TELLING ALL: THE SARBANES-OXLEY ACT AND THE IDEAL OF TRANSPARENCY

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I. ON THINKING ABOUT DISCLOSURE

When I mentioned my participation in this symposium, a visiting German law student asked what my topic was. "Disclosure," I replied, "under the

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I thank the Michigan State Law Review and the Michigan State University College of Law for organizing the conference, and for publishing this symposium issue of the Law Review. My thanks are also due to Bobby Ahdieh, Oline Brandes, Brandon Becker, Bill Carney, Jesse Fried, Joseph Franco, John Kenneth Galbraith, Jean-Marc Gollier, Mae Kuykendall, Frank Partnoy, Pierre Schlag, Jack Schlegel, an unknown reader at the Australian Stock Exchange, and the Finance Transactions Colloquium at UB for, as the case may be their mere interest in, indulgence for, or comments on various aspects of this argument. In converting this talk into a somewhat more substantial paper, I have made a few revisions and additions in order to flesh out the argument, and I have added slight bibliography, but I have retained much of the insouciant tone. The research assistance of Lisa Danish is gratefully acknowledged. The mistakes are all mine.

Sarbanes-Oxley Act,[1] which is the law that Congress passed in response to Enron and similar scandals." I thought to myself, a bit smugly perhaps, that my answer was a model of professorial clarity, and I was well on my way to giving an elegant talk. My bubble soon popped.

"Disclosure?" she asked, "I don't know that word. What is it in German?"

I speak German pretty well, or used to, but I couldn't think of the word, and found myself explaining rather than translating. I reasoned to myself that certainly the Germans have publicly traded securities, and so disclosure, and so, no doubt, a word . . . . Recourse to a pocket translator illustrated the difficulty. *Bekannt machen*, to make known, was too general and casual. *Enthüllung* was worse, with the associations of personal intimacy that "confide" has in old novels. After playing with synonyms of synonyms, we settled on *offenlegen*, literally to lay open, and so to make public.

"So," my student friend offered helpfully and with the civil lawyer's faith in clear language, "the law must start by defining what must be made public."

"Indeed," I replied. "As we've been trying to do since the 1930s, but it is very complicated. Entire legal practices are built up around this question of what must be disclosed. We have repeatedly discovered that the existing understandings were not quite adequate, and so we have written more laws, because, after all, there is nothing like more law for clarifying things. So the question is whether this time, with Sarbanes-Oxley, we've gotten it right."

To be slightly less flippant: it is a little difficult to imagine that somehow, after almost seventy years of trying to mandate appropriate levels of disclosure, a hastily drafted statute will cause the security markets to be properly informed. Later in this paper, I want to spend some time thinking about what it means even to talk about getting disclosure right. How would we even know if our rules for disclosure were correct? Supreme Court Justice Potter Stewart said of pornography that he knew it when he saw it,[2] but good disclosure seems to be the opposite: after an Enron, or a Worldcom, we conclude that disclosure was inadequate (or else prices would not have been bid up so high, and there would not have been a crash). We thus know what disclosure is when we don't see it. More generally, we find it easier to recognize what we broadly call securities fraud, at least after the fact, than to define disclosure ex ante. While I am all for learning from mistakes, and I myself have offered an analysis of Enron,[3] there is a certain intellectual

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1. Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (to be codified at scattered sections of 15, 18, 28 & 29 U.S.C.).
2. *See* Jacobellis v. Ohio, 378 U.S. 184, 197 (1964) (Stewart, J., concurring).
3. *See* David A. Westbrook, *Corporation Law After Enron: The Possibility of a Capitalist Reimagination*, 92 GEO. L.J. 61 (2003).

modesty, not to say impoverishment, to approaching law in terms of its failures. Perhaps we should devote less effort to post-mortems, and instead try to think harder about what we are trying to achieve with our capital markets.

It must be admitted that after Enron and other spectacular accounting scandals, it is a little difficult not to think about failure. Expressions of anxiety about the success of our corporation and security law are ubiquitous. This very symposium entitles itself: *In the Wake of Corporate Reform: One Year in the Life of Sarbanes-Oxley – A Critical Review.* Other conferences and symposia, no doubt less interesting than ours, are similarly concerned about the state of corporation law. For example, at the upcoming meeting of the American Association of Law Schools, the section on business associations will hold a session entitled *Is It Broken and Can We Fix It? Corporate Governance After Enron.* What is flatteringly referred to as "the literature"—most urging some set of reforms, with the usual counterpoint of scholars criticising any reform undertaken by any government, or at least counselling caution, all so lawyerly—is growing by leaps and bounds. At least judging by the prominence in law reviews, corporation law is more interesting than it has been in many years, perhaps ever.

All of this attention, which I personally appreciate, might cause a cynic to question how genuine the concerns of the corporation law professoriate are. After all, it is hard to imagine attending, much less publishing, a conference entitled *Corporate Governance: A Celebration of Perfection*, or a symposium called *A Year of Business under the Sarbanes-Oxley Act: An Appreciation of a Masterpiece of Legislative Drafting.* It is almost inconceivable that law professors would announce that corporate governance, or any other area of the law, was solved, free of difficulty, perfected. The modern American law professor defines herself in terms of a critique of the status quo, combined with a proposal for reform. When could corporation law professors say that corporate governance is flawless? To look across the aisles at other sub-disciplines, when could constitutional law professors say that democracy has been achieved, or evidence professors that trials produce truth? If the problem is solved, then the research is, or ought to be, finished. To use the economic jargon, professors are incentivized to perpetuate, rather than solve or ignore, the problems that define their sub-disciplines. From this perspective, it is unsurprising that we have not really defined disclosure, that we speak of it mostly in the negative, and that we have very little idea (beyond the tautological) of what things must be made public. We mumble for good reason, and if I were consistent, I would stop at this juncture.

Nonetheless, I am going to try and make three rather substantive points about disclosure. First, we could try to understand disclosure in a more affirmative, and more principled, fashion than we now do, which amounts to concluding, after a crash, that disclosure was inadequate, i.e., that certain things an investor would have reasonably wanted to know were not revealed. Therefore, I will try to define disclosure in terms of ideas basic to modern finance. With such an understanding, *in theory*, we should be able to recognize whether a new law, such as the Sarbanes-Oxley Act, actually improved disclosure.

My second and most important point is that the understanding of disclosure in terms of theoretical finance offered here is pretty much a failure. While fun and maybe even correct as a matter of finance theory (what that says about our theory I leave to the reader's mercy), the finance understanding will not answer the perennial question of whether the Sarbanes-Oxley Act or any other law mandating the provision of information to the financial markets is worth the cost and bother. Some of the failures of the financial theory of disclosure offered here are practical, the familiar sorts of problems that arise when one attempts to see one's models in the world. More fundamentally, defining disclosure in terms of finance requires a close correlation between disclosure and efficiency, and it appears unlikely that such a correlation could be established. More deeply still, the understanding of disclosure suggested here—and deployed in most finance theory—is fatally dependent on oversimplification of how communication works.[4] Nonetheless, those who believe the teachings of finance may be convinced, and the ideas are great fun. The "utility" of the thought experiment set forth here is essentially philosophical; it helps make our legal commitments explicit.

Third, for those who, like myself, are skeptical that prices can ever be made very true, the Sarbanes-Oxley Act may, in spite of everything, be on the right track.

II. DEFINING DISCLOSURE IN TERMS OF FINANCE

A. The Sarbanes-Oxley Act's Reliance on Disclosure for Corporate Governance

As corporation and securities law has done since the Thirties, the Sarbanes-Oxley Act establishes both internal and external institutional mechanisms in order to protect investors. Within the firm, the directors monitor, on behalf of shareholders, the activities of managers. The Act therefore devotes considerable attention to the qualities of directors and to their relationship to the publicly listed firm. In general, the Act requires more independence on the part of directors than state corporate law had previously

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4. *See* DAVID A. WESTBROOK, CITY OF GOLD: AN APOLOGY FOR GLOBAL CAPITALISM IN A TIME OF DISCONTENT (2003); *see also* Westbrook, *supra* note 3.

required.[5] Thus, in the longstanding debate over whether directors should be disinterested or knowledgeable, the Act opts for disinterested.

The congressional preference for independent directors is by no means obviously prudent. The problem is that directors require two virtues that tend to be reciprocals of one another, namely a critical objectivity (lack of interest) and particular knowledge of a firm. The ideal director may thus be situated somewhere along a continuum, defined at one end by the truly independent director, who is likely to know less about the firm and be relatively unbiased, and on the other end by the director with an employment, shareholder, or other substantial direct interest in the firm, who is likely to have incentive and opportunity to know a lot about the firm, but who by the same token is more likely to have his judgment skewed by his very interest. The Sarbanes-Oxley Act clearly opts for independence, and thereby takes the risk of minimizing knowledge. Indeed, Enron itself appears to have had relatively little conflict of interest on its board of directors, and so it was by no means obvious that the way to prevent future cases like Enron was to require more director independence; Congress might have tried harder to require director knowledge.[6]

As Jeffrey Gordon has pointed out, the Act's preference for relatively independent, and inevitably, relatively ignorant directors is likely to make an informed equity market that much more important to corporate governance.[7] Independent directors, like investors, will have to base their decisions largely on what management tells them and will have little other basis on which to base their judgments. The Act thus makes the central internal institutional mechanism for shareholder protection, the board of directors, more dependent on the intentional disclosure by management, just like the primary external mechanism, a well informed stock market.

In practice, of course, this distinction between internal and external mechanisms of shareholder protection is a bit artificial. The "external" mechanism of the stock market—and the associated market for corporate control—has been internalized through so-called performance based compensation schemes. To be explicit about a mechanism no doubt familiar to most of this audience: the equity market disciplines managers by affecting stock prices; good management, which, by definition, means managers who do well for the company and its shareholders, is rewarded when the price of

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5. *See* Sarbanes-Oxley Act §§ 301-305 (to be codified at 15 U.S.C. §§ 78j-1, 78u(d)(5), 7241-7243).

6. Despite the heated language of the Senate Report. *See* S. REP. NO. 107-70, at 24 (2002).

7. *See* Jeffrey N. Gordon, *Governance Failures of the Enron Board and the New Information Order of Sarbanes-Oxley*, 35 CONN. L. REV. 1125, 1129 (2003).

the company's stock rises. Such managers keep their jobs, perhaps earn larger bonuses, and their own equity-based compensation is more valuable. Conversely, managers who do a bad job for their company are punished. As Enron so clearly demonstrated, however, in order for the stock market to assess the fortunes of the company, and hence the quality of management, the market must have true information about the progress, or decline, of the company. Market discipline of corporate governance—which is also the mechanism that the Sarbanes-Oxley Act implicitly uses to compensate for its reliance on disinterested, but less informed, directors—thus depends on transparent accounting. Consequently, the Act attempts to improve the quality of information available to the market in a number of specific ways, for example, by imposing new regulations on accounting firms,[8] by requiring that managers certify their financials,[9] by requiring that companies adopt corporate codes and register them, by being more prompt in reporting their contractual obligations,[10] and by being far quicker in reporting changes in their business prospects.[11] More broadly, the Act responds to the essentially microeconomic (if unfortunately widespread) concern for corporate malfeasance by using what this paper argues is an essentially macroeconomic tool, the regulation of disclosure requirements, and hence the securities markets writ large.

B. Discrete Silences Over Disclosure

To considerable extent, the Sarbanes-Oxley Act is a direct response to Enron.[12] Many of its provisions, including those listed above, were implemented in order to make illegal the particular forms of chicanery that Enron employed. In so doing, however, the Act inevitably raises the question with which this paper began and with which we have been wrestling since the

8. *See* Sarbanes-Oxley Act §§ 104, 106, 108, 201-209 (to be codified at 15 U.S.C. §§ 77s, 78j-1(f) to (l), 7731-7734).

9. *See* Sarbanes-Oxley Act § 301 (to be codified at 15 U.S.C. § 78j-1(m)). This is hardly new. *See* Donald C. Langevoort, *Managing the "Expectations Gap" in Investor Protection: The SEC and the Post-Enron Reform Agenda*, 48 VILL. L. REV. 1139, 1156-57 (2003).

10. *See* Sarbanes-Oxley Act § 906 (to be codified at 18 U.S.C. § 1350).

11. *See* Sarbanes-Oxley Act § 409 (to be codified at 15 U.S.C. § 78m(1)). The deterrence/ enforcement mechanisms may be understood as sticks; the point is not to punish people, but to encourage them to fulfill the affirmative obligations imposed on them elsewhere in the securities law and regulation.

12. *See, e.g.*, Michael A. Perino, *Enron's Legislative Aftermath: Some Reflections on the Deterrence Aspects of the Sarbanes-Oxley Act of 2002*, 76 ST. JOHN'S L. REV. 671, 73 (2002) ("Act simply follows headlines from Enron and other corporate scandals").

'33 Act:[13] what information must be disclosed by a company that wishes to offer its securities to the public? At this level, the Sarbanes-Oxley Act thus promises a substantive refinement of the old idea that financial markets work better with a certain amount of mandatory public disclosure. Those at all familiar with securities law discourse will be unsurprised to find that, at least by its terms, the Act provides no such refinement. As my opening vignette implied, bureaucratic evasion is at work in the familiar language we use to discuss disclosure. What does it mean to say—in the context of a policy debate—that information "must be disclosed"? Of course information must be disclosed if the law requires it, but the question is what should the law require. That our securities markets require "some degree of mandatory disclosure" is hardly news, but the question inescapably addressed by the Act and its implementing regulations is "what degree" of disclosure is to be required.

The politically obvious answer is that the new law mandates the provision of information at least to the degree necessary to prevent the market's correction, whether that be the Crash of '29 or Enron, neither of which were prevented by existing law. Crisis thus reveals the inadequacy of existing law, and partially justifies the passage of new law. By the time the new law is passed, however, the crisis which justified its passage may well be over, or largely over. The law thus addresses a situation that no longer exists. Moreover and more importantly, we must live under the new law. Thus an *ex post facto* justification for a regulatory regime, under which we expect to do business in the future, is at best very partial, and intellectually rather embarrassing.

Such regulatory regimes may, however, be perfectly workable. Regulators often have a pragmatic sense of what degree of disclosure they should be trying to or can achieve, and that sense may well stand in for a more principled, even articulable, position on what degree of disclosure is warranted, and what the benefits of such a degree of disclosure would be. Regardless of whether or not regulators have a position on the matter which, for political reasons, they keep to themselves,[14] as an intellectual (or democratic) matter we do not have a public discussion of the degree of disclosure we are trying to achieve, and why this set of regulations—as opposed to some other set—is likely to achieve that goal. What would it mean to define disclosure ex ante, in the abstract?

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13. Securities Act of 1933, ch. 38, 48 Stat. 74 (codified as amended at 15 U.S.C. §§ 77a-77aa (2000)).

14. *See, e.g.*, Gordon, *supra* note 7.

C. A Finance Understanding of Disclosure

Despite the after-the-fact and evasive character of securities policy discourse, some things can be said about its meanings. Securities law arises in response to crises "–manias, panics, and crashes," to use Kindleberger's elegant title.[15] As already suggested, because securities laws are efforts to prevent future crises, we may understand the affirmative meaning of such laws in terms of the structure of crises. To be very basic, a financial crisis involves the bidding up of an asset, and the precipitous repricing of that asset. The bidding up of an asset generally involves a great number of trades; financial bubbles are characterized by high trading volume. Second, by definition, the creation of a bubble and the bursting of the bubble are radical changes in price, that is, financial crises may be understood as examples of extreme volatility. Third, because the same asset was priced at wildly different levels within a relatively short time span, the price of the security cannot be said to reflect the security's intrinsic worth. Thus, because securities laws are passed in order to prevent financial crises, we may say that securities laws are designed to foster markets that are the opposite of bubble markets. Specifically, insofar as a securities law achieves its intentions, we might expect the better-regulated market to exhibit neither the feverish trading ("mania"), nor the volatililty associated with financial bubbles. We might even suspect that the law brought price and value into closer conjunction with one another ("improved price discovery").

How does securities law attempt these difficult tasks? Since the '33 Act, the federal government has required companies whose securities are publicly held to disclose information about themselves to the public. In response to many financial crises since the Thirties, the federal government has demanded still more information and demanded that companies grow still more transparent. But what does this mean? How transparent is transparent enough? Do the benefits from increased disclosure, or, more precisely, from compliance with a new set of regulations, outweigh the undoubted costs?

Suppose, for the moment, the possibility that the Sarbanes-Oxley Act or some other proposed regulation succeeded in realizing its ideals, that the market for a company's equity became, at last, "transparent." What would that mean? By definition, in a perfectly transparent market, investors would have all the information in the possession of the company that the investors needed

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15. *See* CHARLES P. KINDLEBERGER, MANIAS, PANICS, AND CRASHES: A HISTORY OF FINANCIAL CRISES (4th ed. 2000).

to price a security accurately.[16] As price discovery improves, prices would better express intrinsic value. As markets become more transparent, they become more efficient. Mandatory disclosure, the microeconomic regulation of individual actors, thus entails and helps realize a macroeconomic ideal, efficiency writ large. This is, of course, an ideal, but the Sarbanes-Oxley Act and all other laws entail ideals; norms. To put the same point in different terms, we do not pass laws without hoping for a benefit (nor is cost-benefit analysis possible without a benefit), and the benefit entailed in disclosure regimes is better markets.

In order to avoid confusion, let me return, for a moment, to the idea that securities law discourse is rarely very forthright. Mandatory disclosure is generally justified as an effort to prevent fraud, and in the aggregate, to protect investors. The Sarbanes-Oxley Act states that it is "[t]o protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws," and then, somewhat mysteriously, "and for other purposes."[17] Why not take the Act at its word, and understand it simply as a congressional effort to protect investors?

While the protection of investors is a laudable intention (at least within some bound entailed in our understanding of the assumption of risk rewarded by capitalism), justifying securities law purely on that basis is somewhat disingenuous. First, capitalism assumes the existence of risks. People lose money in markets. This does not mean that participants in a given market are not to be protected from behavior that is outside the rules of that market. In the context of the securities market, participants expect to be protected from "fraud" very broadly understood. But while traditional, it is a little misleading to read "the protection of investors" to mean "the protection of investors from fraud." Most forms of fraud are addressed by *ex post* regimes such as tort or criminal law, but all publicly traded companies have mandatory disclosure obligations. Unlike fraud, failure to meet one's reporting violations is illegal regardless of whether any investor was actually misled or even injured.

More importantly, the class of potential investors is in some respects the financial markets itself, and in our society, financial markets are pivotal governance mechanisms. The securities laws that inform the financial markets therefore have a public significance quite apart from whatever impact they may have on individual investors who are being protected. A simile may be helpful: understanding securities regulation in terms of the relatively private, and relatively comfortable, terms of investor protection is like understanding

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16. Yet one can imagine a market that is very "transparent," i.e., nothing is really hidden, and yet hard to value precisely. That, at any rate, has been my own experience in the real estate market.

17. Sarbanes-Oxley Act, 116 Stat. 745, 745.

campaign finance reform as an effort to provide a fair chance to political candidates—true, but not the most important truth. Americans seem to have difficulty acknowledging that finanicial markets, with all their inequalities, are a form of government. Securities policy discourse, at any rate, is strikingly denuded of explicitly political language. But the existence of a polite silence does not mean that the unmentioned is unimportant.

How do we know whether the Sarbanes-Oxley Act, or any disclosure regime, is realizing its political ideal, and making markets more transparent in fact, and hence more efficient? To put the problem slightly differently, many have pointed out that Sarbanes-Oxley imposes costs. But what about the benefits? All disclosure regimes impose costs on companies, but I think few businesses would want to return to the financial environment of the 1920s. Repeal of Glass-Steagal[18] was one thing, but repeal of the '33 Act would be quite another. I am aware of no politically serious proposals to abandon federally mandated disclosure. But within that context, how do we know whether or not a given regulation is sensible—that is, beneficial enough? To put the problem a third way, in terms familiar to academic finance, can we expect to see an improvement over Fisher Black's famous characterization of securities markets, i.e., that the value of a security was usually more than half of its price, and usually less than twice its price, i.e., that the market was very imprecise about what a security was worth?[19]

It is very difficult to determine when price and value are in close conjunction, and when they are not. As Black made so clear, value never announces itself—it is not clear how we could ever declare a market truly efficient. If we cannot know how efficient a market is, it would be surprising if we could know how transparent a market really is. Although we can measure how much companies are reporting, as Enron so convincingly demonstrated, reporting is not the same thing as informing. How can we measure the extent to which, if at all, reporting makes companies transparent, so they can be priced correctly, i.e., so that price converges on value and efficiency is achieved?

To confront this difficulty, I'd like to propose a thought experiment. Even if we cannot know, in any final sense, how transparent a given market really is, thinking done under the rubric of the efficient capital markets hypothesis (ECMH) may teach us a few important lessons about how to think about improved transparency, and as a result, how to evaluate a securities regulation. Recall the famous argument that a financial market cannot maintain a perfectly efficient equilibrium, because in a market they believe to

18. Banking Act of 1933, ch. 89, 48 Stat. 162.

19. *See* Fischer Black & Myron Scholes, *The Pricing of Options and Corporate Liabilities*, 81 J. POL. ECON. 637 (1973).

be efficient, marketplace actors do not have the incentives to acquire and process the information on which efficiency itself depends.[20] That is, as the informational efficiency of the market improves, the competitive benefits of research decline. As a corollary, as the efficiency of a market increases, one would expect to see the number of trades (specifically, those trades made in belief of an informational advantage) to decrease. By extension and all else being equal, the fully transparent (more efficient) market should have less trading than the partially transparent (less efficient) market.[21] In a fully transparent market, investors would have relatively little hope that a stock was undervalued, and so would appreciate at an extraordinary rate, and would therefore have less incentive to trade, in a word, to speculate. In the face of very good public knowledge, there is little room for speculation. As a security's price is believed to approach its true value, there is little reason to pay anything more, or less, than the asking price.

In such circumstances, the price of a security should converge on that predicted by the capital asset pricing model (CAPM)—diversified investors should be compensated at the market rate, plus a premium for their ability to tolerate the risk (beta) associated with particular stocks. Even in such a market, there would still be some trading, as the circumstances of enterprises and individual investor appetite for risk changed. But news (the preoccupation of ECMH), the volatility of particular enterprises (the preoccupation of CAPM), and the risk preferences of particular investors exist in a market regardless of how transparent the market in question is. Such factors, therefore, affect price independently of company disclosure. In less transparent markets, however, such as that for Enron stock, trades are not only driven by the factors just mentioned, but also by shifting opinions (or hopes or fears) about the security's fundamentals, matters which are subject to company disclosure. Because opinions may change very quickly, less transparent markets may provide incentives to trade that cannot—by definition—be present in transparent markets, where knowledge of an enterprise's fundamentals should go some distance toward grounding opinions, keeping hopes in check, and allaying fears.

Volatility, like volume, should be reduced by an increase in transparency, and for basically the same reasons. Presumably, if investors had known how exposed Enron was, and how little money it was actually making, they would not have bid up the price of Enron stock so high. If it had never achieved much altitude, the price of Enron stock could not have fallen very far. In short, consistently accurate pricing precludes the mania and correction that

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20. *See* Sanford J. Grossman & Joseph E. Stiglitz, *On the Impossibility of Informationally Efficient Markets*, 70 AM. ECON. REV. 393 (1980).

21. *But see infra* note 23.

constitute financial crises. More generally, if the price reflects the intrinsic value of an asset, there is little reason to pay much more, or much less, for the asset, than its asking price.[22] As a result, increases in transparency should cause us to observe increased price stability, and conversely, a lack of volatility.[23]

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22. The effect of an increase in transparency on price levels is not obvious. As suggested above, in the fully transparent market, one might expect a security's price to converge on that predicted by CAPM or one of its descendents. But even perfect transparency is unlikely to realize the theories of finance. The application of price theory depends on the determination of variables outside the scope of disclosure. Perfect transparency would not mean that investors knew anything more about new technologies, interest rates, systemic risk, and the like. To make matters worse, it seems quite possible that empirical measures of historical volatility (beta) have been influenced by a historical lack of transparency.

Approaching the question of price as a matter of compensation for investor's risk presents other difficulties. On the one hand, due to the reduction in uncertainty about the value of a security—which imposes anxiety and so cost upon investors—one might expect a security's price to go up as transparency increases. On the other hand, the price of many securities in contemporary markets may be systemically inflated by misreporting ("earnings management" and worse) which tends to make the company look better than it is. While hardly efficient, such misreporting seems to have caused excessive valuations of the stock of Enron, Worldcom, any number of internet companies, and so forth. More transparent markets, and hence the reduction of such misreporting, therefore may result in a reevaluation of many securities, and ultimately, lower share prices.

A behavioral approach raises similarly open-ended questions. In contemporary markets, the existence of uncertainty provides an opportunity to take advantage of the hope and ignorance of others ("a sucker is born every minute"), and that must be worth something. Moreover, investors may systematically overestimate their own acumen, that is, may value the chance to take advantage of someone more highly than the chance that they will be gulled. So perhaps moving to more transparent markets would depress the price of many securities. And so forth.

23. The text makes a few assumptions which are relatively modest in light of contemporary markets, but which should be made explicit. First, this thought experiment presumes that the status quo ante is not opaque, and that investors are in the market. Markets may be so opaque—even corrupt—that potential investors do not enter the market. The SEC traditionally, and often persuasively, has maintained that its regulation has increased the willingness to invest, and indeed, the U.S. equity markets are very broad. Thus one can imagine a regulation that increases transparency and so improves pricing, while at the same time boosting confidence in the market, causing new entry, and thereby boosting volume. Therefore, in understanding transparency and volume in inverse terms, one must correct for changes in the size of the investment pool. For example, one might look at trading activity on a per capita basis. Moreover, at least in the United States, where so many individuals are invested in the equity markets, it is difficult to imagine that there are many people with the wherewithal and appetite for risk required for investment in the equity markets, but who are deterred by a lack of transparency.

Second, a disclosure regime may make new information available to the market, thereby opening up new trading strategies and opportunities, and perhaps fostering increased volatility and volume, and hence deteriorating quality of price. Such circumstances ought, however, to

To generalize: we should understand mandatory disclosure regimes as the regulatory effort to increase transparency and thereby increase informational efficiency of markets. As the transparency of a market increases, and all else being equal, we should see a decrease in trading volume and in volatility. The financial understanding of disclosure offered here is congruent with the regulatory intention of the Sarbanes-Oxley Act and other securities laws: requiring the appropriate level of disclosure is thought to prevent mad buying (manias), i.e., excessive volume, the resulting bidding up of prices, and crashes, i.e., excessive volatility.[24] Conversely, it should be possible to measure the success of such a disclosure regime by noting the changes in the character of trading. If a change to a regulatory regime increases transparency, we should observe a lower volume of trades at steadier prices. Finance thus gives us a standard—at least in theory—with which to evaluate the success of the Sarbanes-Oxley Act and other reforms of our corporate disclosure regime: did they cause a steadying of trade in the affected securities?

III. SOME LIMITATIONS OF UNDERSTANDING DISCLOSURE IN FINANCIAL TERMS

A. Thinking and Seeing

Thought experiments are strange things. Famously, as we approach the speed of light, and assuming that the speed of light is observed to be constant regardless of the frame of reference, what would we observe? The focus on something which cannot be experienced, travel at the speed of light, allows us to think about what cannot be directly observed, but which might nonetheless affect observable phenomena. So while we have yet to travel anywhere near the speed of light, we have empirical confirmations of Einstein's special theory

be self correcting, as the market learns the truth about the company, and price and value converge.

Third, it is important to remember that this thought experiment defines disclosure in terms of its purpose, achieving transparency, which in turn is understood to be in terms of efficiency, i.e., the information in the possession of a company's management that would contribute to accurate pricing of the company's equity. Therefore simply making information available to the public is not, in and of itself, disclosure. Even true information can be presented in ways that are not transparent. Such information does not contribute to better pricing, and therefore are not here deemed disclosure.

24. The idea of a market approaching perfection offered here is also congruent with another more famous speculation, that of John Maynard Keynes on interest rates. *See infra* note 35.

of relativity.[25] With regard to the present problem—how should we think about disclosure—I was hoping that by thinking about the effects of something which evidently cannot be known directly—the accuracy of pricing (the relationship of price to value)—we might discover something which could be observed, and which would indicate increases or decreases in the accuracy of pricing, namely trading behavior. As I hope to have demonstrated, as a matter of the logic of financial theory, a real improvement in transparency should result in a more efficient market for securities. Such a market should be recognized to be more efficient, and therefore we should observe changes in trading behavior. Conversely, we should be able to look for changes in trading behavior to indicate whether a given regulatory change is contributing to transparency and hence efficiency.

But if we actually were to look for empirical confirmation, that is, if we were to attempt to apply the understanding of disclosure set forth here (an endeavor beyond the scope of this paper, as they say), to test the effectiveness of the Sarbanes-Oxley Act, we would immediately run into substantial practical difficulties. As already suggested, trading activity may reflect many variables other than information in the possession of the disclosing company. Suppose that a regulation is introduced, and suppose that shortly thereafter we observe the hoped-for reduction in volume of trades and volatility with regard to a given security. It would be very difficult to know whether and to what extent that change in trading behavior was caused by a rising belief that the truth about the company was known, and the extent to which that consensus could be credited to the regulation in question. Any number of factors may have affected trading behavior. The world is just too noisy to figure out whether an additional regulation—there are already so many—made a difference in the efficiency of a market.

Moreover, as behavioral economists are increasingly successful at suggesting, investors might not be very rational in the first place, that is, the entire idea of the efficient market may be overdone, which of course has ramifications for securities regulation.[26] If investors are not very rational, then even as the quality of information about a company improved, investors might (rationally) continue to speculate, not only on the uncertainty remaining about

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25. I took the occasion to (re?)learn from my old physics text. The special theory of relativity is empirically supported by phenomena including the time dilation in the decay of muons (fast moving subatomic particles), the relativistic shifts in the momentum of small particles as they are accellerated, and most dramatically, in the relation of energy to mass and velocity realized in fissile nuclear reactions. *See* RAYMOND SERWAY, PHYSICS FOR SCIENTISTS AND ENGINEERS WITH MODERN PHYSICS 897-919 (2d ed. 1986).

26. *See* Donald C. Langevoort, *Taming the Animal Spirits of the Stock Markets: A Behavioral Approach to Securities Regulation*, 97 NW. U. L. REV. 135 (2002).

the company, but on the trading patterns of other investors. Consequently, a market may never reach a level of transparency or efficiency sufficient to dampen trading volume or volatility. This possibility seems to comport with recent experience in equity markets, which have seen huge volume and substantial volatility in spite of the widespread availability of vast amounts of information. Perhaps markets may be very transparent, i.e., companies truthfully disclose all they know, and nonetheless remain so inefficient that speculative trading continues unabated.

Nor is the inefficiency of transparent markets a matter of accident. As well as the familiar difficulties posed by empirically evaluating models, or by the compromises that behavioral economics has forced upon claims to efficiency, the financial understanding of disclosure offered here suffers from its stunningly simple understanding of communication. Let me suggest some ways in which communication is complicated, and so provide some sense of why the ideal of transparency is, finally, as unobtainable as other aspirations which animate our laws, such as democracy and justice. (We will always be able to hold conferences.)

B. The Partiality of Disclosure

Disclosure, like accounting more generally, is a reductive process. Vast enterprises are reduced to a few numbers, coupled with several pages of text. Annual reports or 10-Q filings, although impressively detailed documents, are radical simplifications of the business organizations that they describe. Thus, in deciding "what must be made public," a company necessarily decides on ways that it can simplify and communicate its business. One must assume that companies will speak well of themselves, i.e., that disclosures will be systematically biased.[27] This bias need not be mendacious. It is unreasonable to expect the participants in an enterprise to be completely objective about the enterprise to which they have devoted themselves. (Objectivity, critical distance, is an intellectual virtue, which means that it is unevenly distributed and cannot be assumed.) Even if disclosures are made entirely in good faith, a summary or redaction of a firm's business is intensely subjective. The company frames its picture of itself, and photography is an art.

Does the fact that disclosures are necessarily partial and therefore more or less biased mean that a company's disclosures are not true? No, disclosures may indeed provide a true view of the company, just like photographs may indeed provide a true snapshot of an event, but such a view is inherently limited by its perspective; all communications are partial. A complete

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27. *See generally* Westbrook, *supra* note 3.

communication would simply replicate the reality that it sought to transmit, disclosure *à la* the Borges story of the aleph, in which the world was observable from every angle at the same time.[28] It is literally impossible to tell all.

If investors understand that communications are necessarily partial, it is difficult to imagine that they could think that any disclosure, however detailed and well-intentioned, had so successfully transmitted the truth about a company that the market for the security in question was approaching efficiency, and that therefore the security's price expressed its intrinsic value, and that therefore speculative trading was pointless. Rephrased, once the partiality of disclosure is acknowledged, it is difficult to imagine an information regime that was so convincing as to depress speculation. But a decline in speculation was the source of the reductions in volume and volatility that, as I suggested above, could be taken to indicate an increase in efficiency, and so the effectiveness of regulations requiring transparency.

As I have suggested already, the SEC is unlikely to be forthright about the ideal embodied in its disclosure regulations. (Perhaps the closest the SEC has come is in its argument for a pure "fraud on the market" theory of insider trading.) Nor, for that matter, is the Agency often likely to admit that current regulations, whatever they might be, do not already require that all be told. It is the Agency's critics, and more generally, critics of our capitalism, who are most forthright about the ideal of transparency, and who perhaps unwittingly make its dreamlike status is most obvious.[29] So, long before Enron, critics on the left argued that corporations did not disclose the cost of their operations on society and the environment, and that therefore the financial markets were ill-informed, and made socially suboptimal choices. After Enron, this proposition has seemed fairly strong, and so with the Sarbanes-Oxley Act we see disclosure requirements rise accordingly. But the argument is open ended: what could be sufficient information about society and the environment (about the development of history?) in order to evaluate whether a given corporation's disclosure of the impact of its operations was complete?

Nor is the dream of transparency as perfect information an ideal held only by regulators and by those who believe that current regulation does not go far enough—by what we might loosely call the left. Those who have faith in the efficiency of markets, and especially the use of new financial instruments to price—that is, to use the collective power of the market's

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28. *See* JORGE LUIS BORGES, THE ALEPH AND OTHER STORIES 1933-1969 (Norman Thomas di Giovanni trans., 1970).

29. *See* Kim & Michael Fortun, *Due Diligence and the Pursuit of Transparency: The Securities and Exchange Commission, 1996, in* PARANOIA WITHIN REASON: A CASEBOOK ON CONSPIRACY AS EXPLANATION 157, 187-89 (George Marcus ed., 1999).

capacity to gather and assess information—any eventuality, any risk, employ strong versions of transparency. Just like mandatory disclosure requirements, ECMH entails an ideal of communication. Indeed both ECMH and mandatory disclosure regimes base their claims to good governance on the management of information. The dream of perfect information expressed by ECMH has also been expressed legally, for example by lowering capital requirements or removing legal barriers to the consolidation of financial markets, and most famously and explicitly, by the Supreme Court in *Basic Inc. v. Levinson*.[30] At root in ECMH and most other expressions of faith in financial markets is an ideal of communication "eventually incorporating everything within the transparent domain of information."[31] Based on (ever closer to perfect) information, the meta-discourse of financial analysis would be true, that is, we could truthfully discuss prices. Prices themselves would also be true—faithful representation within faithful representation—because price would represent value. As a result, microeconomic decisions would distribute resources in accordance with human values, and in the aggregate, markets would go far toward producing the good society along the lines prophesied by Adam Smith. We would have a capitalism that we could affirm.

While dreams may be necessary for political life, and this particular dream may be required by our politics, we should acknowledge that this is a dream. Law professors and others "less embroiled in the actual traffic of information tend to romanticize what information is, how it is produced, and how it circulates and what it can become: a universal, all-telling language that can integrate the micro and the macro into one narration."[32] Financial policy discourse, at least in the academy, has rested on a radical idealization of what it is to communicate information, and so to the reception of information I now turn.

C. The Mulitiplicity of Readings

Courts have claimed that they understand disclosure in terms of what a reasonable investor would find relevant to an investment decision. This line of analysis has helped to sort out insider trading cases, in which insiders traded on the basis of information that was clearly relevant to an investor (because it motivated the insider's trades), and was equally clearly not available to the public. But while the merger at issue in the classic *Basic Inc. v. Levinson* or the mining strike in *SEC v. Texas Gulf Sulphur*[33] are indubitably significant

30. 485 U.S. 224 (1988).
31. *Id.* at 189.
32. *Id.* at 190.
33. 401 F.2d 833 (2d Cir. 1968).

facts that should be disclosed truthfully (*Basic*) and prior to trading by insiders who wish to trade based on that knowledge (*Texas Gulf Sulfur*), the existence of such specific and exciting facts does little to define the duty to disclose in general, which asks what "ordinary" information is relevant to a good investment decision. Securities law understandably has erred on the side of inclusiveness, and the size of disclosures has grown apace. In due course, regulators have come to focus on making disclosures understandable ("plain English"), realizing that too much information, or information delivered in impenetrable terms, is not useful to the investor, and therefore not really information at all. Disclosure involves striking a balance between saying too little and saying too much, between reasonable simplifications and obfuscation.

Securities law thus attempts to bridge a gap: companies are legally required to disclose, but investors decide. Regulators control what companies write, but they cannot control what investors read. They can do little more than hypothesize about the investing public (personified as the "the ordinary investor," nephew to the "rational man" of classic tort cases, no doubt) served by their regulation. But on what basis do investors actually decide what a stock is worth, or more precisely, whether they are willing to buy or sell a given security? How could such a question be answered? Real-time polls, perhaps conducted at the time of trading ("and now, a few questions from your regulator")? Even such a bothersome approach would be unlikely to produce much insight. Investors often do not know why they have invested as they have, or do not know in any sense more interesting than the obvious, tautological, or vague. As the recent dot-com bubble amply demonstrated, investors can find "reasons" for any price they are willing to pay. Our reasons for doing almost anything are complicated and hard to articulate, which is why self-knowledge is a difficult thing.

Different investors neither have the same reasons for assessing a security in one way or another, nor even understand a given disclosure in the same way. Indeed, the so-called "turn to interpretation" that has marked any number of disciplines in the latter part of the twentieth century has caused us to focus on how meaning is made by the recipient of a communication. Multiple readers means multiple readings. To put the point in financial terms, Warren Buffet and I both can read an income statement, but we do not read the same statement. (I like his reading better.) Indeed, a sophisticated reader is likely to read a single statement in different ways simultaneously.

The same point can be made by focusing on "the information" conveyed by a statement. At one level, we may speak of the data in a statement in terms of what it would take to reproduce the statement. So, for example, a Mozart sonata can be communicated on a few sheets of lined paper, i.e., is comprised by very little data. But what information does it contain? That question depends on who receives the communication. Mozart means different things—each of them true in their way—to an ordinary listener, to a professional musician, to a critic, and to Beethoven. To speak of the "information" conveyed to the market by Mozart's "disclosure," i.e., publication of sheet music, would be ridiculous. Nor does any one meaning make the others irrelevant. But while the subject may be less sublime, can we doubt that any description of a company, located within an industry, itself understood within overlapping social, economic, political, and environmental contexts, can be understood in many different ways, on many different levels? Disclosure thus results not in price discovery, but instead in congeries of opinions. The price of a security is an internally unstable construct. Sustained or fine-grained equilibria are impossible because the fine-grained agreement of opinions is unlikely and ephemeral. More simply, markets are slaves to fashion.[34]

Securities law has proceeded on the assumption that communication, and so disclosure, is a form of transport. A set of objects, information, is conveyed from the company to potential investors. Once we abandon this image of what it means to communicate, then we cannot assume that provision of the right information by companies will result in stable consensus on the right price among readers. The presence of truth is little reason to expect assessments to converge; fashions change. Because we cannot communicate the truth, and because we would not agree on it if we read it, the idea that disclosure can render companies truly transparent—and that equity markets will therefore be much more if not perfectly efficient—is wrong. Consequently, except perhaps in the most egregious of circumstances (and maybe Enron was such a case), we are unlikely to observe the evidence of increases in transparency, viz., reductions in volatility and volume, predicted above.

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34. A sort of parable for the intellectual effort that I've put forth: Towards the end of *The General Theory*, John Maynard Keynes argued that, over time, capital would increase, and as the supply increased, the price of capital, the market interest rate, would fall. The result of this historical process would be the end of the capitalist class of which Keynes was an ornament, an eventuality Keynes called "the euthanasia of the rentier." JOHN MAYNARD KEYNES, THE GENERAL THEORY OF EMPLOYMENT INTEREST AND MONEY 374-77 (1936). Quite apart from the fact that many more people live off the interest today than when Keynes wrote, there are any number of reasons to disagree in principle with Keynes' critical assertion, perhaps the willful daydream of an old man on the eve of another war, that "the demand for capital is strictly limited." *Id.* at 375. *See* JAMES BUCHAN, FROZEN DESIRE: THE MEANING OF MONEY 276-77 (1997). While not discussed by Buchan, not least of the reasons the demand for capital is unlimited is that capital – for our purposes, stock – is a mechanism of control. And while the demand for material goods may be limited, it is difficult to imagine satisfying the lust for power.

IV. CHASTENED EXPECTATIONS FOR DISCLOSURE AND THE SARBANES-OXLEY ACT

To retrace the steps of the argument thus far: a serious theory of disclosure would attempt to integrate financial disclosure with understandings of information, market performance, and most broadly, governance. Bits and pieces of such a theory are scattered throughout academic literature and indeed judicial decisions, but I know of no straightforward effort to evaluate mandatory disclosure in terms of its effect on trading behavior, and hence the quality of governance achieved by our markets.[35] In the second section of the paper, I undertook to use familiar ideas from financial theory to do just that. While perhaps intellectually pleasing, this definition seems to be of limited use, as discussed in the third section of this paper. Unsurprisingly, defining disclosure in terms of financial theory raises some familiar problems with the relationship between financial theory and actual markets. More fundamentally, however, such a definition raises perhaps less familiar problems internal to financial theory itself, in particular, its radical simplification of the nature of communication, and consequently inadequate theory of information. (Perhaps the bureaucrats are right to be evasive about the markets that mandatory disclosure regulations are designed to achieve, that is, to be nearly silent about the capitalism that provides their reason for being.) And so we return home from this little epistemological jaunt, a bit tired but none the worse for wear.

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35. There may be others, but the closest pieces that I can think of are Gordon, *supra* note 7, and Joseph A. Franco, *Why Antifraud Prohibitions are Not Enough: The Significance of Opportunism, Candor and Signaling in the Economic Case for Mandatory Securities Disclosure*, 2002 COLUM. BUS. L. REV. 223. Gordon understands that the SEC is attempting to improve price, but worries that in so doing, they will limit the discretion of management to withhold information that might be valuable, notably in merger talks, and that therefore managers will be disadvantaged and will not make money for shareholders. Two thoughts: first, while a disclosure rule may change the terms of the negotiation, and hence the price, it is difficult to see how this is more than mildly redistributive. Money lost by one side is gained by the other. Second, and far more importantly, Gordon acknowledges, and then simply ignores, the public significance of the capital markets. Similarly, based upon a very complete overview of the debates surrounding mandatory disclosure, Franco argues that a mandatory disclosure regime addresses the informational asymmetries between issuers and investors, and thereby enhances the efficiency of the market. But Franco never quite gets to a discussion of exactly what it would mean to say that informational symetry has been achieved, or how the efficient market (that his preferred solution is designed to foster) is to come about and operate. The SEC is quite correct to care about pricing; my only point is that from an intellectual and democratic (not to say political) point of view, it would be nice if we, and the Commission, were more forthright about our capitalism.

Where does this argument leave the question with which we began, "what must be made public"? Specifically, where does this leave the Sarbanes-Oxley Act? As a number of commentators have pointed out, the Act is less than it initially appears.[36] The Act makes illegal many things—including much of the behavior at issue in Enron—that were already illegal.[37] The Act specifies and often increases penalties, but this hardly seems like legislative innovation.[38] The Act also places affirmative duties on accountants, lawyers, and especially management, in order to ensure that disclosures are truthful. Under previously existing securities law, however, such actors were already liable for untruthful disclosures. Due to its redundant quality, the Act may seem to be mere political posturing, a sop thrown to a populace rightfully angered at getting ripped off by people who were already very rich.[39]

I would like to suggest, however, that the Act is a credible effort to serve a more principled purpose. The Act does not so much undertake to define *what* must be made public, but instead addresses *how* information is disclosed to the investing public. As noted above, financial reporting reduces the complex web of relationships that is a business to very few, ultimately rather simple, numbers, and relatively few pages of text. While Warren Buffet and I may not read an income statement in the same way, our readings rely on conventional understandings, tacit agreements about how things are done (GAAS) or reported (GAAP). Disclosure thus presumes public understandings that make communication possible. The Act attempts to encourage various actors to come up with better conventions for reporting business activities. Rephrased, the Act attempts to improve financial discourse.

Enron consistently operated outside received understandings of accounting. To some extent, Enron's unconventionality—and hence the opacity of its reporting—is due to a lack of agreed upon ways to account for some of Enron's more sophisticated transactions, a lack that Enron's management exploited by choosing unduly favorable accounting treatment for itself. In response, in a number of places, the Act reiterates and reaffirms

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36. *See, e.g.*, Lawrence A. Cunningham, *The Sarbanes-Oxley Yawn: Heavy Rhetoric, Light Reform (And It Just Might Work)*, 35 CONN. L. REV. 915 (2003).

37. *See The Fall of Enron: How Could it Have Happened?: Before the Senate Comm. on Governmental Affairs*, 107th Cong. 58, 103 (2002) (statement of Frank Partnoy); *see also id.*

38. *See* Sarbanes-Oxley Act §§ 802, 805, 807, 905, 1104, 1106 (to be codified at 15 U.S.C. § 78ff(a); 18 U.S.C. §§ 1348, 1519, 1520; 28 U.S.C. § 994 note).

39. *See, e.g.*, Larry E. Ribstein, *Market vs. Regulatory Responses to Corporate Fraud: A Critique of the Sarbanes-Oxley Act of 2002*, 28 J. CORP. L. 1 (2002).

existing conventions.[40] In a few sections, the Act establishes new conventions.[41]

Although, in places the Act is concerned with the substance of accounting, in the main the Act addresses those actors who are responsible for articulating and agreeing to the explicit and tacit understandings that allow financial communication to happen. Enron was a dramatic failure of business culture. Lawyers, accountants, investment bankers, especially the directors and managers of the firm, and others did not perform their roles properly. There appear to have been various reasons, including simple greed, conflicts of interest, and failure to understand. Perhaps most problematically, Enron's unconventionality was characterized as innovation, and lauded as being in the interests of shareholders.[42] Here again, the Sarbanes-Oxley Act's response is fundamentally conservative: the Act expounds upon the proper roles of various actors in our version of financial capitalism. While the Act imposes no one-size-fits-all duty, the Act makes clear that many people active in the capital markets are responsible to others, and even to the public. Such responsibilities often include the willingness to report one's activities, and more broadly, to act in such a way that others in the market can understand the nature of one's business. The Act is thus a reaffirmation of the standards of business culture.[43] No doubt there is not a lot new here; affirmations of tradition tend to be short on novelty. But after the long bull market and years of academic claims that self-interest was always self-correcting, Enron and other accounting scandals called for a reminder that the culture of American finance, like any culture, requires adherence to certain ground rules. In providing that reminder, the Sarbanes-Oxley Act may be judged a success.

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40. *See* Sarbanes-Oxley Act § 802 (criminal penalties for altering documents); § 903 (criminal penalties for mail and wire fraud); § 904 (criminal penalties for violations of the Employee Retirement Income Security Act of 1974); § 1106 (increased civil penalties under the Securities Exchange Act of 1934).

41. An example is the reporting of credit arrangements and contingent liabilities. *See* Sarbanes-Oxley Act § 401 (to be codified at 15 U.S.C. § 78m(i) & (j)). *See also* Gordon, *supra* note 7. In such isolated places, of course, the Act is in fact providing a substantive answer to the question with which we began, viz., "what must be made public?"

42. *See* Langevoort, *supra* note 9, at 1148-50.

43. A point made even more explicit in *SEC v. Worldcom, Inc.*, 273 F. Supp. 2d 431 (S.D.N.Y. 2003). *See also* Richard C. Breeden, Restoring Trust: Report to the Hon. Jed S. Rakoff, The United States District Court for the Southern District of New York (Aug. 2003), *available at* http://www.nysd.uscourts.gov/ RulingsofInterest.htm (last visited Feb. 11, 2004).