VICARIOUS LIABILITY FOR FRAUD ON SECURITIES MARKETS: THEORY AND EVIDENCE

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This article examines the efficiency of vicarious liability for Fraud on the Market. Standard analysis of vicarious liability argues that this rule is efficient. Professors Arlen and Carney argue, however, that in Fraud on the Market cases vicarious liability does not serve the goals of optimal deterrence or optimal risk spreading, nor does it promote optimal loss spreading.

Breaking with traditional vicarious liability literature, the authors examine monitoring costs in detail, and posit a model that predicts that Fraud on the Market generally occurs when agents fear themselves to be in their last period of employment. An empirical study of Fraud on the Market cases demonstrates that these frauds generally are the product of last period agency costs.

The article also shows who pays for securities fraud under a rule of vicarious liability. The empirical study shows that an issuer's potential liability for the fraud of its agents is enormous, representing a substantial share of the equity of the firm. Imposing liability on the firm results in a large wealth transfer from one group of innocent investors to another similar group. Because this transfer neither deters fraud nor spreads losses, it performs no useful social function. The authors conclude that a rule of agent liability, supplemented with criminal enforcement, is preferable.

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I. INTRODUCTION

United States securities laws nearly always hold a corporation liable for fraudulent statements regarding its securities made to the market by its agents in the course of their employment. Although this use of enterprise liability\(^1\) for "Fraud on the Market"\(^2\) subjects corporations to the risk of extraordinary liability, few American commentators have questioned it.\(^3\) Most American scholars, it appears, assume that the economic arguments made in favor of enterprise liability in the torts context are equally valid when applied to Fraud on the Market cases. These arguments are that: (1) enterprise liability better serves the goal of optimal deterrence than does agent liability;\(^4\) (2) enterprise liability optimally spreads the risk of liability between the firm and its agents;\(^5\) and (3) enterprise liability optimally allocates the losses to the firm rather than to the victims.\(^6\)

Although these arguments may be valid in the context of conventional torts cases, they cannot be assumed to apply to Fraud on the Market cases. Fraud on the Market differs from standard torts in several important respects. In the standard torts case, the goal is not to prevent all harms, but rather is to induce the actor to take the optimal level of care. By contrast, Fraud on the Market is optimally deterred when agents are induced to refrain from fraud altogether;\(^7\) consequently, overdeterrence is not an issue.\(^8\) In the standard tort case, the wrongful agent generally injures only third parties. By contrast, in Fraud on the Market cases the wrongful agent generally injures the principal as well.

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1. The term enterprise liability is used throughout this article to refer to corporate liability for acts of its agents. The term, therefore, encompasses both direct corporate liability for acts of senior management deemed to be those of the corporation and vicarious corporate liability for acts of agents. 

2. Fraud on the Market cases are securities fraud actions filed under § 10(b) of the Securities Exchange Act of 1934, 15 U.S.C. § 78j(b) (1988), for fraudulent statements regarding a firm’s securities made to the market by agents of the firm, generally in circumstances where the firm neither purchased nor sold the affected securities. See infra text accompanying notes 23-35.

3. Scholars’ failure to question this rule is particularly remarkable because it contrasts with the rule in Germany (and perhaps elsewhere in Europe), under which a corporation is shielded from liability for its agents’ fraudulent statements about the value of its securities.


5. REINIER H. KRAAKMAN, CORPORATE LIABILITY STRATEGIES AND THE COSTS OF LEGAL CONTROLS, 93 YALE L.J. 857 (1984); SYKES II, supra note 4; see Easterbrook & Fischel, supra note 4, at 640-41.


7. See infra text accompanying notes 69-73 and note 73.

8. This statement assumes low error costs in enforcing antifraud rules. We assume that fraud is readily differentiated from negligent nondisclosure or misstatement by the requirement of scienter—a knowledge of falsehood or a reckless disregard for the truth. See ERNST & ERNST v. HOCHFELDER, 425 U.S. 185, reh’g denied, 425 U.S. 986 (1976); see also infra notes 72 and 129.
because shareholders of the firm are among those defrauded. Moreover, conventional analysis of enterprise liability for torts usually assumes that the principal and agents have an ongoing relationship. By contrast, Fraud on the Market usually occurs when agents fear themselves to be in their last period of employment.\textsuperscript{9} Thus, the firm's ability to sanction wrongful agents is considerably less than assumed by conventional analysis.

Finally, conventional analysis of enterprise liability oversimplifies the principal-agent problem, viewing the principal as a single owner-manager of a firm who hires agents to perform various tasks on his behalf.\textsuperscript{10} The principal also decides what measures the firm will take to deter wrongful acts by the agents. As applied to Fraud on the Market cases (as well as to many torts) this analysis is incomplete. Fraud on the Market cases involve publicly held firms in which the owners of the firm, the "principal," often are a group of widely dispersed shareholders. These shareholders face collective action problems because they are too numerous to manage the firm and to monitor its agents themselves. They therefore hire agents (directors) to manage it for them. These directors, not the firm's owners, decide how the firm will deter wrongful acts by its agents.\textsuperscript{11} Under enterprise liability these directors may not impose optimal sanctions on the firm's agents. This possibility introduces an additional level of agency costs that conventional analysis of enterprise liability ignores. This additional level of agency costs is particularly important in Fraud on the Market cases, because Fraud on the Market is generally committed by some of the very directors and senior officers hired to manage the firm and to deter fraud.

Accordingly, we cannot assume that it is efficient to hold corporations liable for Fraud on the Market simply because prior economic analysis of enterprise liability suggests that this rule is efficient in other tort contexts. We must reexamine the arguments made in favor of enterprise liability for standard torts to determine whether the rule is efficient when applied to Fraud on the Market cases. To do this, however, we must know something about who commits Fraud on the Market and why.

In this article we examine the economic arguments for enterprise liability for Fraud on the Market cases and present the first empirical analysis of these cases. Fraud on the Market involves false or misleading statements made to financial markets involving actively traded securities, in circumstances where market prices are expected to reflect the misinformation.\textsuperscript{12} We focus on this type of securities fraud because it illust-

\textsuperscript{9} See infra text accompanying notes 53-58 and part IV.
\textsuperscript{10} E.g., Easterbrook & Fischel, supra note 4 (recognizing that this is a simplifying assumption); Kornhauser, supra note 4; Sykes II, supra note 4; Sykes I, supra note 4.
\textsuperscript{11} We employ an economic definition of agency and thus treat both officers and directors as agents. By contrast, under a legal definition of agency, some states hold that directors are not agents because directors control the corporation, rather than being subject to its control.
\textsuperscript{12} The Supreme Court has approved the application of the "Fraud on the Market" doctrine
trates most starkly the agency cost problems present in many securities fraud cases. Moreover, the unusually large potential liability in these cases warrants their being given special consideration. Finally, it raises serious questions about the proper interpretation of the control person provisions of the federal securities laws.

The analysis in this article proceeds as follows. In part II we present the law on enterprise liability for Fraud on the Market. In part III we employ economic theory to examine who commits Fraud on the Market and why. We predict that Fraud on the Market generally will be committed by officers and directors seeking to conceal from the market, and from the firm’s shareholders, that the firm is ailing in an attempt to save their jobs and their investments in the firm. In other words, Fraud on the Market is a product of agency costs between owners and managers in circumstances where the managers fear themselves to be in their last period of employment. The types of fraud at issue in Texas Gulf Sulphur and Basic v. Levinson, which involved concealing good news, are, therefore, the exceptions, not the rule, according to our hypothesis.

Using our last period hypothesis, we then examine whether the standard economic arguments in favor of enterprise liability apply to Fraud on the Market cases. We find that enterprise liability for Fraud on the Market is not better able to deter Fraud on the Market than is agent liability. In fact, agent liability probably achieves superior deterrence. We also show that administrative costs are probably higher under enterprise liability. In addition, we show that enterprise liability for Fraud on the Market cannot be justified as promoting optimal risk spreading. Moreover, we show that enterprise liability results in large wealth transfers from one group of innocent investors to another that are inconsistent with the goal of optimal loss spreading. These wealth transfers are subjected to a substantial deduction for litigation costs, a deadweight loss that only benefits attorneys. Finally, we show that the goal of “just compensation” cannot justify enterprise liability because the burden of the liability falls primarily on innocent shareholders. In order to achieve effective deterrence, sanctions must be imposed on the agents who face the temptation to commit fraud. Because of the agent insolvency problem,

to create a presumption of reliance on the part of all investors who trade after a false statement to the public markets. Basic, Inc. v. Levinson, 485 U.S. 224, 241-47 (1988); see also infra text accompanying notes 23-35.

13. Fraud on the Market involves publicly held corporations, which rarely are owned predominantly by management. Where management owns a majority of the stock in a corporation, ownership and control are effectively unified, and the agency cost problems we consider here do not appear.


15. 485 U.S. 224.

16. See infra Table 1 (less than nine percent of the Fraud on the Market cases involved attempts to conceal good news). In both Texas Gulf Sulphur and Basic, the extent of the defendants' obligations to disclose were unclear prior to these decisions. No such problems exist in the garden variety types of fraud studied here. See infra text accompanying notes 150-53.
we conclude that agent liability supplemented with criminal enforcement is probably the superior rule.

In part IV we present an empirical analysis of Fraud on the Market cases to determine whether the evidence supports our hypothesis that Fraud on the Market is the product of last period agency costs. The evidence reveals that Fraud on the Market typically is committed by corporate officers, apparently without consent of the board of directors or major shareholders. In addition, we find that fraud generally results from attempts by officers and directors to present an artificially favorable financial picture under circumstances which are consistent with our last period hypothesis. Finally, we examine the size of the potential damage claims under a rule of enterprise liability. We discover that on average the magnitude of potential claims in Fraud on the Market class actions is so great that, in many cases, the use of enterprise liability could wipe out nearly all shareholder equity. Under enterprise liability a substantial portion of this loss is borne by innocent shareholders. A comparison of the relative size of the average potential plaintiff class (measured in number of shares held by this class) with the firm’s outstanding shares at the time liability is imposed demonstrates that, generally, enterprise liability does not spread losses.

II. ENTERPRISE LIABILITY FOR FRAUD ON THE MARKET

A. Enterprise Liability Defined

Both the Securities Act of 1933 and the Securities Exchange Act of 1934 provide for control person liability.17 Under these statutes a person in control of another is liable for the other’s fraud unless he acted in good faith. Because employers are always “in control” of employees acting within the scope of their employment, control person liability for wrongful statements of corporate officers would seem to be available in almost all Fraud on the Market cases.18 But the employer is not liable if it acted in good faith. The employer, therefore, will not be liable if it neither knew of the agent’s wrongful act nor had reasonable ground to know of it after taking reasonable precautions under the circumstances.19

On its face it would appear that, except for employers actively involved in the securities industry (e.g., broker-dealers), most innocent issuers should be able to meet this good faith standard where a disloyal

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17. SEC v. Geon Indus., 531 F.2d 39 (2d Cir. 1976); SEC v. Management Dynamics, 515 F.2d 801 (2d Cir. 1975). Some claim that controlling person liability is narrower than we suggest. This is not relevant to our analysis, however, because respondeat superior applies to most securities fraud actions. See infra text accompanying note 22.

18. THOMAS HAZEN, THE LAW OF SECURITIES REGULATION § 10.14, at 460 (2d ed. 1990) (suggesting that control person liability requires “not only that the defendant be a control person of the primary violator but also that the defendant was a culpable participant in the illegal activity”).
agent committed fraud to conceal his own failures. The effectiveness of this defense, however, is illusory for several reasons. First, Section 11 of the Securities Act of 1933 imposes absolute liability on an issuer for false statements in a registration statement; no defenses are available. Second, notwithstanding that "controlling person" liability is governed by statute, most courts of appeal now hold that the common law doctrine of respondeat superior applies to securities fraud actions. Accordingly, enterprises can be held liable, regardless of good faith, if an agent's fraudulent statements occurred within the scope of his employment. Finally, many decisions simply treat the corporation itself as the person uttering the fraudulent statements and hold it liable for false statements made in its name, such as those in required filings with the SEC. We treat all of these methods for holding a corporation liable as examples of "enterprise liability."

B. A Description of Fraud on the Market Cases

It is well established under Rule 10b-5 that material false statements about securities are actionable in suits brought by injured buyers or sellers (as the case may be). To prevail in such an action the plaintiff must prove that the statement was false or misleading, that it was made with scienter (either knowledge of the falsity of the statement or a reckless disregard for the truth), that it involved a material fact, and that the plaintiff relied on it to his detriment when he bought or sold the affected

20. Courts seem to have imposed a presumption that broker-dealers are on notice of the greater temptations facing their employees, thereby imposing on broker-dealers a higher duty of care to monitor for fraud in order to invoke the good faith defense. Cf. Zweig v. Hearst Corp., 521 F.2d 1129 (9th Cir.), cert. denied, 423 U.S. 1025 (1975).


24. Ernst & Ernst v. Hochfelder, 425 U.S. 185 (1976). Although the Supreme Court has not ruled on whether the scienter requirement can be met by showing recklessness, every court of appeals that has considered the issue has ruled that recklessness will suffice.
security. In most instances, these requirements do not vary substantially from the requirements of common law fraud.

Fraud on the Market cases generally involve false or misleading statements about a firm made to the market by corporate officials. These statements may take the form of a fraudulent registration statement for a new issue, some other filing with the SEC, public statements by officers, or a press release. If credible, the fraudulent statement will affect the market price of a company’s shares exactly as would a true statement. In efficient markets a credible fraudulent favorable statement will either cause the price to rise or retard a price decline. Until revelation of truthful information about the matter, the stock’s price will reflect the fraudulent “news” about the issuer. This means that all persons trading in the stock between the announcement of the fraudulent information and the disclosure of the truth will trade at prices affected by the fraud. Whether they actually read or heard the fraudulent statement does not matter; the price they pay or receive will reflect the fraudulent information.

Defendants in Fraud on the Market cases generally did not engage in securities transactions, but instead were alleged to be legally responsible for the false statements. Section 10(b)’s prohibition of fraudulent statements “in connection with” the purchase or sale of securities applies to nearly all statements about companies with traded securities and certainly to any statements made in a sufficiently public manner to affect traders’ beliefs about the value of a security.

Fraud on the Market cases usually proceed as class action suits brought by those who traded to their detriment during the period of the


26. A false negative statement will either retard a price increase or cause the price to fall. False negative statements rarely occur, however. Our analysis of Fraud on the Market cases revealed that less than nine percent of the cases involved allegations of false negative signals about issuers, and these can generally be explained by conflicts of interest faced by managers and control shareholders in leveraged buyouts and takeouts of minority shareholders. See infra Table 1. We found one inexplicable case alleging a shift of earnings from a present to a future period, and one case alleging an attempt to depress a stock price so that an insider could purchase stock cheaply.

27. In all likelihood the truth will leak to some traders prior to the public revelation of the truth. Thus on the date of the fraud the stock price will fully reflect the false value of the information, but at some later date part of this value will be dissipated by informed traders. For purposes of simplification we ignore this phenomenon in this article. The problem is considered at length in Bradford Cornell & R. Gregory Morgan, Using Finance Theory to Measure Damages in Fraud on the Market Cases, 37 UCLA L. REV. 883, 889-97 (1990).

28. A handful of Fraud on the Market cases do involve insider trading by agents, however. See infra Table 2 (only 3.3% of frauds that concealed bad news were committed to enable insiders to sell their securities).

In order to prevail in such an action, plaintiff class members must prove that they relied to their detriment on the fraudulent statements. Proof of reliance is an individual matter for each trader, and could have presented an insurmountable difficulty for a class action on behalf of all traders. Courts eliminated this barrier for class plaintiffs, however, by creating a presumption of reliance in Fraud on the Market cases. This presumption involves an economically correct assumption that in efficient markets stock prices are affected promptly by announcements of material information, true or false, about an issuer. It then assumes that individual investors act as if the stock’s price reflects all publicly available information, and that all stock prices are “fair” with respect to each other, in the sense that, as a result of active trading in the shares, stock prices reflect unbiased estimates of similar returns for similar risks. The Supreme Court described the presumption as meaning that investors are entitled to rely on the integrity of the market price under these circumstances. As a practical matter, this means that the plaintiff class does not need to prove that each class member read or heard the false statement before trading in the stock, but only that the trade took place after the false information was announced and before the truth was revealed.

C. Incidence of Liability

The presumption of reliance in Fraud on the Market cases has facilitated class actions on behalf of thousands of investors involving trading

30. This is not to say that individual investors never bring Fraud on the Market actions. A few do. The vast majority, however, are brought as class actions.

31. Basic, Inc. v. Levinson, 485 U.S. 224, 243 (1988) (citing Ernst & Ernst v. Hochfelder, 425 U.S. 185, 206 (1976)); see also Lipton v. Documation, Inc., 734 F.2d 740, 742 (11th Cir. 1984), cert. denied, 469 U.S. 1132 (1985). This problem does not exist under § 11 of the Securities Act of 1933 because reliance is only required if the issuer has made generally available an earnings statement covering at least 12 months beginning after the effective date of the registration statement under § 11(a)(5).


34. The plurality opinion in Basic cited empirical studies suggesting that “the market price of shares traded on well-developed markets reflects all publicly available information, and, hence, any material misrepresentations.” 485 U.S. at 246. It stated that “[t]he market is acting as the unpaid agent of the investor, informing him that, given all the information available to it, the value of the stock is worth the market price.” 485 U.S. at 244 (quoting In re LTV Sec. Litig., 68 F.R.D. 134, 143 (N.D. Tex. 1980)).

35. Id. at 247.
in millions of shares. The dollar amounts in dispute are correspondingly large. Under traditional tort theories, plaintiffs are entitled to their "out-of-pocket" damages—for example, the difference between the price the victim paid and the value received in a purchase transaction.\footnote{See generally HAZEN, supra note 19, § 13.7, at 714-15; Robert B. Thompson, The Measure of Recovery Under Rule 10b-5: A Restitution Alternative to Tort Damages, 37 VAND. L. REV. 349, 356-57 (1984). Both authors note that other measures of damages have been employed by some courts, but these differences are not critical to our analysis.} In Fraud on the Market cases, liability runs to all those who traded at a price affected by the fraud, regardless of the defendant's trading activity.

Plaintiffs in these cases generally utilize enterprise liability to sue the corporation; they sue the agents accused of the fraud significantly less frequently.\footnote{See infra note 171 and infra text accompanying notes 171-74.} A Fraud on the Market action against a corporation threatens it with extraordinary liability, with some disturbing consequences.\footnote{See infra part IV(D).} Revelation of the fraud, and of the corporation's prospective liability, has an immediate impact on the price of the issuing corporation's stock: the price adjusts to reflect both the truth previously concealed by the fraud and the corporation's expected liability for the fraud.\footnote{See generally Daniel R. Fischel & Michael Bradley, The Role of Liability Rules and the Derivative Suit in Corporate Law: A Theoretical and Empirical Analysis, 71 CORNELL L. REV. 261 (1986) (examining the impact on stock prices of announcements of derivative suits).} Those who are shareholders at the time the fraud is revealed bear the cost of this price adjustment.\footnote{See Easterbrook & Fischel, supra note 4, at 638-39.} In most cases, these shareholders are no more culpable than are the plaintiffs.\footnote{Judge Friendly alluded to the problem in his concurring opinion in Texas Gulf Sulphur, when he stated that "[t]he consequences of holding that negligence . . . may impose civil liability on the corporation are frightening . . . . [A]ny remedy imposed against the issuer itself is indirectly imposed on all holders of the common stock, usually the most important segment of the total category of investors intended to be protected." SEC v. Texas Gulf Sulphur Co., 401 F.2d 833, 866-67 (2d Cir. 1968) (Friendly, J., concurring) (quoting Milton Cohen, Truth in Securities Revisited, 79 HARV. L. REV. 1340, 1370 (1967)). Similarly, the importance of the stockholders' identity in derivative actions was recognized in Perlman v. Feldmann, 219 F.2d 173 (2d Cir.), cert. denied, 349 U.S. 952 (1955), where a control premium paid by a buyer of a control block was recovered from the seller for the benefit of the "corporation." The court recognized that because the buyer was the largest shareholder, awarding the recovery to the corporation would reward the buyer and reduce its acquisition cost, rather than provide a reward to the public shareholders. Id. at 178. In Basic, Justice White, dissenting in part, complained about the length of the class period, the size of the potential class, and concluded: "And who will pay the judgments won in such actions? I suspect that all too often the majority's rule will "lead to large judgments, payable in the last analysis by innocent investors, for the benefit of speculators and their lawyers." Cf. SEC v. Texas Gulf Sulphur Co., 401 F.2d 833, 867 (2d Cir. 1968) (en banc) (Friendly, J., concurring). . . . Basic, Inc. v. Levinson, 485 U.S. 224, 262 (1988).} Enterprise liability, therefore, imposes most of the cost of fraud on

\footnote{Enterprise liability imposes costs on a shareholder who benefits from the fraud only when...}
shareholders who were not responsible for, and received no benefit, from the fraud. Moreover, some of the shareholders who bear the cost of liability may themselves be victims of the fraud if they were dissuaded from selling their shares by false positive news about the company. Yet, under the securities laws these shareholders do not have standing to sue. Accordingly, the effect of enterprise liability is to make these shareholders bear some of the costs of the fraud to others, in addition to bearing the full cost of the fraud to themselves. Finally, in some cases it would be possible for most of the plaintiff class to be shareholders of the issuer at the time of suit. In these cases, payment of damages to the injured class is virtually equivalent to a dividend or a partial liquidation. The result in any case is no more than a wealth transfer from one group of diversified investors to another, with a substantial deduction for litigation costs, a result no investor would prefer ex ante. The only persons receiving a net benefit from enterprise liability under these circumstances would be the attorneys for both parties.

III. The Efficiency of Enterprise Liability

Although the preceding analysis of the incidence of enterprise liability for Fraud on the Market suggests that the rule is unjust, its use nevertheless might be desirable were the rule efficient. Conventional analysis of enterprise liability in the torts context presents three economic justifications for holding enterprises liable instead of relying on only agent liability: (1) enterprise liability is better able to deter fraud by agents than is agent liability; (2) enterprise liability efficiently spreads the risk of liability between the firm and its agents; and (3) enterprise liability efficiently allocates the risk of loss to the firm rather than to the victims. The issue presented is whether any of these arguments justify the use of enterprise liability in Fraud on the Market cases. To address this issue we must first determine who commits Fraud on the Market and why.

he sells a portion of his shares, retaining the rest until the fraud is revealed. Even then his liability may not equal the benefit he receives.

44. Easterbrook & Fischel, supra note 4, at 639.
46. Because the efficiency of enterprise liability is our primary concern, the present analysis ignores the unjust enrichment resulting from random wealth transfers among investors occasioned by vicarious liability for Fraud on the Market. See infra part III(B)(4).
47. See, e.g., Shavell, supra note 4; Kornhauser, supra note 4; Sykes II, supra note 4; Sykes I, supra note 4.
48. Easterbrook & Fischel, supra note 4, at 640-41; Kraakman, supra note 5; Sykes II, supra note 4.
49. Musewicz, supra note 6.
A. Expected Characteristics of Fraud on the Market

Our hypothesis is that managers of ailing firms commit Fraud on the Market in an attempt to save their jobs, by using the period of the fraud to turn the firm around. Our reasons for reaching this conclusion are as follows.

We expect that securities fraud is a tort (and a crime) that is peculiarly susceptible to ultimate detection when committed by agents of publicly held corporations. The credibility of false positive statements about a company's sales or profits, for example, can be sustained only so long as a firm remains financially viable and suffers no business reverses that will reveal the fraud. Consequently, fraud generally will remain undetected only if either later events make earlier false statements come true, or the firm's subsequent operating results are so positive that no one appears to have been harmed by an earlier false positive statement, and thus there are no visible damages. Such fortuitous occurrences are unlikely. To constitute actionable fraud the misstatement must be “material,” involving facts sufficiently important to affect the market price of the firm's stock. Only a very fortuitous subsequent turn of events would be able to conceal such large lies. Fraud is thus, at best, an extremely risky strategy. Further, because Fraud on the Market involves false statements made in a public way by company officials to a market populated by large, well-informed investors, ultimate detection of individual wrongdoers should be relatively certain.

We expect that corporate agents commit Fraud on the Market in order to serve their own interests, and not simply to benefit the corporation's existing shareholders. We do not believe that shareholders want agents to commit fraud. Corporations relying on public markets for sources of future financing expect to be repeat players in securities markets; consequently, they would find the long-term costs of Fraud on the Market far higher than any short-term payoffs. Furthermore, uninformed shareholders acting on false information are as likely to be injured as they are to benefit from such frauds. Fraud on the Market is therefore likely to be the act of the firm's agents, generally undertaken without actual authority of the board of directors or the shareholders in the legal sense. Fraud is, in short, an aspect of agency costs. Accordingly, we expect that Fraud on the Market by publicly traded companies usually does not result from a formal corporate decision, either at the

50. Moreover, even shareholders of firms that may fail (firms in a "last period") are not likely to want their agents to commit fraud because each shareholder runs the risk of being a victim of a policy that encourages fraud; lulled by the fraud, the shareholder may retain stock that might otherwise have sold at a higher price. See infra text accompanying notes 59-62. Furthermore, diversified shareholders will prefer no fraud in securities markets, because they are equally likely to be victims or beneficiaries.

We also predict that firm agents commit Fraud on the Market only under unusual circumstances. For most agents, the expected costs of committing Fraud on the Market are very high and the expected benefits are low. Agents benefit from Fraud on the Market only to the extent that they benefit from higher firm share prices. A manager of a healthy firm generally will not benefit substantially from fraud even if he owns shares in the firm, because the passage of time is likely to reveal that the manager's fraudulent positive statements were false, at which point the stock price will fall, and the manager's paper gains will vanish. By contrast, the costs of committing fraud are extremely high—with sanctions ranging from termination of employment and civil liability to potential criminal liability. In Fraud on the Market cases, the threat of termination of employment is a particularly effective sanction. Fraudulent statements usually are issued by, or at the direction of, senior managers, who would forfeit considerable firm specific human capital if they were fired. Additionally, some of these agents may be earning quasi rents, representing deferred compensation from earlier periods (such as stock options and other plans that reward long-term performance) that also would be lost were the agent fired. Under ordinary conditions, therefore, managers have strong incentives to behave honestly when dealing with securities markets.

Because of these risks an agent generally will not commit Fraud on the Market so long as his future employment seems assured. When the firm is ailing, however, an agent's expectations of future employment no longer serve as a constraint on behavior. In this situation a manager

52. We recognize that corporate policy generally is determined by agents of the corporation, not by the shareholders. Accordingly, the conclusion that agents commit fraud to serve their own interests, not those of shareholders, does not eliminate the possibility that fraud might result from a board decision.

53. Of course, the manager might benefit more directly by selling his stock before the fraud is revealed. This is not "pure" Fraud on the Market, however, but rather Fraud on the Market and insider trading. We define "pure" Fraud on the Market cases as those where a Fraud on the Market action is the only available remedy. In this article we only consider pure Fraud on the Market cases because a separate sanction exists for insider trading, and also most Fraud on the Market cases involve pure Fraud on the Market. See infra Table 2 (only three frauds intended to conceal bad news about the firm involved insider trading).


55. But cf. supra note 53.

56. See generally Lynn M. LoPucki & William C. Whitford, Bargaining Over Equity's Share in the Bankruptcy of Large, Publicly Held Companies, 139 U. PA. L. REV. 125 (1990) (managers usually lose their jobs in bankruptcy reorganizations); Susan Rose-Ackerman, Risk Taking and Ruin: Bankruptcy and Investment Choice, 20 J. LEGAL STUD. 277 (1991) (managers risk losing their jobs if a firm goes bankrupt and will take actions that do not necessarily maximize expected firm profits in order to avoid this possibility).
may view securities fraud as a positive net present value project. Aside from criminal liability, in a last period the expected costs of fraud (civil liability\textsuperscript{57} and job loss) are minimal, while the expected benefits of fraud may have increased. As remote as the prospects for success may seem, these benefits include possible preservation of employment as well as the value of the manager’s assets related to the firm’s stock, if by committing fraud he is able to buy sufficient time to turn the ailing firm around.\textsuperscript{58}

It might appear that, contrary to the prior discussion, managers’ incentives to save the firm align their interests with those of shareholders. Generally, however, this is not the case. First, managers may fear themselves to be in a last period when the firm itself is not in a last period—for example, when a previously healthy firm is ailing as a result of bad management decisions, but can expect an eventual, although not immediate, recovery if policies (and managers) are changed. In these circumstances, managers may perceive a personal benefit from committing fraud when shareholders would not. Additionally, even in a last period situation for the firm, committing a successful (undetected) Fraud on the Market to avoid bankruptcy usually benefits a manager more than the average shareholder. Managers have most of their wealth tied to their corporate employer in the form of quasi rents,\textsuperscript{59} which they lose if the firm goes bankrupt. Shareholders, by contrast, are fully diversified and have not invested a substantial portion of their wealth in any one firm.\textsuperscript{60} To avoid bankruptcy, managers are willing to act inconsistently with the shareholders’ goal of maximizing expected firm profits.\textsuperscript{61} Finally, diversified shareholders are as likely to be victims of fraud as they are to be its beneficiaries. Accordingly, shareholders usually cannot anticipate any net benefit from allowing managers to commit Fraud on the Market in a last period situation and as a general rule prefer securities markets that are free from fraud.\textsuperscript{62}

\textsuperscript{57} The primary assets that a manager risks in the event of civil liability are assets derived from his wage income and his stock-related investments in the firm, yet both are also at risk should the firm fail. See supra note 56. Accordingly, a manager facing a last period of employment is not likely to view civil liability as as great a threat as will a manager of a healthy firm.

\textsuperscript{58} Cf. Kraakman, supra note 5, at 866 n.25 (Under enterprise liability, “managers who face imminent replacement—due, for example, to poor performance—may take ‘irrational’ legal risks on behalf of the firm because they have nothing to lose by doing so.”). If the firm’s financial situation does improve, the manager probably need not fear being held liable for securities fraud: private plaintiffs have little, if any, claim to damages if the firm’s share price goes up (or falls very little) after revelation of the fraud and therefore are unlikely to sue. Similarly, in this situation, there will be little to cause government enforcement officials to investigate whether there was fraud.

\textsuperscript{59} See supra note 54 and accompanying text.

\textsuperscript{60} Furthermore, shareholders in firms that undergo bankruptcy reorganization often retain some of their initial investment should the firm become successful after emerging from reorganization. See Jonathan R. Macey, Agency Theory and the Criminal Liability of Organizations, 71 B.U. L. REV. 315, 326-27 (1991).

\textsuperscript{61} See generally Rose-Ackerman, supra note 56.

\textsuperscript{62} This is not to say that shareholders never benefit from Fraud on the Market. Because creditors bear most of the costs of failure, under some circumstances shareholders may prefer that managers undertake fraud to buy time for a recovery, regardless of the low probability of success. This possibility does not undermine our agency cost argument, however, because shareholders of
B. Enterprise Liability in a Last Period Context

Given our last period hypothesis, we now examine whether using enterprise liability to govern Fraud on the Market cases is efficient.63

We assume in our model that under enterprise liability the corporation pays the entire judgment, even though generally both enterprise and agent liability are available simultaneously.64 In other words, we view the question of whether enterprise liability is efficient as equivalent to whether substituting exclusive enterprise liability for agent liability is efficient.65 This view of the issue is consistent with both the prior literature on enterprise liability,66 and our findings in part IV that (1) under our present system of joint enterprise and agent liability plaintiffs invariably sue corporate issuers,67 and (2) that because Fraud on the Market cases almost always settle out of court, agents who are sued may avail themselves of indemnification agreements with the issuer and liability insurance coverage.68

I. Efficient Deterrence

The central aim of the securities laws is to deter fraud.69 Therefore, publicly held firms are in no better position to encourage such fraud than they are to prevent it. Moreover, it is impossible to encourage just "beneficial" types of Fraud on the Market without also encouraging unwanted last period frauds. Finally, to the extent that shareholders diversify by purchasing corporate bonds, these frauds are at best a zero sum game for them. But see the argument of Professors Macey and Miller, infra note 73, that shareholders would prefer fraud if it is necessary to preserve the value of certain deals for the firm.

63. In this part we assume that frauds generally involve attempts either to conceal bad news about a firm or attempts to overinflate good news, generally in a possible last period context. In theory, of course, frauds also can involve attempts to conceal good news about a firm. For the reasons we have previously stated, we expect that there will be few such cases: agents generally benefit from a more valuable firm and a higher stock price. This hypothesis is supported by the evidence in infra part IV.

64. Both § 15 of the Securities Act of 1933, 15 U.S.C. § 77o (1988), and § 20(a) of the Securities Exchange Act of 1934, id. § 78t(a), expressly provide for joint and several liability for control persons.

65. We recognize, of course, that under enterprise liability the corporation will be able to shift some of this cost onto the agents.

66. See Kornhauser, supra note 4, at 1347, 1357 (arguing that enterprise and agent liability should be treated as alternatives because enterprises rarely exercise their rights to indemnification); Renier Kraakman, The Economic Functions of Corporate Liability, in Corporate Governance and Directors' Liabilities 178, 179-80 (Klaus Hopf & Gunther Teubner eds., 1985); Sykes II, supra note 4; see also Shavell, supra note 4, at 172-75. By contrast, in the criminal context, enterprise and agent liability should be treated as simultaneous, not alternative, sanctions. See JENNIFER H. ARLEN, OPTIMUM CRIMINAL SANCTIONS FOR CORPORATIONS (Emory Univ. Law & Economics Working Paper No. 36, 1992). This is because—in contrast with civil liability where full satisfaction of a judgment against one defendant precludes a plaintiff from seeking recovery from the other defendants—the magnitude of the criminal sanction imposed on the agent does not affect the magnitude of the criminal sanction that can be imposed on the enterprise. The government can, and does, therefore, seek to impose full sanctions on both the enterprise and its agents.

67. See infra Table 6. Issuers are only omitted as defendants where protected from suit by bankruptcy or Chapter 11 reorganization proceedings.

68. See infra notes 85 and 182.

69. Easterbrook & Fischel, supra note 4, at 613; see Frank H. Easterbrook & Daniel R. Fischel, Mandatory Disclosure and the Protection of Investors, 70 Va. L. Rev. 669, 693-94 (1984). The claim that the securities laws are intended primarily to deter fraud, not to compensate all injured
the desirability of a rule imposing enterprise liability for Fraud on the Market depends primarily on whether it deters fraud better than agent liability. Efficient deterrence depends on the nature of the harmful activity. When the harmful activity produces social benefits, the efficient level of the harmful activity is often positive. By contrast, when the harm-producing activity yields no social benefits, efficient deterrence is achieved when agents refrain from the activity altogether, assuming no serious risk of court error.\footnote{FRAUD ON THE MARKET} 70

Fraud on the Market produces substantial social costs\footnote{FRAUD ON THE MARKET} and yields no social benefit. Agents can avoid committing fraud at zero cost by simply refraining from intentional material misstatements.\footnote{FRAUD ON THE MARKET} Nor does

victims, finds support in the fact that Congress did not provide an express cause of action for violations of § 10(b). In addition, the Supreme Court in Blue Chip Stamps restricted standing to actual purchasers and sellers, despite the fact that, as the Court recognized, this would leave many who were injured by the fraud without a remedy. Blue Chip Stamps v. Manor Drug Stores, 421 U.S. 723, 754 (1975). In fact, numerous judicial statements repeat that the securities laws were not intended to provide a scheme of investor's insurance. Basic, Inc. v. Levinson, 485 U.S. 224, 252 (1988) (White, J., dissenting); Freeman v. Laventhal & Horwath, 915 F.2d 193, 198 (6th Cir. 1990); Grigsby v. CMI Corp., 765 F.2d 1369, 1376 (9th Cir. 1985); T.J. Raney & Sons, Inc. v. Fort Cobb, Okla. Fuel Auth., 717 F.2d 1330, 1333 (10th Cir. 1983); List v. Fashion Park, Inc., 340 F.2d 457, 463 (2d Cir.), cert. denied, 382 U.S. 811 (1965). Moreover, as we later observe, even if just compensation is a goal of the securities laws, it is not served by vicarious liability for Fraud on the Market because this rule transfers wealth from one innocent group of investors to another. See infra text accompanying note 135, 185-99.

\footnote{FRAUD ON THE MARKET} 70. Easterbrook & Fischel, supra note 4, at 621-22; see Fred S. McChesney, Desperately Shunning Science?, 71 B.U. L. REV. 281 (1991); Fred S. McChesney, Boxed In: Economists and the Social Value of Crime, - INT'L REV. L. & ECON. (forthcoming 1993) [hereinafter Boxed In]; George J. Stigler, The Optimum Enforcement of Laws, 78 J. POL. ECON. 526, 527 (1970); Gordon Tullock, The Welfare Costs of Tariffs, Monopolies and Theft, 5 W. ECON. J. 224, 228 (1967). This statement is subject to the qualification that where enforcement is costly, the second-best optimal amount of fraud (and other wrongs) may be greater than zero. See Michael R. Darby & Edi Karni, Free Competition and the Optimal Amount of Fraud, 16 J.L. & ECON. 67, 83-86 (1973); Stigler, supra. Costly enforcement, however, does not undermine our conclusion that optimal damages exceed the present value of the agent's net compensation from the firm. Within certain limits, the optimal solution to the problem of costly enforcement is to reduce substantially the probability of detection and dramatically increase the sanction above the optimal sanction when enforcement is costly. In order to economize on enforcement costs. See Louis Kaplow, The Optimal Probability and Magnitude of Fines for Acts that Definitely are Undesirable, 12 INT'L REV. L. & ECON. 3, 5 (1992); Nicholas Stern, On the Economic Theory of Policy Towards Crime, in ECONOMIC MODELS OF CRIMINAL BEHAVIOR 123-52 (John M. Heineke ed., 1978); see also A. Mitchell Polinsky & Steven Shavell, The Optimal Tradeoff Between the Probability and Magnitude of Fines, 69 AMER. ECON. REV. 880 (1979) (examining optimal fines for crimes that produce social benefits).

\footnote{FRAUD ON THE MARKET} 71. The social costs of securities fraud include the costs to shareholders of information verification and the costs to society of the misallocation of resources between equity and other investments resulting from the discount for fraud. Subsequent litigation, to the extent that it fails to deter fraud, imposes its own deadweight losses. Finally, in the case of public offerings, fraud also results in a misallocation of resources between firms.

\footnote{FRAUD ON THE MARKET} 72. Securities fraud requires a showing of scienter. Accordingly, liability is not based on the negligent failure to discover information, but rather requires that the defendants knew (or recklessly disregarded) the truth. Moreover, fraud requires a misstatement (or an omission that makes another statement misleading). A mere error in judgment about whether to disclose additional facts needed to make a statement not misleading is not sufficient. Ernst & Ernst v. Hochfelder, 425 U.S. 185 (1976).

We acknowledge, however, the argument that managers may be overdeterred from engaging in corporate speech by a liability system designed to eliminate fraud. The solution to this problem is to strengthen the scienter requirement, not to reduce liability for fraud. Moreover, overdeterrence is
society benefit in any other way from a deliberate attempt to induce investors to allocate capital to a firm to which they would not allocate it otherwise.\textsuperscript{73} Fraud on the Market therefore should be deterred completely.

This presents the issue: Which rule, enterprise liability or agent liability, is better able to deter fraud? The Coase Theorem implies that if transaction costs are negligible, the assignment of liability between the enterprise and the agent should not affect the efficiency of the outcome (here, the amount of fraud).\textsuperscript{74} To illustrate, assume, solely for purposes of this example, that agents and firms are risk neutral. In this situation, under agent liability the agent will bear directly the cost of all liability, which will induce the agent to refrain from engaging in fraud. Under enterprise liability the firm will be directly liable to plaintiffs, but will transfer the entire burden of liability to the responsible agent, once again providing the agent with the incentive to refrain from fraud.\textsuperscript{75} The argu-

\textsuperscript{73} See infra Table 1 (91.3\% of the cases for which we have information on the nature of the fraud involved attempts to conceal bad news). Fraud on the Market imposes costs on society by distorting capital markets, see supra note 71, without creating any mitigating social benefits. It is no more costly to reveal the truth than to reveal a lie, and therefore the fraud does not result in any cost savings. In fact, a deliberate lie is probably more costly for society than is the truth because the lying agents will expend resources to hide the truth; furthermore, the possibility of fraud creates incentives for shareholders and others to investigate both valid and invalid claims to determine their validity. See Easterbrook & Fischel, supra note 4, at 622.

Nevertheless, Professors Macey and Miller argue that fraud may be necessary to protect some transactions, such as mergers, that might be thwarted by premature disclosure. Jonathan R. Macey & Geoffrey P. Miller, Good Finance, Bad Economics: An Analysis of the Fraud-on-the-Market Theory, 42 STAN. L. REV. 1059 (1990). These authors assume, incorrectly, that the only way to avoid disclosure of merger negotiations is to lie. Justice Blackmun rejected that argument in his plurality opinion in Basic: "To be actionable, of course, a statement must also be misleading. Silence, absent a duty to disclose, is not misleading under Rule 10b-5." Basic, 485 U.S. at 239 n.17. Since his pronouncement, many firms have officially adopted "no comment" policies that require corporate officials to announce that not commenting on rumors about firm activity is corporate policy. This removes any possible signal from the "no comment" response, if "no comment" is used consistently by the firm. Moreover, fraud cannot be justified as an attempt to reduce information costs because here, as in the other cases, those committing the fraud invariably incurred the investigative costs necessary to obtain the beneficial information and also incurred disclosure costs in committing and concealing the fraud. Our differences with Macey and Miller notwithstanding, we acknowledge the ongoing debate on whether fraud should be permitted in some circumstances. See, e.g., Ian Ayres, Back to Basics: Regulating How Corporations Speak to the Market, 77 VA. L. REV. 945 (1991); Marcel Kahan, Games, Lies, and Securities Fraud, 67 N.Y.U. L. REV. (forthcoming 1992). The outcome of this debate does not affect the conclusions of this article, however. Our argument regarding the relative efficiency of enterprise and agent liability does not depend on our conclusion that fraud should be deterred absolutely.

\textsuperscript{74} See Kornhauser, supra note 4, at 1347-48; Sykes II, supra note 4, at 1239-41 (citing Ronald H. Coase, The Problem of Social Cost, 3 J.L. & ECON. 1 (1960)). This conclusion holds even when the enterprise is only able to condition the agent's wage on whether the wrong occurred, and not on how much care the agent took to avoid it. Kornhauser, supra note 4, at 1358.

\textsuperscript{75} In a perfect world in which agents and firms are risk averse, enterprise liability and agent liability also are equally effective at inducing optimal risk spreading.
ment for enterprise liability, therefore, focuses on various real-world imperfections that are thought to make enterprise liability the superior rule.

a. Judgment Proof Agents

Probably the most important argument in favor of enterprise liability is that agent liability will not deter fraud efficiently if damage awards exceed the responsible agent's wealth, because judgment proof agents do not bear the full cost of the sanction and thus will not avoid all fraud.\footnote{See Sykes I, supra note 4, at 168 (arguing that the law of vicarious liability exists primarily to deal with the problem of judgment proof agents).} The problem of judgment proof agents is a very real concern in Fraud on the Market cases. To deter fraud completely, the damage award must remove all the gains to the agent from committing fraud. Therefore, the damage award imposed on the agent must equal the agent's expected gain from the fraud divided by the probability that the agent will be found liable.\footnote{Robert Cooter, Prices and Sanctions, 84 Colum. L. Rev. 1523 (1985); David D. Haddock, Fred McChesney & Menahem Spiegel, An Ordinary Economic Rationale for Extraordinary Legal Sanctions, 78 Cal. L. Rev. 1 (1990); see Jennifer H. Arlen, Why the Commission's Proposal is not Good Economics, 3 Fed. Sent. Rep. 138 (1990); McChesney, Boxed In, supra note 70; see also Easterbrook & Fischel, supra note 4, at 622.} We have suggested that relatively senior members of management typically commit Fraud on the Market in order to protect their positions. Accordingly, the optimal damage award equals the net present value of the agent's expected compensation, including deferred compensation from stock and stock benefits (net of the compensation he will earn in his alternative employment), divided by the probability that he will be found liable. It is, in other words, a function of the expected net present value to the agent of being employed by this firm (including stock and stock-related profits).\footnote{In those few cases where agents commit fraud in order to benefit directly from trading on inside information, see supra note 53, damage awards should include an amount equal to the benefit to the insiders of these trades divided by the probability that the agent will be found liable for the fraud.} We expect that agents apprehended for fraud usually will be judgment proof, because the firm's value (and thus the agent's wealth and ability to satisfy the optimal damage award) declines dramatically when the fraud is revealed.\footnote{Moreover, agents apprehended for fraud also may lose their jobs, and consequently a substantial portion of their capital (human and financial).}

The likelihood of judgment proof agents implies that agent liability will not deter fraud completely, but it does not demonstrate that enterprise liability is the superior rule. Enterprise liability is a superior solution to the judgment proof problem only if: (1) the principal can impose greater ex post sanctions on its agents than can the courts; (2) the principal is better able to apprehend guilty agents than are private plaintiffs; or (3) the principal is better able to deter fraud ex ante. We consider each of these possibilities in turn.
b. Ex Post Monetary Sanctions

Scholars analyzing vicarious liability for standard torts and crimes argue that judgment proof agents are less of a concern under enterprise liability than under agent liability because the firm can impose greater sanctions on its agents than can the courts. Specifically, these scholars argue that firms can solve the agent insolvency problem by paying those managers in a position to commit fraud a wage sufficiently in excess of the “market wage” that the cost to a manager of the wage reduction that occurs if he is caught committing fraud equals the optimum damage award.\footnote{80}

Whatever may be the merits of this argument as applied to standard torts and crimes,\footnote{82} it does not hold in Fraud on the Market cases. Because the optimum damage award for Fraud on the Market is a multiple of the agent’s expected net compensation from being employed by the firm,\footnote{83} any increase in an agent’s wage results in an equivalent increase in the optimum damage award, leaving the judgment proof status of the agent unchanged. In the Fraud on the Market context, therefore, the firm is in no better position to sanction the responsible agents than are shareholder-victims. Although under enterprise liability the firm can affect a responsible agent’s future income stream by firing him and also affect his wealth by suing for indemnification, under agent liability shareholder-victims can have the same impact on the agent’s wealth, as well as on his future income stream, by obtaining a judgment against him.\footnote{84}

Of course, the presence of indemnification agreements and director

\footnote{80}{A “market wage” is the wage that the manager normally would earn in the market given his contribution to the firm (i.e., given the marginal product of his labor). An “above-market wage” is any wage in excess of this amount.}

\footnote{81}{See Gary S. Becker & George J. Stigler, Law Enforcement, Malfeasance, and Compensation of Enforcers, 3 J. LEGAL STUD. 1, 6 (1974); see also Kornhauser, supra note 4, at 1362-66.}

\footnote{82}{There is a problem with this argument even as applied to standard torts and crimes: paying managers above market wages is itself inefficient because it distorts the labor market by inducing agents to flock to the jobs that pay these wages, thereby creating an excess supply of workers for these jobs. See Becker & Stigler, supra note 81, at 9; B. Curtis Eaton & William White, Agent Compensation and the Limits of Bonding, 20 ECON. INQUIRY 330, 331 (1982). This excess supply of workers would force firms (and thus society) to employ nonmarket factors to select between workers. \textit{Id.} Moreover, this labor market problem cannot be solved by requiring employees to bid for these lucrative jobs. Cf. Becker & Stigler, supra note 81. Firms usually need their managers to have specialized skills, and often firm-specific human capital. It is likely that the supply of qualified agents with sufficient wealth to pay the optimum “entry fee” on these jobs is less than the demand, in which case the bidding system will not eliminate the economic rents from these jobs, and the labor market will remain distorted. Eaton & White, supra. Moreover, agents may not be willing to pay such fees if they fear that they may be fired even though they have not committed fraud, thus losing the entry fee without obtaining the expected financial benefit from the job. \textit{Id.} at 341-42.}

\footnote{83}{See supra text accompanying note 78.}

\footnote{84}{Both corporate employers and shareholders can affect an agent’s future income stream by suing for damages on Fraud on the Market because an agent probably cannot obtain a discharge in bankruptcy for this debt. There is no discharge for a debt incurred by fraud while acting in a fiduciary capacity. 11 U.S.C. § 523(a)(4) (1988). Whether this rule extends to liability for Fraud on the Market, however, is not established. Moreover, even under agent liability, revelation of the fraud often will result in the firm being sent into bankruptcy proceedings, see infra text accompanying note 166, in which case the wrongful agents will lose their jobs, as well as their deferred compensation
and officer (D&O) liability insurance may diminish the deterrent effect of monetary sanctions. This problem applies equally to agent liability and enterprise liability, however. Moreover, for reasons discussed below, D&O insurance well may strengthen the case for agent liability.

Accordingly, one cannot justify resort to enterprise liability for Fraud on the Market by citing firms’ superior ability to impose monetary sanctions on agents ex post. In fact, the deterrent effect of the available monetary sanctions under agent liability may exceed the effect of enterprise liability. If, as appears likely, agents are stigmatized more by civil judgments than they are by sanctions imposed privately by firms, agent liability may exert a greater deterrent force on agents than will enterprise liability. Moreover, the judgment proof problem can be eliminated completely by supplementing civil agent liability with nonmonetary criminal sanctions.

c. Are Firms Superior Enforcers?

Even if firms are unable to impose greater monetary sanctions on agents than the courts, enterprise liability still may be the superior rule when agents are judgment proof, if firms are better situated than the courts and private plaintiffs to identify and sanction wrongdoers once fraud has occurred. If the probability that the firm will impose a sanc-

and the value of their stock-related assets. See supra note 56. In addition, some firms will fire managers found liable for Fraud on the Market in order to preserve the firm’s reputation.

85. Top corporate officers likely to be charged with fraud usually have indemnification agreements or liability insurance coverage that covers liability for torts. Janet C. Alexander, Do the Merits Matter? A Study of Settlements in Securities Class Actions, 43 Stan. L. Rev. 497, 550-57 (1991) (94% of public companies have directors and officers liability insurance (citing Wyatt Co., 1989 DIRECTORS AND OFFICERS LIABILITY SURVEY 42 (1989)); Kraakman, supra note 5. Typical liability policies and indemnification provisions exclude losses based on a director or officer’s liability for having acted dishonestly. Joseph Hinsey, The New Lloyd’s Policy Form for Directors and Officers Liability Insurance—An Analysis, 33 Bus. Law. 161, 1970-71 (1978); see also PRACTICING LAW INST., DIRECTORS’ AND OFFICERS’ LIABILITY 640-55 (1986); Clifford Holderness, Liability Insurers as Corporate Monitors, 10 Int’l Rev. L. & Econ. 115, 117 (1990); Dale A. Oesterle, Limits on a Corporation’s Protection of Its Directors and Officers from Personal Liability, 1983 Wis. L. Rev. 513, 549-50. Managers, however, often settle these cases, partly in order to avoid themselves of indemnification provisions and director and officer insurance.

86. See infra text accompanying notes 102-07.

87. Although the reputational cost to managers of civil judgments has not been measured, John Lott has found that white collar criminals face substantially higher collateral penalties (in the form of lost licenses and the loss of legitimate income after returning to the work force) than their poorer counterparts. John R. Lott, Jr., The Effect of Conviction on the Legitimate Income of Criminals, 34 Econ. Letters 381, 381-85 (1990); see John R. Lott, Jr., An Attempt At Measuring the Total Monetary Penalty From Drug Convictions: The Importance of Individual Reputation, 21 J. Legal Stud. 159 (1992).

Similarly, a successful action by investors against an agent may increase the chances that the SEC will proceed against the agent with an administrative or injunctive proceeding. Being subject to administrative or injunctive orders with respect to securities fraud may result in the agent being barred from utilizing certain exemptions under the securities laws, see, e.g., 17 C.F.R. §§ 230.262(b), 505(b)(iii), and from serving as an investment advisor, see 15 U.S.C. § 80b-3(e) (1988).

88. See Kornhauser, supra note 4, at 1369-70.

89. See generally Steven Shavell, Criminal Law and the Optimal Use of Nonmonetary Sanctions as a Deterrent, 85 Colum. L. Rev. 1232 (1985).
tion on a fraudulent agent exceeds the probability that the agent will be found liable for damages in an action by victims, then the optimal sanction under enterprise liability\(^{90}\) (benefit of fraud/probability of sanction) is lower than the optimal damage award under agent liability (benefit of fraud/probability of liability). Because fewer agents will be judgment proof under the lower sanction required by a rule of enterprise liability, proponents argue that this rule will deter more agents from committing fraud.\(^{91}\)

This claim as to the superiority of enterprise liability contains two separate arguments: (1) that firms are better able than plaintiffs and courts to identify the agents who committed the fraud; and (2) that firms are at least as likely as private plaintiffs to sanction responsible agents once discovered. Both of these claims fail in the context of Fraud on the Market cases.

Standard torts cases often involve multiple, and intersecting, wrongful failures to act. Thus, concluding that firms are in a superior position to determine which agents are responsible for the tort is reasonable.\(^{92}\) By contrast, Fraud on the Market cases involve affirmative wrongful public acts that frequently are in writing and attributed to signatories or a named spokesperson, so the identity of the wrongdoer is readily ascertainable by plaintiffs, as well as by the enterprise.\(^{93}\) Plaintiffs can determine which agents are responsible for the fraud by examining the firm’s records to determine which agents must approve SEC filings and press releases and the lines of command leading to these documents. Indeed, SEC filings must be signed in compliance with regulations, and press releases frequently are attributed to a particular individual. Although the ostensible attribution of such documents well may fail to identify the ultimate wrongdoer, it provides the victims the same starting point for investigation that it gives the firm’s board of directors. Accordingly, there is little reason to believe that firms are better able than plaintiffs to determine which agents are responsible for the fraud.

There is a second problem with the argument that firms are in a superior position to sanction wrongdoers. Plaintiffs are more likely to proceed against a wrongful agent under agent liability than are firms under enterprise liability. In a perfect Coasean world of zero transaction

\(^{90}\) By “optimal sanction under enterprise liability” we mean the amount of liability that the enterprise must shift to the agent (for example, in the form of lower wages) in order to deter fraud optimally.

\(^{91}\) This is because under enterprise liability fewer agents will be judgment proof.

\(^{92}\) See Kornhauser, supra note 4, at 1370. For example, when an accident could have been avoided had any one of a number of agents acted differently, the firm will often be in a better position than the victim to determine which agent should have acted otherwise, and thus which agent is responsible for the harm.

\(^{93}\) In this respect Fraud on the Market differs from most other cases of corporate crime, where some argue that the responsibility for the crime is so diffused that it is difficult to determine which individuals were actually responsible for the action. Christopher D. Stone, Where the Law Ends 58-59 (1975).
costs, firms pass liability for securities fraud on to the responsible agents. Securities laws, however, preclude firms from doing this: the SEC and some courts have taken the position that it is against public policy for one codefendant to seek indemnification from another where both have been held liable in a securities fraud action. 94 Enterprises thus may be barred from seeking indemnification from agents in cases where wrongful knowledge is sufficiently widespread among directors or responsible officers that it is imputed to the enterprise. Moreover, under enterprise liability a firm's board of directors may hesitant to impose sanctions on a wrongful agent while litigation is pending for fear that to do so would amount to a corporate admission that the corporation itself was liable for the fraud. Under these circumstances a prudent board well might defer action against an employee until after corporate liability is determined or the matter settled, if not forego the opportunity altogether. 95

Finally, agency cost problems may cause a publicly held firm to refrain from sanctioning wrongful agents. A substantial portion of Fraud on the Market cases involve alleged frauds committed by senior management, often Chief Executive Officers (CEOs). The decision whether the firm should sanction these agents generally is made by the board of directors, not the shareholders. Although shareholders may want to sanction the responsible agents, the board may be reluctant to do so for a variety of reasons, in addition to the disinclination to admit corporate liability mentioned above. 96 For example, only the board can weigh the costs to the firm resulting from the fraud against the advantages of retaining a manager. Moreover, some observers suggest that structural bias in favor of colleagues may influence many board members to go easy on top managers. 97 The problem is exacerbated when a majority of the directors are either insiders of the firm or outside directors who owe their positions on the board to the senior managers implicated in the fraud. 98 Inside directors also may be inclined to go easy on the obvious wrongdoer in ex-

94. Globus v. Law Research Serv., 418 F.2d 1276 (2d Cir. 1969), cert. denied, 397 U.S. 913 (1970). The SEC's hostile policy toward indemnification is expressed in Regulation S-K, Items 702, 510 and 512. Besides requiring full disclosure of indemnification arrangements, Item 512(i) provides that the SEC will not accelerate the effective date of a registration statement (a critical step in most public offerings) unless the registrant undertakes to submit to a court a determination of whether indemnification is against public policy. Should acceleration not be sought, the registration statement must nevertheless include a disclosure that the registrant has been informed that "in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is therefore unenforceable." Regulation S-K, Item 510.

95. The agent may benefit substantially from this period of delay because during this period he will continue to collect his salary and can cash in on his stock options.

96. Conventional analysis of enterprise liability generally has ignored this additional level of agency costs.


98. Should the firm become insolvent, the new board of directors may fire the guilty manager. Yet this sanction has no particular deterrent effect because the manager no doubt would be fired in any event should the firm become insolvent. See LoPucki & Whitford, supra note 56; Rose-Ackerman, supra note 56. Also, firms held liable for securities fraud face the SEC's public policy objections when seeking indemnification. See supra note 94 and accompanying text.
change for his not implicating them. So long as the board follows
proper procedures, any decision it makes not to proceed against individual
officers will be insulated by the Business Judgment Rule, and collective action problems generally will preclude shareholders from effectively
pressuring the board to sanction wrongful agents.

By contrast, under agent liability victims have every reason to proceed against solvent wrongful agents. The senior managers of publicly
held firms who commit Fraud on the Market usually are wealthy and
may have sufficient assets to make a suit worthwhile (at least to the plaintiffs' lawyers)—although they probably will not have sufficient assets to satisfy the full optimum judgment. The presence of D&O insurance
also increases the likelihood that managers will be able to satisfy the
judgment. Because most Fraud on the Market cases settle, managers
may be able to avail themselves of this insurance coverage.

In fact, D&O insurance provides an additional argument for agent
liability. Agent liability for Fraud on the Market provides insurance
companies with an incentive to monitor managers to deter fraud.
Although we question the efficacy of any ex ante monitoring, to the
extent that such monitoring is possible, insurance companies are in a better position to do so than are shareholders or firm managers: an insurance company does not face the collective action problems plaguing shareholders and does not suffer from the agency cost problems associated with managers' efforts to monitor each other. Moreover, agent liability coupled with D&O insurance increases the likelihood that wrongful managers will be sanctioned. Under D&O insurance policies, managers are not covered if they acted dishonestly or committed willful violations of the law. Accordingly, under agent liability insurance companies will investigate to determine whether the agent indeed committed a fraud, even if the case settles. Moreover, this investigation is likely to have an additional deterrent effect: should the wrongful officer seek employment with another firm, the insurance company may be reluctant to insure him.

99. See Christopher D. Stone, The Place of Enterprise Liability in the Control of Corporate
Conduct, 90 YALE L.J. 1, 30 (1980).
100. John Coffee, Corporate Crime and Punishment: A Non-Chicago View of the Economics of
Criminal Sanctions, 17 AM. CRIM. L. REV. 419, 469 (1980) (available empirical evidence does not
support claim that firms subject to criminal fines discipline responsible employees). Notwithstanding
agency costs, some firms hoping to be repeat players in financial markets may fire wrongful agents in
order to protect their reputations. This pressure on firms to fire wrongful agents is market driven,
however, and thus should operate with equal force under enterprise liability and agent liability.

101. See supra text accompanying notes 76-79.
102. See Holderness, supra note 85.
103. See infra text accompanying notes 116-20.
104. See supra text accompanying notes 96-100; see infra text accompanying notes 116-20.
105. See supra note 85.
106. See Holderness, supra note 85, at 121-22.
107. See id. at 122-23. Moreover, other insurance companies may learn of the agent's wrongful
conduct because an insurance company is less likely to suppress information revealed during an
investigation than is the firm. Id. at 123.
Because of limitations on D&O insurance coverage, however, many agents will be judgment proof and thus fewer Fraud on the Market actions will be brought under agent liability than under enterprise liability.\textsuperscript{108} This, in and of itself, is not an argument against agent liability. The reduction in lawsuits should not impair the deterrent effect of the securities laws, because firms generally are unable or unwilling to sanction wrongful agents where plaintiffs proceed and prevail under enterprise liability.\textsuperscript{109} Nor does enterprise liability lead to effective firm monitoring of agents.\textsuperscript{110} Accordingly, because enterprise liability has virtually no additional deterrent effect, any reduction in lawsuits associated with agent liability hardly reduces the deterrent effect of the securities laws. In fact, a reduction in lawsuits well may argue in favor of agent liability. Given the enormous litigation costs associated with Fraud on the Market cases, and the difficulty of using enterprise liability to deter these last period frauds, society well may be better off trading the marginal increase in frauds associated with fewer lawsuits for the tremendous decrease in socially wasteful litigation costs resulting from a switch to agent liability.\textsuperscript{111}

Accordingly, in contrast to the conventional wisdom, in Fraud on the Market cases enforcement concerns appear to weigh in favor of imposing liability directly on agents and not on firms.

d. Incentives To Screen for Honest Agents

Although the preceding analysis suggests that firms are not in a better position than the courts to sanction agents ex post, enterprise liability nevertheless might be preferable to agent liability if, as some have argued, enterprise liability provides firms with superior incentives to screen its prospective agents for honesty.\textsuperscript{112}

Although shareholders bear the burden of enterprise liability when agents are insolvent, it is their agents, either directors or officers, who

\textsuperscript{108} See Alexander, supra note 85 (finding that, in the small sample of cases studied, plaintiffs' lawyers bring securities fraud actions if the settlement value equals or exceeds five million dollars).

\textsuperscript{109} See supra text accompanying notes 96-100 (discussing reasons why firms may not proceed against wrongful agents).

\textsuperscript{110} See infra text accompanying notes 116-20 (firms are not likely to be able to deter fraud by monitoring agents).

\textsuperscript{111} Cf. Roberta Romano, Corporate Governance in the Aftermath of the Insurance Crisis, 39 Emory L.J. 1155, 1167-68, 1183 (1990) (eliminating duty of care suits may be desirable because they result in enormous litigation costs and have little deterrent effect). This benefit of agent liability includes the reduction in meritless suits that would accompany a switch from joint agent and enterprise liability to a system of pure agent liability. See infra text accompanying note 124.

\textsuperscript{112} In fact, some scholars argue that under agent liability firms may have an incentive to hire agents who are inclined to commit fraud because the firms will get the benefits from the fraud but bear none of the costs. See Richard Posner, An Economic Analysis of Law 398 (3d ed. 1988) (making this argument in favor of corporate criminal liability). We reject this argument because shareholders see themselves (and the firms in which they invest) as repeat players in capital markets—shareholders because some day they will want either to buy or sell more shares in the firm, and the firms because the cost of future capital will depend on the firm’s reputation for integrity in its dealings in capital markets. See infra note 115.
must decide whether and to what extent to screen other potential agents for honesty. Screening imposes direct costs on these agents, involving both time and effort to obtain and analyze information on the willingness of prospective employees to commit fraud. Accordingly, we must determine the extent to which directors and officers benefit from screening for honest colleagues and subordinates under enterprise liability and agent liability.

Outside directors’ compensation generally is not tied to firm profits; thus, they benefit from screening only to the extent that it reduces their expected personal liability for fraud, which is minimal in the absence of scienter. Enterprise liability, therefore, usually does not provide them with additional incentives to screen agents. Officers’ compensation generally is tied to firm profits, however. They benefit both from higher firm profits that increase their own compensation and from reduced exposure to personal liability or discipline for fraud. When agents are judgment proof, fraud has a greater impact on firm profits under enterprise liability than it does under agent liability. Accordingly, the benefits to managers of screening are theoretically higher under a rule of enterprise liability.

These additional benefits are likely to be small, however, and usually are exceeded by the costs that additional screening imposes on managers. Screening for agents willing to commit fraud is costly and is unlikely to identify potential wrongdoers. Identifying the flagrantly dishonest may not be so difficult. But Fraud on the Market (in our hypothesis) is caused by top corporate officials, and only under extreme circumstances. An agent realistically cannot be tested for a propensity to commit this kind of fraud until he has held high corporate office under conditions where Fraud on the Market is likely—i.e., conditions where the firm is failing or where the manager has failed. Managers of failed firms, however, are rarely candidates for other such positions of responsibility; persons promoted from within organizations generally have succeeded at their previous responsibilities and thus have had no occasion to cover up huge failures. Accordingly, we do not believe that enterprise liability will result in superior screening to avoid hiring agents willing to commit Fraud on the Market.

e. Ex Ante Monitoring

Proponents of enterprise liability argue that this rule creates supe-

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113. This is because the firm bears the burden of all liability in excess of its wrongful agents' wealth under enterprise liability, but not under agent liability.

114. We note that firms already have incentives to screen for the flagrantly dishonest, in order to avoid hiring those likely to commit fraud against the firm itself. These incentives are not likely to be noticeably higher under enterprise liability because Fraud on the Market appears to occur quite infrequently.

115. Cf. Macy, supra note 60, at 325 (abandoning criminal enterprise liability will not lead shareholders to hire managers willing to commit crimes in part because shareholders will not be able to identify managers who have predisposition for engaging in criminal acts).
rior incentives to monitor current employees to prevent them from committing Fraud on the Market. This argument assumes either that firm owners (the shareholders) can monitor at relatively low cost, or that enterprise liability creates superior incentives for top level managers to monitor lower level employees and each other, and that they can do so effectively. The first assumption does not hold in Fraud on the Market cases because widely dispersed owners of publicly held firms face serious collective action problems. Indeed, nonshareholder investors who may be victimized by Fraud on the Market are just as competent as shareholders to monitor, if both groups hold diversified portfolios. Moreover, should some shareholders be able to monitor, agent liability provides them with an incentive to do so—in order to avoid being a victim of fraud.

As for the second assumption, we acknowledge that enterprise liability may provide managers with greater incentives to monitor, if their compensation is tied to firm profits. Nevertheless, we do not expect to find greater monitoring under enterprise liability because managers’ incentives to monitor each other for Fraud on the Market decline dramatically in the very circumstance in which such fraud is most likely to occur: when the firm is at serious risk of failing. Under our last period hypothesis, Fraud on the Market usually results from the efforts of a few desperate managers to hide the fact that the corporation is ailing or has done sufficiently badly relative to reasonable expectations that senior managers can expect to be replaced. In this last period situation, even honest managers have relatively little to gain from preventing other managers from committing Fraud on the Market. If a manager prohibits fraud that would cover up the firm’s difficulties, the firm may fail, and she will lose her job. If she permits fraud, however, there are two possible outcomes. First, the fraud may be discovered, in which case the firm may fail, the manager will lose her job, and be no worse off than if the fraud had not occurred. Alternatively, the fraud may succeed, in which case the manager’s job and firm-specific investments will be salvaged. Additionally, enterprise liability is unlikely to result in increased monitoring in last periods because the senior managers in charge of monitoring are the very people most likely to commit Fraud on the Market. They also control the access of firm agents to the news media and the SEC.

Furthermore, even if senior managers are inclined to monitor each

117. See supra note 113 and accompanying text. Under agent liability, firms will establish some procedures to monitor for fraud because ex ante firms and managers view themselves as repeat players in capital markets where reputational capital has value.
118. Nor can we rely on widely dispersed shareholders to pressure management into incurring
other and lower level employees for fraud, there is little evidence that they can do so effectively. Fraud usually is committed by the people in control of the relevant information; checking the veracity of this information will be nearly impossible. Accordingly, we do not expect enterprise liability to result in greater monitoring for fraud on the market than agent liability. We therefore conclude that the presence of judgment proof agents does not justify enterprise liability for fraud on the market.

f. Administrative Costs

A final argument in favor of enterprise liability is that administrative costs of collecting judgments are lower under this rule because: (1) collecting from many agents is more expensive than collecting from a firm; and (2) collecting from any given agent is more expensive than collecting from a firm because locating sufficient assets may be more difficult. Enterprise liability reduces administrative costs of collection, proponents argue, by providing the plaintiff with a single, and likely more solvent, defendant.

This argument is not valid. Enterprise liability exerts the requisite deterrent effect on agents only if the firm shifts its liability to the wrongfull agents. By shifting liability, the firm, and thus society, incurs the very administrative costs that victims would bear under a rule of agent liability. Ironically, enterprise liability actually increases the administrative


120. See Arlen, supra note 66; CyRus Chu & YingYi Qian, Vicarious Liability Under a Negligence Rule (Stanford Univ. Working Paper No. 92, 1992).

121. See Kornhauser, supra note 4; Stone, supra note 99, at 29.

122. Although the firm can impose some sanctions on the agents cheaply—by firing them—to
costs of collection, by adding the cost of the shareholders' suit against the firm to the cost of the actions against the wrongful agents.

Moreover, while agent insolvency presents a genuine difficulty, firms may be judgment proof as well. If, as our analysis predicts, agents commit fraud because they fear that the firm is in danger of failing, then we should expect many of these firms to be insolvent as well. In these cases, it will be as difficult to collect from the enterprise as from the agent, and plaintiffs will seek other solvent defendants.\footnote{123}

An additional administrative cost concern favors the use of agent liability. The current availability of both enterprise and agent liability appears to increase litigation costs substantially by leading to unjust suits against the corporation. Under the current system, plaintiffs have incentives to bring nuisance suits against both the enterprise and its managers, with the intention of dropping the action against the managers in exchange for a settlement by the firm. Managers have a strong incentive to settle because they may not be covered by D&O insurance if they proceed to trial and lose.\footnote{124}

2. Managerial Risk Shifting

Some who agree that deterrence arguments do not support enterprise liability nevertheless advocate enterprise liability on the grounds that it increases social welfare by shifting the risk of liability from managers, who are risk averse, to shareholders, who are risk neutral.\footnote{125} Shareholders can easily purchase fully diversified portfolios, and thus are effectively risk neutral and wish their firms to behave similarly. Managers, by contrast, are not fully diversified because they generally have a substantial portion of their human capital, and a considerable portion of their wealth, invested in their corporate employer.\footnote{126} The cost of a given amount of liability, therefore, will be greater for risk averse managers than it will be for the risk neutral shareholders. Accordingly, it is argued that enterprise liability is preferable to agent liability because managers faced with agent liability will be overly cautious.\footnote{127}

\footnote{123} We observe that in many cases plaintiffs proceed against third parties, such as accounting firms. See infra text accompanying note 179. Part of the explanation for this appears to be that defendant enterprises frequently are insolvent. Our study shows that at least 24\% of these firms were involved in bankruptcy reorganization proceedings subsequent to the revelation of the fraud. See infra text accompanying note 166.

\footnote{124} See Stone, supra note 99, at 30 n.119; cf. Alexander, supra note 85 (most securities fraud actions settle regardless of the merits).

\footnote{125} E.g., Easterbrook & Fischel, supra note 4, at 640-41; see Sykes II, supra note 4, at 1235-36.

\footnote{126} See Jennifer H. Arlen, Should Defendants' Wealth Matter?, 21 J. LEGAL STUD. 413 (1992); Carney, supra note 54, at 418-20; Easterbrook & Fischel, supra note 4, at 641; Macey, supra note 60; Rose-Ackerman, supra note 56.

\footnote{127} Easterbrook & Fischel, supra note 4, at 641; see Sykes II, supra note 4, at 1236. This argument implicitly assumes the presence of transactions costs (or agency costs, see supra text accompanying notes 97-98), that operate to make an agent's expected liability less under agent liability...
Although this argument may have some merit when applied to torts cases, it is not valid in the context of Fraud on the Market. In standard torts cases, the optimal level of accidents is not zero. The risk shifting argument, therefore, is a claim that the cost to society of those “optimal” accidents that do occur should be as low as possible. This is achieved by placing the burden of these accidents on the party who is the superior risk bearer—the shareholders. By contrast, the optimal level of Fraud on the Market is zero. 128 If damage awards are optimal, risk spreading is not a concern because fraud will not occur. 129

Of course, fraud does occur, both because actual damage awards are not optimal and because agents expect to be judgment proof. The solution to the problem of suboptimal damage awards, however, is to reform the damage rules under agent liability, not to employ enterprise liability. The solution to the judgment proof agent problem is not to shift the risk of liability from agents to enterprises and their shareholders, but rather to increase the cost to agents of committing fraud, for example, by employing nonmonetary criminal sanctions in addition to agent civil liability. Shifting costs from agents in a misplaced attempt to improve risk spreading simply impairs the ability of the securities laws to serve their main goal of deterrence. 130

3. Loss Spreading

Some scholars argue that enterprise liability for torts is appropriate because it shifts the risk of harm off the victim and onto the firm, which can spread the cost of the unfunded liability 131 among its shareholders. These scholars argue that this shifting is desirable because the aggregate

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128. See supra text accompanying notes 69-73. As noted previously, this conclusion excludes monitoring and enforcement costs. See supra note 70 and infra note 130.

129. Because securities fraud claims require a showing of scienter, we have far less reason to be concerned that courts will impose liability erroneously than we do under the negligence standard generally employed in standard torts cases. See supra note 72. Again, we exclude the negligence standard of § 11 of the Securities Act, which applies only to registered offerings, from this analysis. We also have little reason to fear that agents will engage in fraudulent disclosures not knowing they are illegal because senior managers of publicly held firms are likely to be well advised about securities fraud rules.

130. This conclusion also holds when costly enforcement is taken into account. When enforcement is costly and individuals are risk averse, a probability of detection sufficient to deter all individuals may be optimal, see Kaplow, supra note 70, at 6, in which case, shifting liability from agents to enterprises clearly is not desirable. Moreover, in circumstances where the optimal amount of the wrongful activity is not zero because of enforcement costs, the solution to the problem of risk averse agents is not to shift liability from the agent, but rather it is to decrease the sanction below the optimum sanction when the probability of detection is negligible and to increase the probability of detection. See id.

131. The unfunded liability is the amount of liability that exceeds the amount that the firm can collect from the wrongful agents.
burden to shareholders of bearing a small financial loss is less than the victims' burden of each bearing a large loss.\textsuperscript{132}

There are several problems with this argument, both in general and as applied to Fraud on the Market cases. First, we must be wary of grounding the imposition of liability on loss shifting arguments because nothing in the loss spreading argument limits its application. This argument could be used, for example, to support a rule under which the decision whether to hold a defendant liable for an accident depends solely on the relative burden of liability to the plaintiff and defendant and not on whether the defendant had anything to do with the plaintiff's losses.\textsuperscript{133}

Moreover, the loss spreading argument is invalid in the context of Fraud on the Market cases. Victims of Fraud on the Market are usually fully diversified investors, as are the shareholders who ultimately bear the costs under a rule of enterprise liability. Because both types of investors are effectively risk neutral, shifting the losses from one group of investors to the other produces no welfare gain.

The argument for loss spreading also fails even if both groups of investors are risk averse. Because of the high volume of shares traded on the national stock exchanges, the number of shares in the potential plaintiff class is likely to exceed the number of shares held by the defendant shareholders.\textsuperscript{134} Accordingly, it is likely that the number of victims exceeds the number of the defendant firm's shareholders, in which case the loss spreading argument implies that losses should remain with the victims.

4. \textit{Just Compensation}

Some scholars defend enterprise liability on the grounds that it provides superior compensation to victims when agents are judgment proof. We concede that victims are likely to recover larger judgments under enterprise liability. Although compensating victims may be a laudable goal, enterprise liability does not serve the goal of just compensation because it simply replaces one group of innocent victims with another: those who were shareholders when the fraud was revealed. Moreover, enterprise liability does not even effect a one-to-one transfer between innocent victims: a large percentage of the plaintiffs' recovery goes to their lawyers. Finally, enterprise liability may injure innocent people in addition to shareholders. For example, employees are injured if enterprise liability sends a firm into bankruptcy or causes it to lay off employees.\textsuperscript{135}

\textsuperscript{132} Musewicz, supra note 6, at 794-97. This argument implicitly assumes that agent liability will not adequately shift the risks from victims because the agents are likely to be judgment proof.

\textsuperscript{133} Sykes I, supra note 4, at 172.

\textsuperscript{134} See infra text accompanying notes 185-98, and infra note 189.

C. Summary

We conclude that enterprise liability should not be applied to Fraud on the Market cases.\textsuperscript{136} The last period nature of the agency problems involved and the additional agency costs that plague efforts by publicly held corporations to monitor and sanction senior managers render the conventional analysis of enterprise liability inapplicable to Fraud on the Market cases. In contrast, we find that there is little reason to believe that enterprise liability is the superior rule from the standpoint of deterrence, and there are many reasons to suspect the contrary. The deterrent effect of the available monetary sanctions under agent liability probably exceeds the deterrent effect of enterprise liability because a civil judgment against an agent hurts his reputation more than does a sanction imposed by the firm in private.\textsuperscript{137} Moreover, the threat that sanctions will be imposed appears to be greater under agent liability. Agent liability places the responsibility of sanctioning wrongful agents with the victims, who have no reason not to proceed against them and have every reason to proceed. Enterprise liability, by contrast, places the responsibility of proceeding against the wrongful agents with the firm, and thus with the very agents (and their close associates) most likely to have committed fraud. Moreover, agent liability in effect enlists insurance companies as corporate monitors and disciplinarians, thereby eliminating the agency costs associated with firm managers monitoring and disciplining each other. Furthermore, the judgment proof problem under agent liability can be completely eliminated if, in addition to civil liability, the government imposes sufficient nonmonetary criminal penalties on agents, such as imprisonment.\textsuperscript{138} Finally, we find that administrative costs probably are lower under agent liability.

In addition to the deterrence arguments favoring agent liability, an interest in loss spreading also favors the use of this rule. Moreover, justice concerns favor replacing enterprise liability with agent liability because enterprise liability for Fraud on the Market results in liability being imposed on innocent investors, some of whom are victims of the fraud not entitled to compensation under the securities laws.\textsuperscript{139}

IV. The Evidence

Our conclusion that agent liability for Fraud on the Market is the

\textsuperscript{136} Our conclusion that enterprise liability is inferior applies most directly to the frauds designed to conceal bad news, which were the focus of our analysis. Our analysis also applies to some “good news” frauds, however: specifically, hostile takeovers where managers are fighting to keep their jobs. These two types of fraud should account for virtually all pure Fraud on the Market cases. Now that the Supreme Court has clarified the law governing disclosure of merger negotiations, see Basic, Inc. v. Levinson, 485 U.S. 224 (1988), we do not expect to see many of these “good news” cases in the future. Unresolved questions of materiality may generate some litigation in the short run, however.

\textsuperscript{137} See supra text accompanying note 87.

\textsuperscript{138} See Kraakman, supra note 5.

\textsuperscript{139} See supra text accompanying notes 41-45.
superior rule depends heavily on our last period hypothesis. Accordingly, we now present an empirical analysis of Fraud on the Market cases to demonstrate that the evidence supports our hypothesis.

A. The Data Base

We examined all cases in the LEXIS database, "Fedsec" library, "cases" file, under the heading "fraud w/2 market" between 1975 and mid-1990. This period was chosen because the Fraud on the Market doctrine, which relaxed the reliance requirement when securities are publicly traded, was first announced in 1975. Most of the decisions involved preliminary rulings on issues such as class certification, appropriateness of class representatives, motions to dismiss, or motions for summary judgment. Few involved final judgments on the merits, because generally Fraud on the Market cases are either dismissed at a preliminary stage or settled. Thus our data base consisted largely of allegations rather than proven charges. Nevertheless, given the fact that relatively few Fraud on the Market cases proceed to trial, we do not believe a superior set of cases exists to examine civil liability rules for securities fraud. We assume that the set of cases brought is an unbiasied set of actual frauds found in securities markets; that is, that plaintiffs do not have incentives to bring groundless charges more frequently with respect to any particular type of activity.

We limited our review to allegations of issuer fraud in companies not engaged in securities offerings unless it appeared that a registration statement merely continued a fraud begun at an earlier date. We also excluded cases involving public offerings for several reasons. First, our purpose in this article is to examine fraud on secondary trading markets. In addition, as the courts are beginning to recognize, the Fraud on

140. In relying on LEXIS for our data, we limited ourselves to cases with published opinions. We do not believe that this biases our sample, however. The issue of bias depends on whether the complaints that produce published opinions are more or less likely than the total population of Fraud on the Market complaints to be cases in which our last period hypothesis is correct. We do not see any reason to expect bias. First, Fraud on the Market cases proceed as class actions, which generate numerous procedural motions likely to lead to published opinions. Therefore, we expect that a relatively high percentage of Fraud on the Market complaints produce published opinions. Moreover, there is nothing in either the decision of whether to file such a procedural motion or the decision of whether to publish an opinion that is likely to bias the sample for or against frauds committed in a last period situation.

141. Blackie v. Barrack, 524 F.2d 891 (9th Cir. 1975).

142. See infra note 182.

143. SEC enforcement actions may provide more detail about actual, as opposed to alleged, wrongdoing. They do not, however, provide information about the potential impact of civil liability rules.

144. The one exception is fraud in the context of takeovers, where litigation may be used strategically rather than to vindicate rights of investors. We excluded these cases from our analysis for the reasons presented infra text accompanying notes 150-53.

145. We also excluded cases involving commodities fraud where Fraud on the Market cases were cited in support of analogous arguments. Other cases found with our LEXIS search did not involve Fraud on the Market, although our search technique included them in the set of cases retrieved.
the Market doctrine cannot legitimately be applied to initial public offering (IPO) cases.\textsuperscript{146} Moreover, IPOs do not represent the typical model of a publicly held corporation with widely dispersed shareholders, because at the time of the alleged fraud these firms are typically closely held and do not experience the same agency costs as publicly held firms. Finally, liability rules governing registered offerings differ significantly from those governing public statements or SEC filings by officials of publicly held companies.\textsuperscript{147} Section 11 liability under the Securities Act extends to a wide variety of participants (and even some who are not active participants) in the offering and imposes liability on the basis of negligence, rather than scienter.\textsuperscript{148} For reasons we have previously discussed, the analysis of enterprise liability for negligent torts differs significantly from that for intentional torts such as fraud.\textsuperscript{149}

We also excluded cases involving allegations of fraud in the context of mergers and hostile takeovers. Until recently, disclosure rules when a target firm was negotiating with a prospective merger partner were poorly specified.\textsuperscript{150} It appears that many of the “frauds” that occurred prior to the Supreme Court’s ruling in \textit{Basic} were not fraud in the standard sense of the word but rather resulted from confusion over the legal standard governing disclosure in the merger negotiation context. As for hostile takeovers, fraud charges are a standard part of the arsenal of the contestants, regardless of their merits.\textsuperscript{151} Therefore, we were not comfortable relying on allegations of fraud in takeover battles to provide any valuable information about what frauds are actually committed. Moreover, excluding these cases should not bias our results because target


\textsuperscript{147} We recognize that many of these offerings were unregistered, largely because they involved offerings of tax-free industrial revenue bonds issued by municipalities. These offerings present special agency problems because the municipal officials have weak incentives to monitor project sponsors for fraud. These offerings also are not an appropriate subject for application of the Fraud on the Market doctrine. Carney, \textit{supra} note 33.

\textsuperscript{148} Securities Act of 1933, \textsection\textsuperscript{11}, 15 U.S.C. \textsection\textsuperscript{77k} (1991). Liability is extended to what Kraakman calls “gatekeepers”—professionals, such as underwriters and accountants (and occasionally lawyers) whose participation is required to complete the registration process. Kraakman, \textit{supra} note 5.

\textsuperscript{149} \textit{See supra} text accompanying notes 7-11.

\textsuperscript{150} These rules were clarified in Basic, Inc. v. Levinson, 485 U.S. 224 (1988), although some critics might argue that the materiality standard chosen by the Court is less clear than the bright line “agreement in principle” test argued for by \textit{Basic}.

\textsuperscript{151} \textit{See generally} Herbert Wachtell, \textit{Special Tender Offer Litigation Tactics}, 32 BUS. LAW. 1433 (1977) (describing litigation as a tool to affect attitudes of arbitragers, to delay the other side, or to protect target employee morale).
managers' incentives to commit fraud in takeover cases result from similar last period concerns to those operating in other Fraud on the Market cases (because quasi rents are at stake),\textsuperscript{152} although the probability of prompt detection of fraud in takeover cases is much higher.\textsuperscript{153}

Ultimately, we had a base of 111 reported decisions. Because of limited statements of the facts in some of the opinions, the set of cases examined for specific questions usually was less than 111. All of the complaints examined alleged liability under Section 10(b) and Rule 10b-5, the general antifraud provisions of the Securities Exchange Act under which the Fraud on the Market doctrine developed. Five complaints also made claims under the similar language of Section 17(a) of the Securities Act.\textsuperscript{154} Three cases alleged claims under Section 18 of the Securities Exchange Act, which is surprising in view of the reliance requirement imposed by that section.\textsuperscript{155}

In addition to the reported opinions, we examined Moody's Industrials, Standard & Poor's Reports, and SEC filings for information about the number of outstanding shares of each company; the Dow Jones Historical Stock Quote Reporter Service for information about trading volumes during the period of alleged frauds; and reports of the New York Stock Exchange, American Stock Exchange, and the over-the-counter stock markets for daily prices. To render the research project manageable, we used monthly trading volumes rather than daily trading volumes, including both the month of the alleged fraudulent or misleading statement and the month of the revelation of the fraud. This overstates the trading volume during the period of the fraud somewhat.\textsuperscript{156} The extent of overstatement is mitigated by the average length of the interval between the alleged fraud and its revelation. We adjusted stock prices to account for market movements but did not account for the Beta of individual securities; we assumed that our set was representative of a market portfolio, in part because many of the securities are thinly traded in the over-the-counter market. In addition, we employed the Dow Jones Industrial Average rather than broader measures of the market. In view of the large magnitude of price changes found, we do not believe that these departures from standard event study methodology would affect the directions of price movements, although the magnitudes may be affected somewhat.\textsuperscript{157}

\textsuperscript{152} See Kenneth J. Martin & John J. McConnell, Corporate Performance, Corporate Takeovers, and Management Turnover, 46 J. Fin. 671 (1991) (turnover rate for top managers of target firms significantly increases following completion of a tender offer-takeover).

\textsuperscript{153} See Carney, supra note 54.

\textsuperscript{154} Securities Act of 1933, § 17(a), 15 U.S.C. § 77q(a) (1991). The relatively small number of such claims is explained both by the fact that § 17(a) covers only fraudulent sales and not purchases, and by the fact that the circuits are divided over whether implied rights of action exist under § 17(a). See cases collected in Hazen, supra note 19, § 13.13.


\textsuperscript{156} Where the revelation occurred in the first several days of a month we excluded that month's trading volumes from the count in order to achieve somewhat greater accuracy.

\textsuperscript{157} See generally Stephen J. Brown & Jerold B. Warner, Using Daily Stock Returns: The Case
Although our data base contains a considerable amount of information, we were unable to answer a number of important questions. For example, in most instances we were unable to learn the amount of damages claimed. Most complaints do not appear to request a specific amount of damages, probably because the size of the plaintiff class and the prices paid by individual class members are unknown at the time of suit. In most cases, subsequent reports by issuers of these claims in their 10-K filings do not mention the amount requested. As a result, we have only a small amount of information about damage claims. Moreover, we were unable to determine how much successful plaintiffs actually receive in most cases because these cases generally settle before trial if the plaintiffs survive preliminary challenges to certification of the class, motions to dismiss, and motions for summary judgment.\footnote{158}

B. Is Fraud a Consequence of Last Period Agency Costs?

Previously we postulated that most fraud on securities markets is committed by desperate agents who fear that they are in a last period of employment. To test this last period agency cost hypothesis, we first examined the data to determine whether: (1) Fraud on the Market generally results from attempts to put the firm in a false favorable light, rather than attempts to conceal good news about the firm; (2) the frauds were sufficiently serious to suggest that accurate pictures of the firms would reveal that they were ailing (and thus that the senior managers would have reason to fear getting fired); and (3) the duration of the frauds were sufficiently short that agents would be unlikely to commit Fraud on the Market unless they were desperate from facing a last period situation.

To determine the nature of the frauds committed, we categorized the types of alleged fraud on the basis of whether the fraudulent information provided a false positive or false negative signal about the company, and whether it was in the context of a securities offering (not an IPO) or a disclosure in the ordinary course of business, whether an SEC filing, a proxy statement, or a press release. Our results are contained in Table 1.

We were unable to classify the type of fraud in eight of the reported cases, and therefore the relevant set contains only 103 cases. As we expected, only a small percentage of the frauds in these cases (8.7\%) involved attempts to understate the value of securities. In the vast majority

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\textit{of Event Studies, 14 J. FIN. ECON. 1 (1985); Eugene Fama et al., The Adjustment of Stock Prices to New Information, 10 INT'L ECON. REV. 1 (1969); G. William Schwert, Using Financial Data to Measure Effects of Regulation, 24 J.L. & ECON. 121 (1981). Many of our companies were traded over the counter and, thus, are not represented in the Center for Research in Securities Prices' tapes, or in standard Beta reference books. They are thinly traded in some cases, in markets that can be expected to be of relatively weak efficiency. While we recognize that the assumptions that the Dow Jones Industrial Average is an acceptable proxy for overall market averages and that our study sample has a Beta of one are strong ones, we do not believe more refined methods would alter our conclusions.}
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158. Data on class action settlements could be obtained, at considerable expense, by examining court records across the country. We are unaware of any published reports of these settlements.
of cases (91.3%), managers were accused of providing false favorable information to the market. Moreover, 89.3% of the cases involved fraud in the context of regular reports and press releases to investors. These frauds clearly hurt current shareholders by lulling them with false assurances to retain their shares. These cases thus support our agency cost hypothesis.

As for the 8.7% of the cases in which managers understated the value of the securities, closer examination of these cases reveals that typically they involve managers and control shareholders who were alleged to have a conflict of interest because they were attempting to buy out the public shareholders at an unfairly low price. There are other remedies for these kinds of fraud, which typically hold the wrongdoers directly liable for their profits. Accordingly, the evidence supports our assertion in the preceding part that pure Fraud on the Market cases should be viewed as resulting from agents' attempts to provide the market with a falsely favorable picture of the firm.

Establishing that managers usually are motivated by last period concerns, however, requires additional analysis. Table 2 attempts to break down the false positive announcements in more detail. Approximately 67.7% of these cases clearly involve potential last period situations: 50.5% of the cases involved false positive statements designed to conceal declines in earnings, while another 17.2% of the frauds were designed to conceal bad news about the issuer. An additional 20.4% of the cases involved false optimistic statements of business developments and projections. We believe that most of these cases were also attempts to conceal bad news, as evidenced by the dramatic stock price declines reported in Table 3.

Moreover, the exaggerations of earnings or claims of positive business developments involved in these cases appear to be extremely serious, as predicted by our last period hypothesis. In order to determine the magnitude of the alleged frauds, we examined the movement of stock prices resulting from revelation of the fraud. Table 3 presents the average price declines from the date of the announcement of the fraudulent news (the " announcement date") to ten days after the revelation of the fraud. A ten-day window allowed sufficient time for revelations to be reflected in stock prices, even where stocks were thinly traded. Both announcement dates and revelation dates were taken from judicial opinions. Firms that announced false positive news to the market experienced an overall 42.6% drop in stock prices when the truth was revealed. Firms that concealed bad news experienced even larger losses.

159. See infra Table 1.
160. See infra Table 2.
161. For example, these defendants may be charged with breach of fiduciary duties under state law.
162. See supra note 53.
163. See supra text accompanying note 157.
(47.8%). Although there is no way to separate the amount of the decline attributable to the revelation of the truth from the amount of the decline attributable to anticipated liability for fraud, the magnitude of the price changes revealed in Table 3 are sufficiently great to indicate that, even if there were no liability, revelation of the truth would have caused a significant decline in the firm’s value. This finding is consistent with our hypothesis that the fraud was intended to conceal that the firm was ailing. Moreover, 24.3% of the firms saw the inside of bankruptcy courts, which further supports our last period hypothesis. In many other cases newspaper accounts contain reports of financial difficulties and speculation about the likelihood of bankruptcy.

In sum, the evidence reveals that two types of fraud predominate in Fraud on the Market actions: false positive financial statements to conceal declines in earnings and omission of bad news in SEC filings and public statements. Table 2 reveals that concealing adverse business developments was the most common source of fraud charges, followed by concealing self-dealing and illegal acts. Table 3 shows that stock prices declined an average of 43.6% when bad news was revealed. These results are consistent with our last period agency cost hypothesis.

We find further support for our last period hypothesis from an examination of the duration of the frauds committed. Previously we hypothesized that agents are unlikely to commit fraud unless they are desperate because fraud is usually detectable over time and therefore is very risky. As a result, we concluded that fraud is likely to appear to be a viable option only for a manager of a failing company who thinks that he can turn the company around and perhaps obtain new financing in the intervening period.

The cases support this claim that fraud is highly risky. We obviously do not have any data on frauds which were undetected. Examining the data on detected frauds, however, reveals that some frauds were discovered in less than a month, the median period before discovery was twelve months, and the average period was 16.3 months. The longest

164. At least one event study suggests that the anticipated impact of announcement of the filing of a derivative action is quite small. See Fischel & Bradley, supra note 39.

165. Although we have very little data on actual judgments and settlements in Fraud on the Market cases, the data we do have reveals that the average expected value of a judgment and settlement is 11.2% of the market value of the firm. See infra Table 8. This suggests that approximately 75% of the decline in the value of the equity is attributable to the revelation of the bad news about the firm.

166. Our hypothesis that agents commit fraud when they fear themselves to be in a last period of employment is consistent with, but does not require, evidence that the firm itself is in its last period. Senior managers may fear that they will be fired if the firm's finances decline substantially, even though the firm itself may not yet be in a last period situation.

167. See infra Table 2.

168. See infra Table 1. These two categories overlap substantially. The overlapping cases have been included in Table 1, while those that do not overlap have been set out separately in Table 5.

169. This analysis is based on the 61 cases in which we were able to determine when the fraud was detected.

period was six years. Only 11% of the frauds went undiscovered for three years or longer. These results are consistent with our claim that fraud is a product of last period concerns. A manager of a healthy firm anticipating a continuing relationship with capital markets could not expect to obtain much benefit from an increase in the firm's share price occurring for so short a time. A year or so, however, might be enough time to enable the manager of an ailing firm to save the firm—for example, by deferring adverse creditor actions or by obtaining new financing.

C. Is Fraud a Corporate Policy or an Agency Problem?

Previously we hypothesized that although enterprises are sued for fraud,171 senior managers generally commit fraud in order to benefit themselves; fraud is not committed at the behest of, or in order to serve, the shareholders.172 The evidence presented above is consistent with this hypothesis. To obtain further support for this hypothesis, we examined the cases to determine (1) whether the agents sued for fraud usually are senior managers, as opposed to lower level employees, and (2) whether there is any evidence that fraud is the product of corporate policy, as opposed to being committed by agents acting on their own behalf.

Table 4 displays the identity of the persons named as defendants in the cases involving financial statements allegedly concealing declines in earnings. In the forty-seven cases of financial fraud by issuers to conceal earnings declines, 91% of the complaints named defendants in addition to the issuer. These defendants were never employees below the officer level. Indeed, officers were named in 80.9% of these complaints, while accountants were named in 59.6% of the complaints; major shareholders were named in five cases (10.6%).173 We believe that this evidence supports the desperate manager hypothesis, with managers named as defendants in 80.9% of all complaints. It is not surprising that the next most frequent category of individual defendants includes outsiders—the "other" category—which is dominated by accounting firms as defendants.

Table 5 describes the nineteen cases of omission or concealment of bad news about issuers and concealment of self-dealing, not included in Table 4. Table 5 reveals a somewhat different pattern for these "other type of bad news" frauds. Officers were named defendants in 63.2% of these cases. In 36.8% of these cases, however, no one other than the

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171. We found no cases where agents were sued but the firm was not. As Table 6, infra, reveals, generally both the firm and its agents are sued.
172. See supra text accompanying notes 50-52.
173. This finding that in some cases major shareholders are named in addition to senior managers is not inconsistent with our hypothesis that agents do not commit fraud in order to benefit the firm's owners. There is no evidence in these cases that the major shareholders were acting on behalf of the other shareholders, and there is every reason to suspect the contrary.
issuer was named. Although this is somewhat troubling, under enterprise liability plaintiffs have weak incentives to add individual defendants if the defendant enterprise is solvent. Major shareholders were named in only one case (5.3%). The "others" category contains two complaints against accountants (10.5%), one against a company controlled by corporate insiders, and one claim against a securities broker—a random assortment of alleged participants in wrongdoing.

Table 6 examines the total relevant set of Fraud on the Market cases (109 cases). We found that officers were named in 71.6% of the cases and major shareholders in 18.3%. Persons outside the firm, primarily accountants, were named in 41.3% of the complaints.

We next examined whether the evidence is consistent with our hypothesis that the wrongful agents were acting on their own behalf and not on behalf of the firm. Because it is not possible to test agents' motivation directly, we examined the validity of an alternative hypothesis: Fraud results from either a formal corporate policy or a decision made at the board level in publicly held corporations, rather than from decisions of individual agents. To evaluate this alternative hypothesis, we examined how often outside directors were sued. We focused on outside directors because Fraud on the Market generally requires the issuance of a statement or filing by someone with actual or apparent authority to speak for the corporation. An outside director can authorize such a statement only to the extent that it is the product of board action. Accordingly, we generally expected to find outside directors joined as defendants only if they were alleged to have participated in the fraud in their capacity as board members. Thus, we expected to find outside directors sued when the fraud resulted from board action—i.e., corporate policy—instead of simply from acts of individual agents.

We believe that board involvement in the fraud is unlikely for several reasons. The outside members of the board generally will not participate in fraud unless someone—for example, the shareholders—have provided powerful financial incentives for them to do so. Outside directors have less at stake if the firm were to fail, because they earn most of

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174. See infra Table 6. In 20% of the cases the issuer was named as a defendant when no individuals were named, suggesting the strength of the presumption of vicarious liability.

175. These are our best estimates because of the inadequate descriptions of the defendants in many reported decisions.

176. We recognize that a finding that fraud results from board action would not rule out the possibility that fraud is the product of agency costs, because board members may act to serve themselves, not the shareholders. We nevertheless consider whether the board is involved, however, because lack of board involvement suggests that the shareholders (as a group) did not pressure the firm's agents to commit fraud: if the shareholders wanted the firm to commit fraud, they would be best able to achieve this goal by exercising the influence they have over the board of directors. Moreover, generally we do not expect to see outside members of the board participating in fraud unless someone—for example, the shareholders—have pressured them to do so. See infra text accompanying note 178.

177. We assume that plaintiffs attorneys engage in some preliminary investigation before filing suit.
their income outside the firm. Indeed, because their reputational capital may be threatened by association with fraudulent activities, outside directors have incentives to deter, rather than to encourage, fraud. Finally, it would be difficult for dispersed shareholders to communicate effectively to the board their desire that the firm commit fraud.\textsuperscript{178}

The results of our case analysis are consistent with our expectations and are presented in Table 6. Based on our set of 109 cases, we found that outside directors were named in only 39.4\% of the cases at most, and in as few as 28.4\%. Of the forty-three cases listed in Table 6, we are certain that thirty-one actually involved outside directors (28.4\%), and the reported decisions are ambiguous in the remaining twelve cases. These cases involving outside directors appear to constitute the only ones where formal corporate action could be said to be alleged, at least in the sense that the full board of directors was alleged to have approved or known of the action taken.

We suspect, however, that the 28.4\% of the cases in which outside directors certainly were sued overestimates the percentage of cases in which the board of directors actually participated in the fraud, and these cases are therefore analyzed in more detail in Table 7. Few of these thirty-one cases in which outside directors were definitely sued contain allegations of specific knowledge by directors. Moreover, in many cases the description of the alleged fraud seems to focus on the wrongdoing of an individual officer or major shareholder to such an extent that it is extremely unlikely that the outside directors could have known of the fraud, and one wonders why the plaintiffs thought these directors were involved. As for the other cases, in virtually all of them, little indicates board involvement in the fraudulent disclosures. This is best illustrated by the seventeen cases involving false financial statements (54.8\%),\textsuperscript{179} 76\% of which name accountants as defendants. The board employs accountants to serve as outside monitors of the integrity of the firm’s financial reporting systems. Normally, information about difficulties with these systems flows from the accountants to the audit committee of the board, typically composed of outside directors. Formal action by the board of directors authorizing publication of financial statements is not required. Therefore, the fact that outside directors were sued does not imply that the frauds involved formal board authorization, or even knowledge, of the alleged fraud. Rather, it suggests that controls instituted by the board were thwarted by disloyal agents. As for the 29\% of the cases involving conflicts of interest,\textsuperscript{180} even if all of these cases involved formal board decisions to commit fraud, they comprise only ten of 111 cases, or 9\% of all cases. Moreover, the board action in these

\textsuperscript{178} Where there is a single dominant shareholder, however, this difficulty disappears. This may explain the presence of large shareholder defendants in some Fraud on the Market cases. These complaints generally involve additional charges of conflicts of interest by these shareholders.

\textsuperscript{179} See infra Table 7.

\textsuperscript{180} See infra Table 7.
cases probably was in furtherance of personal, not shareholder, interests. Accordingly, these frauds cannot properly be treated as acts of the corporate principal.\textsuperscript{181} We conclude that Fraud on the Market is not usually the product of corporate policy but rather results from acts of individual agents.\textsuperscript{182}

In conclusion, the evidence presented above reveals that Fraud on the Market is a risky short-term strategy engaged in by senior managers, without the approval of either the board of directors or a majority of the shareholders. Almost all of these frauds were designed to deceive the market and current shareholders into believing that the firm's financial situation was better than it was. Most frauds involved attempts to conceal declines in earnings or other bad news. The dramatic decline in share prices following the revelation of the frauds demonstrates the seriousness of the cover-ups involved. These facts, combined with the observation that most Fraud on the Market cases did not involve managerial self-dealing,\textsuperscript{183} support our last period agency cost hypothesis, and thus our conclusion in part III that agent liability, combined with criminal sanctions, is better able to deter Fraud on the Market than enterprise liability.

\textbf{D. The Incidence of Fraud on the Market Liability}

We now test our conclusion regarding enterprise liability as a vehicle for loss distribution by examining the monetary impact of Fraud on the Market suits on firms and their shareholders. Specifically, we examine both the magnitude of the potential wealth transfer resulting from a judgment against the firm, and whether this transfer can be justified as promoting loss spreading.

We have relatively few judgments and settlements to report because most of the reported cases involve the preliminary procedural issues of class certification or defendants' motions for summary judgment. The few dispositions we have report only payments by corporate principals,

\begin{footnotesize}
\begin{enumerate}
\item See supra note 176. Presumably these frauds were pursued to further the goals of a dominant shareholder that were in conflict with the interests of other shareholders. Cf. William J. Carney, The Theory of the Firm: Investor Coordination Costs, Control Premiums and Capital Structure, 65 Wash. U. L.Q. 1 (1987) (describing the nature of conflicts that arise among co-investors).
\item Although the evidence supports our hypothesis that individual agents commit fraud without actual authority to do so, there are few judgments against officers, employees, and directors. This is explained by the prevalence of settlements in securities fraud litigation. See Alexander, supra note 85 (all class actions involving initial public offerings resolved by settlement); Barbara A. Banoff & Benjamin S. Du Val, The Class Action as a Mechanism for Enforcing the Federal Securities Laws: An Empirical Study of the Burdens Imposed, 31 Wayne L. Rev. 1, 57-59 (1984) (only 2% of securities fraud class actions filed in Southern District of New York went to trial, while 48% of cases that were not class or derivative actions were tried); John E. Kennedy, Securities Class and Derivative Actions in the United States District Court for the Northern District of Texas: An Empirical Study, 14 Hous. L. Rev. 769, 811 (1977) (83% of the 54 class and derivative securities actions filed in U.S. District Court in Dallas settled).
\item If most of these cases resulted from managerial self-dealing, this would provide an alternative to our last period hypothesis as to why managers commit Fraud on the Market.
\end{enumerate}
\end{footnotesize}
and none by corporate agents, with one possible exception. Table 8 reveals judgments and settlements that range from .01% to 39% of the market value of the firm's equity when the fraud was revealed, 184 with an average of 11.2%. The largest amount was $100 million and the smallest was $1 million. Thus these observed settlements and judgments had a very substantial impact on shareholder wealth, although a sample of six firms is too small a sample from which to generalize.

Because we had little information on judgments and settlements, we sought to use information on the amount of damages sought by plaintiffs. This proved even more difficult because only two of the reported decisions described the amounts sought. Table 9 sets forth plaintiffs' damage award requests in two cases: these were 35% and 60% of the market value of the firm's equity. Generally, complaints do not contain requests for recovery of specific monetary damages; Fraud on the Market cases are class actions and the plaintiffs, at the time the suit is filed, do not know the size of the class or the potential damages for each class member. Instead, plaintiffs leave this matter open for subsequent determination by the court.

Because so few of the reported cases reveal either the amount claimed or the amount awarded, we estimated the potential impact of securities fraud actions on shareholders by examining the sixty-two cases for which we had data on the volume of securities traded between announcement and revelation dates. We assumed that the number of shares purchased or sold by potential members of the plaintiff class was represented by the number of shares traded between the date of the fraud and the revelation date. 185 We further assumed that all those who were shareholders when the fraud was revealed would bear the expected liability. 186

Because of the high turnover of the float of publicly traded securities, if a fraud is perpetrated for any significant period of time, the number of shares bought by the plaintiff class may be quite large compared to the total number of shares outstanding. The average trading volume was 199% of outstanding shares; in the median case trading volume equalled 131% of the number of outstanding shares in the firm. The large difference between the median and mean results from a handful of cases where trading volumes exceeded 400% of the number of outstanding shares.

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184. Our measure of the market value of firms’ equity is based on month-end market prices at the close of the month after revelation of the fraud.

185. Some cases indicate the number of class members, but as a general rule reported decisions do not give this information. We did not attempt the costly task of determining the number of shareholders from shareholder lists because this information is not particularly revealing since so many shares are held in nominee names by a few nominee corporations.

186. Because our trading data was processed manually, it is not as precise as we would wish. We used monthly trading volumes rather than daily volumes. We included the month of the announcement and the month of the revelation, which overstates trading volume somewhat. We corrected for this in some cases by excluding the month in which the fraud was revealed where the revelation occurred in the first several days of the month.
ing shares, including two cases in which trading volumes exceeded 1000%. Volumes ranged from trivial—.003% in one case—to more than twelve times outstanding shares in another. In over one-third of the cases trading volume was more than double the number of shares outstanding.

Given the dearth of evidence about the size of damage claims, we estimated the potential damage awards by taking the stock price decline from the date of the fraud to the revelation date, adjusting this price decline to the market, and then multiplying the resulting number by the number of shares traded during the relevant period.187 We used this measure on the theory that the stock price decline measures the damages caused by the fraud, although we recognize that it also includes the impact of the revelation of other bad news about the firm. An average decline of 47.8% in cases where bad news has been concealed, multiplied by the average trading volume of 199%, yields potential damages that represent 95% of the market value of the firm after the revelation date.188 If we use the average decline of 43.3% in all Fraud on the Market cases, and multiply it by 199%, the potential damages are 86% of the entire market value of the firm.189 The potential liability is thus enormous.

Whether imposing this liability on the enterprise promotes loss spreading depends on whether the number of victim shareholders exceeds the number of firm shareholders at the time the fraud is revealed.190 Although we were unable to determine the number of plaintiff and defendant shareholders, we were able to determine the potential number of plaintiff and defendant shares. Based on the volume of shares traded during the fraud, on average the number of potential plaintiff shares is nearly twice as large as the number of outstanding shares (defendant shares); in the median case trading volume equalled 131% of the number of outstanding shares in the firm. Although we suspect that this analysis overestimates the relative size of the plaintiff and defendant

187. These prices were adjusted to the market using the Dow Jones Industrial Average, as described above. See supra text accompanying note 127. We did not use the price decline for the period of 10 days following the revelation date, because it appeared that in many cases considerable leakage of the bad news occurred prior to the revelation date. Despite the length of the test periods, we believe that the presence of other bad news about firms generally should be offset by good news in a portfolio of this size, so that the price declines are primarily, if not exclusively, attributable to the bad news concealed by the fraud, and to the news of the fraud itself.

188. See infra Table 3.

189. See infra Table 3. We recognize that these numbers may overstate the magnitude of the firm's expected liability. The volume of shares traded during the fraud will exceed the number of shares represented by the plaintiff class if many members both purchased and sold during the period of the fraud, and the price did not fall during that period. In this case, these shareholders would not have been injured by the fraud. It is important to note, however, that the number of shares represented by the plaintiff class can exceed the firm's outstanding shares at the time of revelation if the firm's stock price declined during the period between the fraud and its revelation. In this case the shareholders who sold during the period of the fraud can sue for damages, as can those who purchased stock from these shareholders (if the stock price continued to fall).

190. The loss spreading issue depends on the number of shareholders at the time the fraud is revealed, and not the number at the time the firm's liability is established, because when the fraud is revealed, the market price of the stock will fall to reflect the firm's expected liability.
classes, the evidence suggests that in general plaintiff shares outnumber defendant shares. Consequently, enterprise liability for Fraud on the Market usually shifts losses from a larger group onto a smaller group, thus concentrating losses instead of spreading them. Accordingly, if we wish to spread losses, agent liability, which, in the event of agent insolvency leaves the plaintiffs bearing most of the losses, is the superior rule.

We were surprised by the relationship between the average number of shares traded during the period of the fraud and the outstanding shares because it suggests a huge potential wealth transfer from revelation-date shareholders to the members of the plaintiff class. The surprisingly large potential wealth transfers result from the liquidity of American securities markets, the relatively high trading volumes observed in these companies, and the length of time the fraud typically went undetected. Judicial opinions almost invariably ignore this wealth transfer phenomenon.

In addition, if a significant number of these cases result in either judgments for the plaintiff class or substantial settlements, the result is a transfer of wealth from existing shareholders in the firm at the revelation date to former shareholders who may have held shares representing more than the total outstanding shares of the firm. In publicly held companies this would mean that a small group of passive investors would partially compensate a large group of similarly situated investors, when in fact, both groups are without fault. Accordingly, enterprise liability is inconsistent with the goal of loss distribution.

Moreover, the primary victims in the plaintiff class may be those who bought while the fraud was in effect and remained as shareholders after the revelation date. Therefore, under enterprise liability some existing shareholders are compensated at the expense of the remaining

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191. See supra note 189.
192. The number of shares represented by the plaintiff class can exceed the number of shares outstanding when the fraud is revealed. See supra note 189.
193. The loss relevant to this analysis is the unfunded liability. See supra note 131.
194. See, e.g., the comments of Judge Friendly (quoted supra note 41) in SEC v. Texas Gulf Sulphur Co., 401 F.2d 833, 866-67 (2d Cir. 1968). This brings to mind the comments of Professor David Ruder on the first class actions involving a Fraud on the Market—the Texas Gulf Sulphur case in 1968. Ruder noted that if liability were imposed on the company from the date it failed to disclose valuable inside information until the revelation date, damages would have been approximately $390,000,000 or $150,000,000 more than the net worth of Texas Gulf. Even if liability were limited to the period from a misleading press release on April 12, 1964, until revelation of the true state of affairs on April 16, damages could amount to $84,000,000, still a substantial portion of the shareholder’s entire equity. David S. Ruder, Texas Gulf Sulphur—The Second Round: Privity and State of Mind in Rule 10b-5 Purchase and Sale Cases, 63 Nw. U. L. Rev. 423, 428-29 (1968).
195. As we pointed out earlier, the median period before discovery was 12 months, while the average was 16.3 months. See supra text accompanying note 170.
196. But see supra note 41.
197. See supra note 189.
198. Compensation would be partial because some of the plaintiffs also will be current shareholders, and thus will bear a pro rata share of the cost of the damage award.
shareholders, but as plaintiffs bear part of the cost of their own judgment. Where virtually all of the firm’s shares are owned by the plaintiffs, the result is, as we have mentioned, essentially equivalent to a distribution in complete or partial liquidation. 199 The only true winners in this situation are the lawyers.

V. CONCLUSION

United States securities laws enable injured shareholders to recover enormous sums from a firm for Fraud on the Market committed by the firm’s agents in the course of their employment. In recent years courts have undermined a firm’s ability to defend against such actions by permitting plaintiffs to employ the doctrine of respondeat superior in securities fraud cases, thus removing good faith as a defense. Enterprise liability for Fraud on the Market, however, is unwarranted. Fraud on the Market generally is committed by senior managers attempting to save their jobs, not trying to serve shareholders. Yet, enterprise liability allows plaintiffs to ignore the assets of these responsible agents and to proceed instead against the pool of assets held by the firm for the benefit of innocent shareholders, many of whom also were victims of the fraud. This use of enterprise liability cannot be defended on the ground that it promotes optimal deterrence; in fact, enterprise liability appears more likely to shelter individual wrongdoers from liability than to deter them. Neither risk spreading nor loss distribution arguments justify this rule. Rather, it appears that a rule of agent liability, combined with criminal liability, is the superior approach.

The switch towards agent liability is more easily accomplished than it might first appear. Courts could adopt in effect a rule of agent liability simply by rejecting the use of respondeat superior for Fraud on the Market and allowing corporate defendants to employ the good faith defense of the control person provisions of the securities acts. In this way issuers would be liable when fraud was a corporate policy designed to benefit shareholders, but would not be liable when fraud was initiated to serve agents’ own ends.

199. See supra text accompanying note 44.
## Table 1
### Types of Fraud Alleged

<table>
<thead>
<tr>
<th>Type of Fraud</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hiding Bad News:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>False positive statements in SEC filings &amp; press releases</td>
<td>71</td>
<td>64</td>
</tr>
<tr>
<td>Omission of bad news in securities offerings</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Omission of bad news in SEC filings &amp; press releases</td>
<td>21</td>
<td>18.9</td>
</tr>
<tr>
<td><strong>Hiding Good News:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omission of good news in securities offerings</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Omission of good news in SEC filings &amp; press releases</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>False negative statements in SEC filings &amp; press releases</td>
<td>4</td>
<td>3.6</td>
</tr>
<tr>
<td>False negative statements in securities offering</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Unclassified</strong>*</td>
<td>8</td>
<td>7.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>111</td>
<td>100.2**</td>
</tr>
</tbody>
</table>

* In some cases the decisions did not provide information about the nature of the fraud, while others involved denials of merger negotiations prior to the clarification of the law in *Basic, Inc.* One involved the only known payment of "hushmail."

** This totals 100.2% because of rounding.
<table>
<thead>
<tr>
<th>Type of Fraud</th>
<th>Number</th>
<th>Percentage*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>False Positive Statements by Issuers in SEC Filings &amp; Press Releases:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statements to conceal declines in earnings</td>
<td>47</td>
<td>50.5</td>
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<td>Optimistic statements of business developments</td>
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<td>14.0</td>
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<tr>
<td>Projections of sales and earnings</td>
<td>3</td>
<td>3.2</td>
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<tr>
<td>False projections until insiders can sell out</td>
<td>3</td>
<td>3.2</td>
</tr>
<tr>
<td>False positive statements by management in proxy fight</td>
<td>1</td>
<td>1.1</td>
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<tr>
<td>False financial statements</td>
<td>4</td>
<td>4.3</td>
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<td><strong>Omission of Bad News in SEC Filings &amp; Press Releases:</strong></td>
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<tr>
<td>Omission of adverse business developments</td>
<td>13</td>
<td>14.0</td>
</tr>
<tr>
<td>Concealment of bad news until insiders can sell out</td>
<td>3</td>
<td>3.2</td>
</tr>
<tr>
<td>Concealment of self-dealing and illegal acts</td>
<td>5</td>
<td>5.4</td>
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<tr>
<td><strong>Third Party Frauds:</strong></td>
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<td></td>
</tr>
<tr>
<td>Against issuers for assisting insiders’ manipulation</td>
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<td>1.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>93</td>
<td></td>
</tr>
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</table>

* Percentages exceed 100% because there were multiple claims in some cases.
<table>
<thead>
<tr>
<th>Type of Fraud</th>
<th>Number Cases</th>
<th>Average Percent Decline*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>False Positive Statements by Issuers in SEC Filings &amp; Press Releases:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statements to conceal declines in earnings</td>
<td>21</td>
<td>42.6</td>
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<td>Optimistic statements of business developments</td>
<td>12</td>
<td>43.7</td>
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<td>Projections of sales and earnings</td>
<td>2</td>
<td>47.2</td>
</tr>
<tr>
<td>False projections until insiders can sell out</td>
<td>1</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>Total False Positive Statements</strong></td>
<td>36</td>
<td>42.6</td>
</tr>
<tr>
<td><strong>Omission of Bad News in SEC Filings &amp; Press Releases:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omission of adverse business developments</td>
<td>7</td>
<td>47.4</td>
</tr>
<tr>
<td>Concealment of bad news until insiders can sell out</td>
<td>1</td>
<td>30.2</td>
</tr>
<tr>
<td>Concealment of self-dealing and illegal acts</td>
<td>1</td>
<td>68.3</td>
</tr>
<tr>
<td><strong>Total Omissions</strong></td>
<td>9</td>
<td>47.8</td>
</tr>
<tr>
<td>Average Stock Price Decline</td>
<td></td>
<td>43.3</td>
</tr>
</tbody>
</table>

* Stock prices were adjusted to account for market movements using the Dow Jones Industrial Average.
### Table 4
Defendants in Cases Involving Financial Statements Alleged to Conceal Declines in Earnings

<table>
<thead>
<tr>
<th>Defendants</th>
<th>Number of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officers</td>
<td>38</td>
<td>80.9</td>
</tr>
<tr>
<td>No one other than issuer</td>
<td>4</td>
<td>8.5</td>
</tr>
<tr>
<td>No one other than issuer and third parties outside firm</td>
<td>3</td>
<td>6.4</td>
</tr>
<tr>
<td>Nonofficer employees</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Outside directors</td>
<td>14</td>
<td>29.8</td>
</tr>
<tr>
<td>Major shareholders</td>
<td>5</td>
<td>10.6</td>
</tr>
<tr>
<td>Others (accountants, brokers, attorneys, etc.)</td>
<td>28</td>
<td>59.6</td>
</tr>
</tbody>
</table>

### Table 5
Defendants in Cases Involving Allegations of Omissions of Adverse Business Developments and Concealment of Illegal or Self-Dealing Acts

<table>
<thead>
<tr>
<th>Defendants</th>
<th>Number of Cases</th>
<th>Percentage*</th>
</tr>
</thead>
<tbody>
<tr>
<td>No one other than issuer</td>
<td>7</td>
<td>36.8</td>
</tr>
<tr>
<td>No one other than issuer and third parties outside firm</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Officers</td>
<td>12</td>
<td>63.2</td>
</tr>
<tr>
<td>Nonofficer employees</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Outside directors</td>
<td>2</td>
<td>10.5</td>
</tr>
<tr>
<td>Major shareholders</td>
<td>1</td>
<td>5.3</td>
</tr>
<tr>
<td>Others (accountants, brokers, attorneys, etc.)</td>
<td>4</td>
<td>21.3</td>
</tr>
</tbody>
</table>

* Percentages exceed 100% because multiple defendants were named in many cases.
### Table 6
**Defendants Named in Fraud on the Market Cases**

<table>
<thead>
<tr>
<th>Defendants</th>
<th>Number of Cases</th>
<th>Percentage of Total Cases*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issuer</td>
<td>88**</td>
<td>80.7</td>
</tr>
<tr>
<td>No one other than issuer</td>
<td>21</td>
<td>19.3</td>
</tr>
<tr>
<td>No one other than issuer and third parties outside firm</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td>Officers of issuers</td>
<td>78</td>
<td>71.6</td>
</tr>
<tr>
<td>Nonofficer employees</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Outside directors</td>
<td>43***</td>
<td>39.4</td>
</tr>
<tr>
<td>Major shareholders</td>
<td>20</td>
<td>18.3</td>
</tr>
<tr>
<td>Others (accountants, brokers, attorneys, etc.)</td>
<td>45</td>
<td>41.3</td>
</tr>
</tbody>
</table>

* Percentages exceed 100% because multiple defendants were named in many cases.

** In at least nine cases (8.2%) the issuer was not named a defendant because it was involved in bankruptcy proceedings. Because we found that approximately 25% of the issuers were bankrupt, it seems likely that bankruptcy explains the absence of the issuer as a defendant in most of these cases.

*** Twelve of these cases may involve inside rather than outside directors, but the reports do not allow us to discriminate.

### Table 7
**Types of Cases in Which Outside Directors were Sued**

<table>
<thead>
<tr>
<th>Type of Charges</th>
<th>Number of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>False financial statements</td>
<td>17</td>
<td>54.8</td>
</tr>
<tr>
<td>Concealment of conflicts of interest</td>
<td>9</td>
<td>29.0</td>
</tr>
<tr>
<td>No information</td>
<td>2</td>
<td>6.4</td>
</tr>
<tr>
<td>General fraud allegations</td>
<td>3</td>
<td>9.7</td>
</tr>
</tbody>
</table>
### Table 8
**Settlements and Judgments Reported**

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Amount of Judgment/Settlement ($000)</th>
<th>Market Value of Company ($000)</th>
<th>Award as Percent of Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple Computer</td>
<td>100,000</td>
<td>1,323,153</td>
<td>7.6</td>
</tr>
<tr>
<td>Pepsico</td>
<td>22,000</td>
<td>3,947,527</td>
<td>0.6</td>
</tr>
<tr>
<td>Comserv</td>
<td>4,000</td>
<td>10,314</td>
<td>38.8</td>
</tr>
<tr>
<td>Dorchester Gas</td>
<td>1,037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saxon Corp.</td>
<td>20,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warner Communications</td>
<td>10,300</td>
<td>3,739,375</td>
<td>0.3</td>
</tr>
<tr>
<td>Cenco, Inc.</td>
<td>19,250</td>
<td>96,250</td>
<td>20.0</td>
</tr>
<tr>
<td>Union Carbide</td>
<td>31,730</td>
<td>2,308,444</td>
<td>1.4</td>
</tr>
<tr>
<td>Ferrovanadium Corp.</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 9
**Amounts of Damages Sought by Plaintiffs**

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Market Value of Company ($000)</th>
<th>Amount Claimed ($000)</th>
<th>Claim as Percent of Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha Industries</td>
<td>106,099</td>
<td>37,482</td>
<td>35.3</td>
</tr>
<tr>
<td>Hospital Corp. of America</td>
<td>2,472,764</td>
<td>1,500,000</td>
<td>60.7</td>
</tr>
</tbody>
</table>