage of clarity, but suffers from greater propensity to be undermined by lobbying efforts against such designation or regulatory arbitrage, for example, holding balance sheet assets below fixed threshold amounts. Either approach would be workable, and would yield a significant improvement upon the *status quo*.

7.5 Deterrence

In order to induce appropriate deterrence, expected damages payable should in principle equal the expected social cost of activities imposing externalities (Shavell 1987).[57] In relation to systemic harms, some

56 The FDIC currently prohibits banks from providing D&O insurance that covers "Civil Money Penalties" that can be assessed for violation of banking laws and regulations. See 12 CFR § 359. Directors can apparently evade the force of this regulation by paying an allocated portion of the bank's D&O coverage that includes such liability or by obtaining a separate policy (Gerrish 2009). As condition for taking a controllers' position in the relevant set of financial firms, the parties should agree not to obtain such insurance.

57 Under a negligence liability formulation, the court pronounces whether the defendant's level of precaution was "reasonable", and damages are payable only if it was not. In order to induce an appropriate level of care, the court must set the "reasonable" level of care equal to the social optimum.

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considerations point to under-deterrence. Social losses from systemic externalities are likely to be so large that damages reflecting them would render any individual—or firm—bankrupt and therefore partially judgment-proof. To the extent that damages exceed the defendant's ability to pay, they yield no marginal deterrence. In other words, the expected damages actually payable $\bar{d}$ will be far less than optimal expected damages reflecting the full social loss, which we will term $\bar{d}^*$; that is, $\bar{d} \ll \bar{d}^*$. To get a feel for the size of the inequality, Bebchuk, Cohen, & Spamann (2010) report that the senior executives of Bear Stearns and Lehman, taking into account losses of stock in the failure of their firms, had made net withdrawals of cash and stock from their firms totaling $1bn during the eight years leading up to their firms' failure; the social losses we discussed in Section 2 were measured in trillions.

Other considerations, however, help to inflate the *effective* deterrence of such liability.[58] Put together, the countervailing considerations offset each other to some degree. First, the standard framework assumes risk neutrality. Individual directors and officers, however, are likely to be risk-averse, because the risk of liability is not diversifiable. Risk-averse defendants view the expected cost of damages as equal to $\bar{d}\ (1 + r)$, where r represents the level of risk aversion. This is precisely why the business judgment rule ordinarily shields risk-averse directors and officers from liability. Yet the boost to effective deterrence risk aversion introduces can be useful if the maximum liability that can be imposed is otherwise insufficient. The *effective* deterrent power of damages is thereby raised to $\bar{d}(1+r)$ (Kraakman 1984).

Second, individual directors and officers will not themselves bear the costs of precautionary actions to mitigate the liability risk; rather, they will be borne by the firm. If we assume an individual defendant bears some fraction $1/n$ of the costs of precaution p—whether because of their equity interest in the firm, or the necessary personal effort to implement such measures—then they will seek to minimize the sum of $(p+n\bar{d}(1+r))$, equivalent to the expected damages being boosted to $n\bar{d}(1+r)$. This will encourage directors to increase expenditure on risk management activities, one of the few indicators shown to have been associated with reduced losses during the financial crisis (Ellul & Yerramilli 2013).

We are not so sanguine as to conclude that the combination of these separate tendencies to under- and over-deterrence, respectively, will somehow yield a "Goldilocks" formula of perfect deterrence. What does seem likely, however, is that their combination will result in a net divergence from optimal deterrence

58 Considered alone, these other factors might be thought to point to over-deterrence.

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that is less than in the presence of either alone. That is:

$$(\bar{d}^* - n\bar{d}(1+r)) < (\bar{d}^* - \bar{d})$$

7.6 Which Plaintiffs?

The link between systemic firm bankruptcy and systemic harm creates a particular problem for liability proposals, because policymakers will be tempted to bail out systemically important firms so as to *avoid* bankruptcy. To the extent this happens, the probability of enforcement will be very small. An obvious implication is that liability for directors and officers should be built into "resolution mechanisms", the speeded-up versions of bankruptcy intended to require investors in systemically important firms to bear losses without triggering systemic harms. Indeed, the FDIC has power in bank receivership proceedings to pursue directors and officers for gross negligence,[59] and the Orderly Liquidation Authority resolution procedures of the Dodd-Frank Act follow the strategy endorsed in this article. These permit the imposition of liability on former senior executives or directors of failed systemically important financial institutions for negligence, with the quantum of recovery measured by reference to their compensation over the preceding two years.[60] However, these resolution mechanisms are untested in relation to systemically important firms. Notwithstanding anticipatory regulatory planning, which relies heavily on the efficacy of firms' pre-specified "resolution plans" and structural resolution approaches such as "single point of entry", the decision to put such a firm into receivership will be perceived as highly risky, even dangerous, depending on the circumstances (Armour 2014; Gordon & Ringe 2014). All parties, government and firms, may be looking for a bail-out, some way to avoid triggering either resolution or a bankruptcy.

Given the uncertainty over the implications of resolution, it is desirable to impose liability for breaches of the duties of care and loyalty discussed above, even where they do not result in the firm's failure and the follow-on systemic harms. The optimal number of failures of systemically important financial firms is zero and thus it makes sense to include within the strong deterrence

59 See Financial Institutions Reform, Recovery, and Enforcement Act ("FIRREA"), Pub. L. No.101-73, Title II, § 212(k), 103 Stat. 243 (1989) (codified at 12 U.S.C. § 1821(k) (1994)); Ramirez (1996). Cornerstone (2014) and Laursen (NERA) (2014) present detailed summaries of FDIC litigation against officers and directors of failed financial institutions in the post-2007 period.

60 See Dodd-Frank §§ 210(f), 210(s). The FDIC's implementing regulations make clear that the standard is simply "negligence", as opposed to "gross negligence": 12 CFR § 380.7.

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penumbra those duty breaches that are associated with harms of a magnitude and type that threaten the firm's stability.[61] In this regard, the overlap we identify between the interests of diversified shareholders and those of society can provide a solution. Failings in risk management will result in a distribution of outcomes, of which only the far right tail will involve systemic losses.[62] Yet such failings will in a much larger part of the distribution be associated with losses to the *firm*. Permitting the firm to sue controllers for such losses where they flow from breaches of risk management duties would greatly increase the likelihood that controllers would face liability. For example, the $6bn loss suffered by J.P. Morgan Chase in relation to the "London Whale" trades would, on this view, trigger liability if poor risk management were shown to be causally relevant (US Senate Permanent Subcommittee on Investigations 2013).[63] "The firm" in this context means the diversified shareholders, precisely the group whose interests are harmed by excessive risk-taking at systemic firms.[64] Our analysis suggests their interests are aligned with the interests of society in the case of systemic harms.

Another option would be to make the duty a regulatory one, enforced by an agency. As a general matter, the incentives of private plaintiffs to bring lawsuits are stronger than those of public enforcers, because the former get to keep the rewards from the litigation (Hay & Shleifer 1998). Agencies are, as we have emphasized, subject to the problems of influence by regulated firms.[65] And, as with the strictness of substantive regulation, the intensity of public enforcement may be expected to vary with the success or failure of the financial system depending on the degree of political pressure exerted on agencies (Gerding 2006, pp. 433–437).

61 This could at one level be understood either as a pragmatic restriction on the circumstances giving rise to liability—that is, to rule out strike suits for small amounts (and more paradoxical claims that by making profits for shareholders the controllers have exposed them to systemic risk). At a more basic level, however, it signifies the range of circumstances under which there is sufficient overlap between the interests of diversified shareholders and those of society for it to be appropriate for the former to act as plaintiffs.

62 That is, breaches of these duties impose *probabilistic* harms. Whether the breach results in the firm's failure may be determined by underlying market conditions or by the actions of rivals and other market participants.

63 The question of the officers' and directors' negligence in the risk-taking and risk oversight that produced the loss would presumably be contested in litigation.

64 Ordinarily, diversified shareholders would prefer not to have managers face such liability, precisely in order to encourage risk-taking. Yet where systemic harms may result from the conduct in question, the analysis changes, as we have shown.

65 *Supra*, Section 3.3.

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Here the UK provides a cautionary case-study. Senior executives and directors of UK financial firms are subject to regulatory obligations to take reasonable care in managing the business of their firms.[66] However, notwithstanding considerable evidence of mismanagement in large UK banks (Financial Services Authority (UK) 2011, Part 3; UK Parliamentary Committee on Banking Standards 2013), only one individual executive—Peter Cummings, former head of Corporate Banking at HBOS plc—was ever the subject of regulatory enforcement proceedings. He was fined $750,000 (Financial Services Authority (UK) 2012), which compares modestly with compensation of approximately $3.7m in the 2006–2007 financial year alone (HBOS plc 2009, p. 65). In explaining why action was not taken against other executives, the UK's Financial Services Authority set out a list of perceived legal obstacles as grounds for not bringing suit (Financial Services Authority (UK) 2011, Part 3). It is hard to imagine class action lawyers being so reticent about coming forward.[67]

7.7 Federal or State Law?

Fiduciary duty liability rules would rely on judges to adjudicate claims against directors and officers of systemic firms. The most expert judges in corporate law matters in the USA are widely thought to be those constituting the bench of Delaware's Court of Chancery (Kahan 2006; Cain & Davidoff 2012).[68] But does Delaware—or any other state—have any incentive to introduce liability of this kind?

The forces of regulatory competition in corporate law, as traditionally understood, seem to push against the introduction of controller liability for systemic Delaware firms. In order to attract incorporations, states are said to have

66 Financial Services and Markets Act (UK) 2000, s 64; UK Prudential Regulatory Authority / Financial Conduct Authority Handbook, Statements of Principle and Code of Practice for Approved Persons (APER), APER 2.1B3, Statement of Principle 2 ("An approved person must act with due skill, care and diligence in carrying out his accountable functions"). UK company directors are also subject to a negligence-based duty of care, with no business judgment rule protection (Companies Act 2006 (UK), § 174). However, difficulties with derivative and class actions mean that there is effectively no private enforcement of this duty (Armour et al. 2009).

67 As a corollary, if the probability of enforcement is very low, then a threat of liability calibrated purely in financial terms may not itself be enough to deter misconduct (UK Parliamentary Commission on Banking Standards 2013, pp. 512–516). In light of this, the UK has recently legislated for criminal penalties, encompassing up to seven years in jail, against directors of banks who are found to have been guilty of gross negligence: Financial Services (Banking Reform) Act 2013 (UK), § 36. Germany recently adopted criminal sanctions for risk management failures for banking and insurance executives, but only where the executives "contravene[d] a specific order issued by the Federal Financial Supervisory Authority (BaFin), the German banking and insurance regulator, to remedy insufficient risk-management mechanisms" (Richter 2013, pp. 434–435).

68 Other courts also have expertise in commercial matters—the courts of New York, for example, are another well-known choice (Eisenberg & Miller 2009).

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incentives to modify their corporate laws in accordance with the interests of those making charter-selection choices. A well-known body of literature debates whether these choices, and the corporate laws that respond to them, are made primarily in the interests of managers or of shareholders (e.g. Bebchuk 1992; Romano 1993). Yet on either view, systemically important firms might be expected to incorporate away from jurisdictions adopting a controller liability rule. Managers obviously would prefer a regime without liability. Unfortunately, so too might shareholders who focus solely on the share price, which would go down if the firm internalized systemic harms.[69]

This implies that a federal law liability regime, which could not be evaded by reincorporation, might be necessary to implement our proposal. Such a regime might be introduced through Federal Reserve rulemaking, or might require legislation.[70] The point is not to internalize adjudication within the Federal Reserve but to assure that these fiduciary duty cases get through to courts who are expert at evaluating director behavior, under an appropriate liability standard. Rulemaking or legislation of this variety would be fiercely resisted by industry lobbying. Nevertheless, the popular salience of controller accountability is particularly intense, such that a measure of this sort might nevertheless be capable of being passed (see Tarullo 2014). Such measures would likely be supported by diversified shareholders. Although they face coordination costs as regards intervention in any individual company's affairs, the same does not hold as regards political intervention, which may be expected to yield benefits across their entire portfolio (Black 1992).

Yet the mere possibility of federal intervention could itself spur Delaware to action. In recent years, the most powerful driver of innovation in Delaware corporate law has not been inter-state competition, but rather the threat of federal pre-emption (Roe 2003; 2005). If Delaware law permits controllers to ramp up systemic risk in a way that harms diversified shareholders, then the latter may be expected to seek recourse in Washington. And controllers of systemic firms would calculate that reincorporating away from Delaware

69 See *supra*, Section 4.2.

70 For example, the Federal Reserve could require firms designated as systemically important under Title I of Dodd-Frank, and other bank-holding companies above specified asset thresholds, to incorporate in a jurisdiction that permits charter provisions that impose officer and director liability and then, by regulation, describe the required charter terms; or perhaps simply require that the charters of such firms omit any opt-out from monetary liability for duty breach as might be otherwise permitted by state law. The point is to make clear that a robust set of fiduciary standards, including negligence liability in appropriate cases, applies to the officers and directors of systemically significant financial institutions, and leave fact-finding and calibration to the courts. Such a course is likely to be preferable to the Fed's trying to create a private cause of action directly.

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under such circumstances would likely provoke Federal intervention; from their perspective, a trip from the frying pan into the fire.

8. CONCLUSION

The normal framework within which we think about corporate law and governance urges those running a corporation to maximize the value of shareholders' claims, as measured by the stock price. The SVM norm encourages managers to make decisions as diversified shareholders would, were these shareholders not beset by collective action problems. But if the firm's owners don't bear the full social costs of their activities, then the SVM norm will encourage managers to act in a way that increases social costs. The standard response to weaknesses in internalization mechanisms is to argue for an improvement of these mechanisms, not a weakening of the SVM norm itself.

We have argued that the recent financial crisis calls this accommodation into question as regards financial firms whose activities are systemically important. We have made three claims. First, the extent to which traditional private law mechanisms—in particular, the law of tort—fail to internalize systemic harms has been under-appreciated. In particular, the economic nature of the losses occasioned by systemic harms, and the causal link between financial-firm failure and the infliction of these harms, mean that the usual technique of imposing tort liability on the firm cannot gain traction on the problem. This causal link is unique to financial firms, which renders the internalization of their systemic risks particularly weak under current arrangements. In this regard, financial firms are different.

Second, we have argued that the SVM norm creates incentives for firms systematically to undermine the efficacy of regulatory internalization.

Our third claim is that, where the harms are *systemic*, even the firm's diversified shareholders, its majoritarian owners, would rather that the managers did not impose externalities. Risks of systemic harms—that is, affecting the economy at large—increase the undiversifiable portion of investors' risk. In relation to projects with such potential consequences, diversified investors should not want managers to single-mindedly maximize share prices. As a result, a system in which "shareholder value" is interpreted as share price maximization is paradoxically *not* aligning managers' interests with those of dispersed shareholders, at least as regards systemic risks.

It is therefore appropriate to relax the SVM norm in the case of systemically important financial firms. In addition to regulatory changes to compensation practices in such firms, we make the case for the complementary imposition of liability for directors and officers. Such liability, appropriately structured,

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makes agents behave in a more risk-averse fashion, which the conventional wisdom underpinning the business judgment rule suggests is contrary to the interests of diversified shareholders. Our analysis reveals that when a firm's actions affect *systemic* risk, the conventional wisdom is reversed: diversified shareholders want managers to take *less* risk. This undercuts the case for business judgment protection. We have argued that director and officer liability has a potentially useful role to play in circumscribing the limits of shareholder value. Such liability would be owed to the firm, and could be triggered by a shareholder action following the occurrence of significant losses.

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