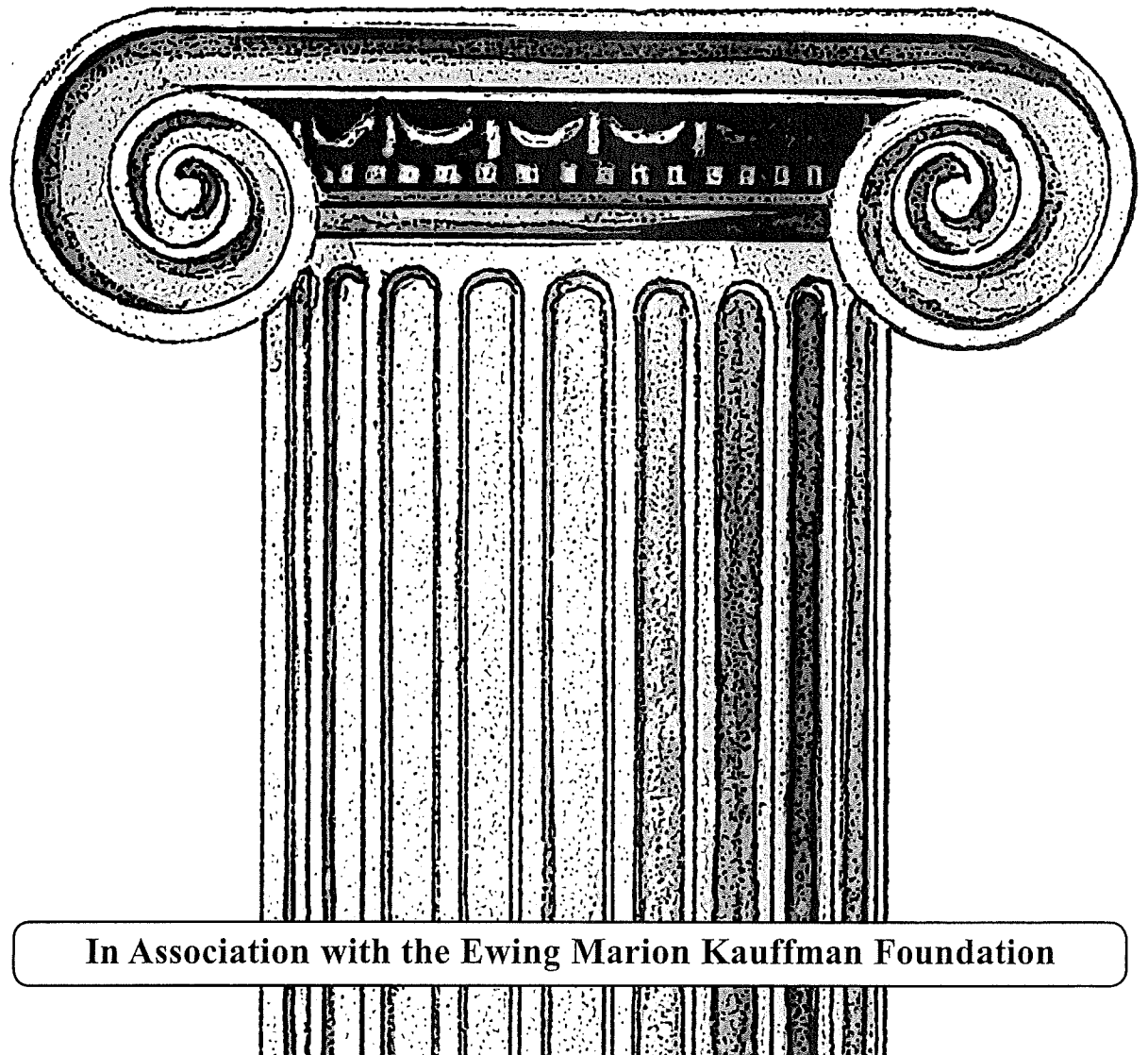




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3 Integrity and innovation in the public capital markets: a survey of the securities law literature

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3.1 INTRODUCTION: COMPELLING INFORMATION, OR PERMITTING INNOVATION?

In this chapter, I survey the academic securities law literature that bears on innovation and economic growth. As it turns out, such a task is somewhat difficult because the securities literature usually does not discuss innovation and societal welfare in explicit terms. Rather, because securities law is concerned with information and the functioning of the capital markets, there is a tendency to focus on two proxies for economic efficiency that are direct functions of the informational environment: liquidity and price accuracy.¹ More and better information tends to promote both liquidity and price accuracy, which often (though not always, as I will discuss) will in turn promote socially optimal economic production. More liquidity and greater price accuracy can imply a lower cost of capital for entrepreneurs, more efficient capital allocation, easier monitoring of managers, and other benefits, all of which lead to a greater degree of production, innovation, and economic growth. Thus, while the ultimate concern of the securities law ought to be the effect of the laws upon the real economy, for tractability's sake this is usually couched in terms of liquidity and price accuracy.

There is thus a substantial branch of securities law literature that explores how securities law provides the benefits of liquidity and price accuracy, and how best to maintain the requisite informationally-rich environment. This literature places a great emphasis on disclosing as much

¹ Liquidity, as used in this chapter, is the ease with which a security may be transacted owing to the informational environment of the market. Price accuracy is the extent to which market prices actually reflect the true underlying value of the security, as seen by an omniscient observer. These concepts are discussed in greater depth in the discussion of the Copeland & Galai (1983) and Glosten & Milgrom (1985) models in Section 3.2.

information with the greatest amount of credibility as possible; it tends to push for greater disclosure requirements, greater sanctions for fraud and managerial malfeasance, more controls on managers, and a disclosure process that ensures an equal dispersion of information among market players. This view is not just limited to academics; it has been a mainstay of the U.S. Securities Exchange Commission (SEC) and Congress, finding expression in calls for the preservation of market integrity, leveling the playing field, and investor protection.

One important manifestation of this approach to securities regulation – which might be termed a ‘market integrity’ approach – is a preoccupation with managerial malfeasance. The predominant characterization of the firm from the academy, the SEC, and Congress, is one of severe agency costs: left to themselves, managers will lie to boost their short-term compensation, trade on the firm’s proprietary information, pawn off substandard shares onto an unsuspecting investor public, or buy off accountants, underwriters, and other supposed gatekeepers in furtherance of the foregoing. All this undermines market integrity, impairing both the volume and credibility of disclosure that firms provide, starving the markets of the information needed to promote accurate pricing and liquid markets and, derivatively, reducing efficient investment in value-adding enterprises. In sum, if not properly pinned down with regulation, managers will lie to benefit themselves and expropriate shareholder profits, and the markets and wider economy will suffer as information disclosed by firms becomes non-credible.

This agency-cost lens suggests that regulatory oversight is paramount, to ensure that firms and executives properly toe the line. The Sarbanes-Oxley reforms, certainly, exemplify this view, with CEO/CFO certification, enhanced disclosure mandates, internal controls, accounting oversight, and enhanced white collar penalties.² This is, as well, the SEC’s current philosophy,³ and there are current proposals to extend the scope of the securities laws by bringing heretofore exempt private equity and hedge funds under the aegis of the mandatory reporting system.⁴ The ostensible benefit of this approach is that we will have fewer corporate frauds, less

² For an economic overview of Sarbanes-Oxley, see Butler & Ribstein (2006).

³ As the Wall Street Journal describes, the SEC ‘wants to demonstrate that there is a tough, new cop on the beat,’ in the wake of the Madoff scandal. Kara Scannell, “‘Urgency’ Drives SEC Crackdown,” *The Wall Street Journal*, August 12, 2009.

⁴ See, e.g., Edmund L. Andrews and Louise Story, ‘Geithner to Outline Major Overhaul of Finance Rules,’ *The New York Times*, March 25, 2009.

unreasonable corporate risk taking, and fewer instances of public outrage at what is admittedly often bad behavior.

This is arguably true (though arguably not true, too). But what is the cost of this approach? As a somewhat smaller securities law literature points out, vigilance against fraud and other managerial bad behavior will come at the cost of good risk taking – the sorts of innovations, ventures, and projects that actually help to grow the economy. This literature (which might be termed ‘innovation-oriented’) claims that, given the uncertainties inherent in business and in making disclosure about what the value of a firm will be tomorrow (which is ultimately what shareholders care about), regulation that seeks to extinguish securities fraud will tend to dissuade at least some beneficial activity.

Part of what this pro-innovation literature does is to combat the view that detecting managerial malfeasance is an easy matter: there is a tendency to believe that there is no cost to prohibiting fraud since firms and managers can simply choose not to lie. But a tough-on-fraud approach is problematic, because, unlike, say, a tough-on-murder approach, where the detection of the crime itself is trivial, the very nature of fraud crimes is that the subject of the crime, the lied-about fact or contingency, is difficult to verify. The reason that companies have to make reports to shareholders and the markets is because of the information asymmetry inherent in the corporate form’s separation of ownership and control. If we are going to prohibit frauds and swindles that are difficult to detect, even *ex post*, then in putting teeth in such a prohibition it is likely that we will catch within our nets not just the behavior intended to be proscribed, but a host of others as well. Interestingly, such over-broadness is explicitly spelled out in the law, with significant penalties imposed even without proving fraudulent conduct on the executive’s part.⁵

Another aspect of this pro-innovation literature is that it points out that informational richness, price accuracy, and liquidity – the fruits of a mandatory disclosure regime – are only imperfect proxies for what really matters, which is the real economy. It is not the case that as much information as possible, at any cost, is in our collective best interest. It is unsurprising that this should be true: if liquidity and price accuracy are merely proxies for economic growth and innovation, then blindly maximizing liquidity and price accuracy will not, in general, maximize growth and innovation. This literature tends to focus on the unintended

⁵ An example which has recently emerged as important is Section 304(a) of the Sarbanes-Oxley Act, which claws back executive bonuses in the event of a financial restatement.

consequences of regulation, and the negative real effects that disclosure regulation can have upon managerial behavior. Those in control of the firm – entrepreneurs or managers – are the ones in whom the ability to innovate is vested; fostering a climate of growth requires providing them the correct incentives to do so, which can well be upset by rules that force disclosure or punish risk-taking.

The goal of securities law, then, ought to be that of balance: enabling credible communication of information in the capital-raising process and allowing entrepreneurs to commit to an optimal level of disclosure and liquidity for secondary market traders, while refraining from going too far and maximizing disclosure and liquidity at the expense of value-adding innovations. How is this balance to be struck? How much disclosure is enough, how much regulation is optimal, and what respective roles should the state and private entities play in policing the marketplace? As the review of the literature in this chapter shows, we have not yet answered these questions, and the academy hosts substantial disagreement on all of these issues.

This chapter proceeds as follows. Section 3.2 discusses the economic theory of information and liquidity around which much of the legal literature revolves. It also discusses the limited extent to which liquidity, price accuracy, and innovation arise together, and the problems that arise in using liquidity and price accuracy as proxies for economic efficiency. Section 3.3 surveys the legal literature on securities law and innovation, which generally takes liquidity and price accuracy as its starting point. Section 3.4 briefly concludes.

3.2 LIQUIDITY, PRICE ACCURACY, AND INNOVATION

In this section, I describe the economic model of how information impacts liquidity and price accuracy, which much of the securities law literature adopts, if implicitly (and occasionally with some confusion). I also discuss a principal drawback of using this model in designing securities regulation: while policies that further liquidity and price accuracy may also further innovation, this relation does not always hold. In fact liquidity and price accuracy can come at the expense of innovation and efficiency.

3.2.1 The Basic Model

Liquidity – the ease with which a security may be transacted – is a general concept that encompasses a number of determinants, such as wealth

endowments, trading and communications technology, legal and contractual restrictions, and market structure. For present purposes, however, I focus on the determinant of liquidity that is most important to the role of securities law: information. In the economics of trading markets, liquidity is a function of the informational environment: the more widely dispersed information is, the more liquidity there is, and illiquidity is roughly synonymous with adverse selection and information asymmetry. Problems with liquidity – or the lack thereof – can arise in both primary and secondary sales of securities.

In secondary trading, adverse selection arises where some traders know more than others. From the classic work of Copeland & Galai (1983) and Glosten & Milgrom (1985), information asymmetry reduces liquidity in the form of increased trading spreads, which imposes costs on uninformed market participants. The mechanism for this effect is a type of winner's curse: where there is uncertainty regarding the security being traded, and where information is unevenly distributed throughout the trading market, uninformed traders will fear being on the losing end of a trade with a better-informed trader. Given the specific microstructure of the trading market, in which market makers stand ready to buy or sell a particular security, this fear of loss to informed traders generates the bid-ask spread, which is the excess of the price at which a market maker will sell over the price at which the market maker will buy. The spread protects the market maker from traders with better information, and the cost of this protection is ultimately borne by uninformed traders who, when they buy or sell depending upon their needs for investment or for ready cash, lose the amount of the spread on each buy-sell pair of trades. Thus, the bid-ask spread is a common measure of a market's illiquidity, and it represents the cost required to transact a security. At the extreme, information may be so unevenly distributed that the bid-ask spread is large enough that no one transacts, and the market completely breaks down.

In primary sales, illiquidity can arise either because of information asymmetry between the seller and the buyer, or because of asymmetry between buyers. In the famous Akerloff (1970) 'lemons' model of adverse selection, if the seller of an asset has more information about that asset than the buyer, the buyer would fear that the seller would only be selling the asset if it were of low value, which lowers the price that the buyer is willing to pay. This reduces the level of value at which the seller would keep the asset instead of selling it, which further reduces the willingness of the purchaser to pay, and so on. In the extreme case, only the lowest quality asset can be transacted; liquidity costs, in a sense, are so great that very few or no trades can occur. Less extreme cases lead to outcomes where sales may be made, but at a discount or subject to some costly verification technology.

Liquidity can be restored to the system if there exists a way to enable the seller to credibly communicate his information to the buyer.

Even where both parties to a transaction are equally informed, illiquidity may still arise because of the possibility that others in the marketplace know more. Where a firm is selling securities in the marketplace, for instance, it could be that information asymmetries exist among purchasers of the public offering. In such a case, analogously to the Copeland & Galai and Glosten & Milgrom models, uninformed traders may fear a 'winner's curse,' where they are awarded disproportionately high allotments of overpriced securities, since the more informed traders grab up the underpriced offerings (Rock (1986)). If that happens, capital becomes more expensive to firms to the extent that uninformed traders are needed to fulfill the firm's capital needs; firms will have to underprice their securities to attract uninformed investors to the offering. This underpricing, a well-documented phenomenon in IPO markets, represents a substantial cost of capital to issuing firms.

3.2.2 When Liquidity, Price Accuracy, and Innovation do not Converge

While the legal literature generally takes price accuracy and liquidity to be valuable steps on the way to promoting economic growth, what is often not acknowledged is that this relationship need not hold. Liquidity and price accuracy do not always go together. What is an even greater concern is that more liquidity and price accuracy do not necessarily lead to greater innovation and economic growth, and in fact the reverse may sometimes be true.

First, from the economic liquidity models, it turns out that accuracy implies liquidity, but liquidity does not imply accuracy. Suppose that prices are perfectly accurate with respect to all publicly and privately held information – that is, the price is 'right.' Then prices are fully informative, and there is no need to fear expropriation by traders who have access to better information. Thus, policies that achieve price accuracy also achieve liquidity (in the informational sense, at least). However, creating an informationally liquid market does not necessarily lead to accurate prices. Indeed, the elimination of informed traders would suffice to provide perfectly liquid markets, as everyone would know exactly the same amount (which might be little) and would have no fear of expropriation by a better-informed trader. Trading spreads are zero; the uninformed bear no information-related transaction costs, yet prices might be highly inaccurate. This trade-off is important, for example, in the literature on insider trading: eliminating insiders can improve liquidity, but may decrease price accuracy.

Second, and more importantly for the purposes of this discussion, policies that advance either liquidity or price accuracy (or both) do not

necessarily advance economic efficiency and innovation. Consider the following example, which involves the elimination of uncertainty at the expense of value. Suppose that an entrepreneur owns a firm that has assets worth \$10, and that this firm has a potential project of uncertain value: undertaking the project yields gains of either \$3 or \$5, each of which occurs with probability $\frac{1}{2}$. The expected value of the firm if the entrepreneur undertakes the project is then \$14, which is higher than the current value of \$10. Hence it is economically efficient for the entrepreneur to 'innovate' by undertaking the project. However, suppose further that while the results of the project will not be immediately apparent, the entrepreneur and some knowledgeable industry members (i.e., the informed traders) have a relatively good guess ahead of everyone else. In this case, the existence of the project, while unambiguously good for the overall economy, actually reduces both price accuracy and liquidity. Price accuracy is lower than it would be if the project did not exist because the price of the firm – the expected value of \$14 – is less precise than the known value of the firm if the project is not undertaken. Liquidity is similarly lower, since the entrepreneur and some market participants know more about the probability of success than do others; an uninformed market maker would have to charge a positive bid-ask spread given the existence of the project, while without the project the bid-ask spread would be zero.

Consider then a policy that maximizes price accuracy and liquidity: forbidding the entrepreneur from undertaking the project. This is patently not in society's best interests (the expected net loss to our economy is \$4), yet it is what a regulator focused narrowly on liquidity and price accuracy may well recommend. If this example seems trivial – after all, it is unlikely that the SEC would issue a rule prohibiting innovation – the same effect may well be accomplished by rules that are not at all far-fetched, such as strict liability for inaccurate disclosure under § 11 of the Securities Act of 1933. Returning to the example, if the entrepreneur were to sell the firm for its expected value of \$14 in an Initial Public Offering (IPO), under § 11 he may face liability in the 50 per cent likelihood that the value of the firm turns out to be only \$13. In effect, the entrepreneur is forced to bear firm-specific risk that he would rather offload to risk-neutral public market investors. As discussed in Spindler (2007), depending upon the penalty and the degree of the entrepreneur's risk aversion, this form of liability can result in not undertaking effort in the first place: the whole project may become unprofitable from the entrepreneur's ex ante, risk averse perspective. Thus, a rule such as § 11 may maximize liquidity and price accuracy, but at the expense of overall welfare.

This breakdown in the relationship between liquidity, price accuracy, and economic efficiency is somewhat troubling for the securities law.

Disclosure rules that militate for more and more credible information will tend to increase liquidity and price accuracy, and to an extent this is a useful instrumentality by which to increase overall economic production. But it is not always true that doing so has a beneficial effect, and it may be that increases in informativeness are good only up to a point or along certain dimensions, beyond which further increases are in fact bad. One meta-question, then, that the securities law literature should face is whether it is a productive enterprise to consider liquidity and price accuracy issues divorced from explicit recognition of social welfare effects. The failure to do so could lead to policies that maximize disclosure at the expense of the health of the economy.

3.3 HOW THE LITERATURE APPROACHES LIQUIDITY, PRICE ACCURACY, AND INNOVATION

Liquidity and price accuracy play a central role in theories of securities regulation and the usefulness of disclosure: an assumption of much of the literature is that liquidity and price accuracy are tractable way stations on the path to innovation and productive economic activity. In this section, I discuss how the legal academy has contemplated and rationalized this assumption, and the extent to which the literature has taken note of the potential divergence between goals of informational completeness and innovation. In Section 3.2.1, I discuss the legal literature bearing on the benefits of disclosure, liquidity, and price accuracy. In Section 3.2.2, I discuss the literature's debate regarding the proper methods of attaining liquid and accurate securities markets. In Section 3.2.3, I consider the literature that questions goals of informational completeness and instead looks to the efficiency effects of regulation.

3.3.1 The Benefits of Market Integrity

The securities laws are primarily concerned with disclosure, not the substantive merits of the securities being sold or traded. How do disclosure rules impact economic efficiency and innovation? As pointed out by, among others, Easterbrook & Fischel (1984), a primary effect of a liquid, informationally-complete market is that capital allocation is more efficient: if good firms can separate themselves from bad, they can obtain a lower cost of capital. Disclosure rules that ensure that signals of value are credible can thus help to overcome a lemons problem in the context of securities offerings.

However, periodic or ongoing disclosure would not appear justified by such a rationale. Firms are not constantly raising capital, and hence adverse selection would seem an insufficient explanation for disclosure outside of the direct capital-raising process. Following this line of reasoning, Stout (1988) has pointed out, in a welfarist critique of policies oriented toward pricing accuracy, that capital allocation is an incomplete and insufficient justification for public company disclosure requirements. If capital allocation were the driving force of policy, then it would seem that these laws should only need to apply at the time that the firm raises funds from investors.⁶

As a response, Kahan (1992) describes the welfare benefits of maintaining informational completeness in the markets beyond just simple capital allocation. For a start, the expected failure to maintain liquidity for secondary trading would lead to an unwillingness to purchase the firm's shares in the first place. Investors would realize that they would, in the future, need to either expend resources on searching for information or else risk losing out to informed traders; having the firm commit to maintaining an informationally complete environment obviates these costs, as also noted by Easterbrook & Fischel (1984) and Goshen & Parchomovsky (2006). Hence the firm's cost of capital is impacted not just by liquidity at the point of capital raising, but also by expectations of whether the firm will maintain a liquid market in its securities through ongoing disclosures.

Accurate pricing can help police or evaluate managerial performance and minimize agency costs. Mahoney (1995) argues that controlling certain agency costs (rather than pricing accuracy per se) should be the goal of mandatory disclosure – to uncover abuses by management or stock promoters – and supports his argument with the legislative history of the English and American securities laws at the time of enactment. Gordon (2007) reasons that increasing stock price accuracy enabled the shift toward independent directors in the second half of the 20th century, as managing by stock price movements became a viable strategy, requiring less intimate knowledge of the inner workings of the corporation. Related to this is the notion that accurate stock prices also enable efficient changes of corporate control. If a manager is underperforming, this is reflected in the stock price, and even if the board does not fire her, the market for corporate control will generate efficiency gains that (ex ante, at least) make everyone better off, as in Easterbrook & Fischel (1981).

An additional justification for compelling disclosure is that information about one firm may increase liquidity for others in the market, since one

⁶ Easterbrook and Fischel (1984 at 682) make this point as well.

company's success or failure often has relevance for another, as with competitors or suppliers. Hence, even if the firm is able to freely contract with its shareholders and to commit to providing a given level of disclosure and liquidity, as Easterbrook & Fischel (1984) note, they will not contract for the socially optimal level given these positive externalities.

The debate over the benefits of informational completeness, price accuracy, and liquidity is largely theoretical. There is relatively little empirical evidence on the matter, though Fox, Morck, Yeung, & Durnev (2003) discuss two prior finance studies that suggest that greater market informedness (as measured by lower stock price synchronicity, or R-squared) 'improve[s] the quality of choice among new proposed investment projects.'

3.3.2 Maintaining Market Integrity

Accepting the benefits of a rich informational environment, there has been considerable disagreement over how to go about maintaining such a system. Questions as basic as 'do we even need a mandatory disclosure system?' have no generally accepted answer. Assuming that one accepts the need for mandatory disclosure, there is then considerable disagreement over what form it should take, how extensive it should be, and how such a system should be enforced.

3.3.2.1 Mandatory disclosure

The Securities Act of 1933 and Exchange Act of 1934 create a mandatory disclosure regime under which firms are required to make extensive disclosures in the sale of securities and, on a periodic basis, after the sale of securities or once the firm has reached a certain size and level of shareholder dispersion. The rationale for these disclosure-based rules is that the best way to maintain an informed, fair, and liquid marketplace is by forcing firms to divulge as much information as possible. As Gilson & Kraakman (1984) point out, mandatory direct disclosure by issuers may be a particularly effective way of maintaining informationally efficient markets. Gordon (2007) describes the SEC's agenda of ever-increasing mandatory disclosure; as one concrete metric of disclosure, average 10-K (annual report) length has gone from 16 pages in 1950, to 40 pages in 1970, to 125 pages in 2000, to 164 pages in 2004. Gordon (2007) argues that this has helped to increase pricing accuracy over time.

However, there has also been an influential line of argument suggesting that mandatory disclosure requirements may do more harm than good. Early opponents of mandatory disclosure include Kripke (1973, 1979), who argued that mandatory disclosure in practice is largely useless and

replete with meaningless cautionary language,⁷ and Manne (1974), who maintained that the mandatory regime is one-size-fits-all and eliminates diversity from the marketplace by artificially requiring a minimum level of disclosure quality that many firms may not be able to provide. Kitch (1995) and Romano (1998) claim that mandatory disclosure line items (the numerous items contained in Regulations S-K and S-X, for example) are either meaningless boilerplate or would have been produced voluntarily absent regulation.

Examining mechanisms of voluntary disclosure, Easterbrook & Fischel (1984) claimed that, by and large, private contracting between shareholders and managers, perhaps at the time of the firm's IPO and with the aid of third party auditors, may be sufficient to maintain the approximately optimal amount of information. Even without mandatory disclosure rules, there should be a process of informational unraveling, where firms with good news would have an incentive to disclose it, and where if a firm were to remain silent, it would be inferred by the market as bad news. A contemporary response by Coffee (1984) observed that the degree of both potential externalities of disclosure and the efficacy of private contracting were up for grabs, making a cost benefit analysis of mandatory disclosure impossible absent further empirical studies.

Resolution of these empirical issues has not occurred.⁸ The seminal work on mandatory disclosure, Stigler (1964), found in an event study that the passage of the Securities Act of 1933 and Securities Exchange Act of 1934 did not change average stock returns of new issues, but did lower the variance of returns. Of course, interpretation of this result is difficult in light of the single event (which coincides with, among other things, the Great Depression) and the endogenous choice of firms of whether to go public.⁹ More recent literature has attempted to identify both a change in the law and a relatively unaffected control group of firms, and thereby

⁷ While the SEC and Congress have sought to encourage more forward-looking information subsequent to Kripke's writing with liberalizations such as Rule 175 and the Private Securities Litigation Reform Act, it remains questionable how useful prospectuses and other mandatory disclosure forms are. According to Spindler (2007), in the IPO context, 'the consensus of the securities industry practice is that forward-looking information is still too dangerous to include, as "even the slightest misstatement regarding predictive expression" will result in securities litigation' (citing Wander (2003)).

⁸ As Fox, Morck, Yeung, & Durnev (2003) observe, "[t]he surprisingly small amount of empirical research brought to bear on these issues [of disclosure rules] is relatively equivocal in its implications."

⁹ Other event studies of the Securities Acts by Benston (1973) and Simon (1989) have the same difficulty of interpretation.

isolate a differences-in-differences effect. Ferrell (2007) and Greenstone, Oyer & Vissing-Jorgensen (2006) each find that the Securities Acts Amendment of 1964, which brought larger over-the-counter stocks under the aegis of mandatory public reporting, resulted in positive abnormal returns to the affected stocks. Fox, Morck, Yeung, & Durnev (2003) show a positive effect upon the enactment of enhanced manager's discussion and analysis disclosures in 1980. In contrast, some recent studies of the Sarbanes-Oxley Act of 2002, which among other things enhanced disclosure requirements, find apparent negative effects. Litvak (2007) finds that there were negative abnormal returns for the affected firms relative to unaffected firms, while Kamar, Karaca-Mandic & Talley (2009) find that Sarbanes-Oxley led smaller firms to exit the public capital markets. Based on the empirical evidence thus far, it is not possible to draw a conclusion about mandatory disclosure as a general matter, though perhaps possible to isolate some particular disclosure rules as either beneficial or counterproductive.

3.3.2.2 Enforcing the mandatory disclosure regime

The legal academy has entertained a robust debate regarding the proper mechanisms for ensuring that the information firms disclose is both credible and valuable. Mandatory disclosure means little if firms need not tell the truth, and even truthful information may have little worth to investors if its value may be expropriated by insiders. Along these lines, the two general categories of discussion are anti-fraud and insider trading.

Anti-fraud Anti-fraud rules are intended to guarantee the credibility of a firm's disclosures by attaching some sort of penalty to false disclosures. As noted above, there has long been skepticism of the claim that law is required to maintain credible communication. And even among those scholars who agree that some public law means of ensuring credibility is required, the issue of who should pay the penalty, what the penalty should be, and what should constitute actionable conduct, has been greatly contested.

A problem that has attracted a great deal of recent attention is whether penalties for fraud should fall upon the firm or the managerial persons responsible for the fraudulent communication. As an artifact of traditional agency law, the rule is that the firm is vicariously liable to purchasers for frauds committed by its agents (i.e., the executives who put out the fraudulent reports). This is at some tension with the observation that much fraud is committed out of managerial self-interest: Arlen & Carney (1992) show that the great majority of fraud cases involve price inflation designed to preserve managers' jobs or the value of their performance-based

compensation. Several scholars, such as Arlen & Carney (1992), Alexander (1996), Coffee (2006), and Langevoort et al (2007b) have suggested that liability placed upon the firm will fail to deter the bad managers who commit the fraud in the first place, making personal liability for managers a better choice. An interesting line of argument along a different dimension, made by Arlen (1994) and Arlen & Kraakman (1997), has been that penalties imposed on the firm create a 'perverse incentive' not to discover fraud (and not to report it even if it is discovered); in contrast, firms would police themselves more if penalties for fraud were borne by the individual agents of the firm who perpetrated the fraud. Militating in favor of firm liability, Schwarcz (2005a) notes that temporal conflict arises among current and future shareholders, and Spindler (2010) shows that if such conflicts exist, then shareholders may choose governance structures that lead to overstatement of value, for which firm-level liability provides an appropriate deterrent.

Managers and issuers are not the only ones to whom liability may be extended. A literature has arisen around the notion that 'gatekeepers' – such as underwriters, accountants, research analysts, and lawyers – play a pivotal role in the offering and disclosure process. Arguing that reputational concerns are not enough to enforce good behavior among such intermediaries, Coffee (2002, 2004) and Fisch & Sale (2003) have argued that liability ought more readily to attach to those fulfilling gatekeeper functions. On the other side, Schwarcz (2005b) opposes making legal opinions tools of corporate governance, and Spindler (2006) contends that conflicts of interest among research analysts ought not to have been prohibited, as they allowed the communication of otherwise inside information to the marketplace and helped to overcome informational asymmetry.

The chief mechanism of anti-fraud enforcement – the 'fraud on the market' securities class action, which gained Supreme Court acceptance in *Basic, Inc. v. Levinson* – has come under intense scrutiny as well. The main complaint against class action lawsuits has been that there are so many of them, and that they appear to be filed on the basis of little more than a drop in price. A robust empirical literature began with Alexander's (1991) small-sample study that observed that settlement outcomes do not appear to vary with the merits of the case. Bohn & Choi (1996) find evidence of frivolous lawsuits by examining offering quality proxies such as underwriter reputation and insider share retention. Klausner (2009) finds that class action settlements do not track parallel SEC enforcement actions, which should tend to be relatively meritorious. Because the objective merit of a fraud case is generally unobservable except by means of fairly crude proxies, scholars have asked the more tractable question of whether class action reforms have improved metrics of case quality (typically, some

hard evidence of fraud such as an accounting restatement). Perino (2003) finds that the Private Securities Litigation Reform Act of 1995 (PSLRA) may have improved the quality of cases filed post-PSLRA. Johnson, Nelson & Pritchard (2007) also find that post-PSLRA cases have greater likelihood of merit based on accounting restatements or insider selling; however, Choi, Nelson & Pritchard (2009) find that the PSLRA screens out both meritorious and non-meritorious cases that do not have hard evidence of fraud. Cox, Thomas & Bai (2008) examine lead plaintiffs and find that institutional shareholders prosecute a significant proportion of post-PSLRA class actions and that SEC enforcement actions do affect settlement values, both indicia of merit.

While the empirical evidence is somewhat inconclusive as to the merits of securities class action litigation, the general sense in the academy and the financial community is that it is overly burdensome and unproductive: the *Economist* (2006), for example, describes the current class action system as 'economic lunacy.' Numerous proposals exist to cut back on the amount and severity of class action litigation, or even to do away with much of federal securities regulation. Coffee (2005) and Mahoney (1992) argue for enhanced pleading requirements to cut back on the incidence of suit. Langevoort (1996) proposes capping class action damages, while Alexander (1996) would replace private class actions with administrative sanctions doled out by the SEC. A hybrid, proposed by Rose (2008), would require SEC approval for private class actions to go forward. More radically, Romano (1998) proposes a system of 'competitive federalism' akin to the current system of corporate law, devolving much of securities regulatory authority to the states; while Choi (2000) proposes the licensing of investors to largely replace the regulation of issuers, and Mahoney (1997) favors devolution of regulatory authority to exchanges, whom he notes were indeed the first securities regulators.

A relatively new, though influential, approach in limiting securities fraud does not apply to disclosure directly, but rather mandates specific corporate governance and other internal controls that are thought to reduce the incidence of fraud.¹⁰ The new approach, exemplified in the substantive corporate governance requirements of Sarbanes-Oxley and discussed in detail in Ribstein (2002), mandates as prophylactic measures against fraud such governance structures as an independent board of directors, auditor oversight, internal controls, and executive pay clawbacks. (While not part

¹⁰ This is distinct from what is typically the primary goal of corporate governance reforms, which is the reduction of managerial moral hazard in the form of opportunistic mismanagement (such as empire building), diversion, or shirking.

of the Sarbanes-Oxley reforms, increased shareholder control is also seen as a prescription against fraud; Stout (2007) discusses and dismisses this argument as primarily 'emotional.') One particularly important plank in this platform is to improve the structure of executive pay and incentives. Such improvements would eliminate 'stealth compensation' through perks, favorable options, pensions and other measures – which amount essentially to nondisclosure of compensation to shareholders, according to Bebchuk & Fried (2004) and Bebchuk, Fried & Walker (2002), and which allow executives to essentially determine their own pay. Reforming executive pay also would combat fraud more generally, as according to Bebchuk (2005, 2006) it would also eliminate 'perverse incentives . . . to produce short-term stock price increases instead of long-term value' that arise from 'broad freedom to unload options and shares' (Bebchuk 2005). Providing a concrete example, in an examination of the 2004 Fannie Mae scandal, Bebchuk & Fried (2005) find that Fannie Mae's executive pay arrangements 'richly rewarded its executives for reporting higher earnings without requiring them to return compensation if the earnings turned out to be misstated, thus providing an incentive to inflate earnings.' If executive pay that is uncontrolled by shareholders leads to securities fraud, then a proper regulatory anti-fraud response is either to increase shareholder control or else regulate it directly.

Insider trading Investors may be unwilling to participate in the marketplace if they stand to be expropriated by those who are better informed. The effect of a ban on insider trading is that there are simply fewer informed traders who can expropriate the uninformed, as described in Macey (1991). Hence, liquidity costs (as reflected in bid-ask spreads) will be lower, although if managers do not trade based on their inside information, and do not otherwise choose to disclose that information, price accuracy may decrease. While the economic theory is clear that insider trading reduces liquidity until the insiders' information is incorporated into prices, there are three areas of disagreement that have played out in scholarly debate.

First, it is unclear what happens to price accuracy where insiders may freely trade. Manne (1966) argues that insider trading incorporates managers' private information into price, and Carlton & Fischel (1983) reason that insider trading can signal private information to be reflected in market price that might otherwise be too sensitive to disclose otherwise (such as proprietary trade secrets). This would tend to promote price accuracy. However, it may be that the opportunity to trade on inside information alters disclosure behavior. Mendelson (1969) is an early proponent of the argument that managers would, if allowed to inside trade, have an

incentive to keep information secret at least until the time of the trade, potentially reducing price accuracy. Relatedly, Bebchuk, Fried & Walker (2002 at 829) put forward the view that rules restricting managers' sales of shares will keep managers from attempting to profit from 'short-term price movements' at the expense of long-term shareholder value. Gilson & Kraakman (1984) argue that insider trading would be relatively slow to incorporate inside information into prices, as the market must be able to decode the meaning behind anonymous trades. As any of these arguments are plausible (and not mutually exclusive), it would be left to empirical studies to determine the overall effect; unfortunately, despite the amount of attention that insider trading has garnered in the academy,¹¹ there is relatively little formal empirical work on the effects of insider trading law. As a start, the recent work of Beny (2007, 2008) shows some positive correlation between effective insider trading bans and measures of market liquidity and robustness across countries.

Second, while the direction of the liquidity effect is clear, its magnitude is not, and hence some scholars believe the benefits of an insider trading prohibition may be easily outweighed by other potential costs. Cox & Fogarty (1988) note that the claimed illiquidity effects of prevalent insider trading (i.e., investors leaving the market when they perceive themselves at an informational disadvantage) have not materialized in environments where insider trading is allowed. Macey (1991) cites Japan as an example of a country that has significant insider trading but robust market activity. Carlton & Fischel (1983) observe that while insider trading was largely legal at the time of their writing, firms were free to prohibit it, but generally chose not to. Cox & Fogarty (1988) note that (from casual observation) the 'disclose or abstain' rule of classical insider trading law does not appear to lead managers to disclose more; the information on which they intend to trade would no longer be of any value once made public, hence there is no disclosure.

Finally, there is some disagreement as to who benefits when insiders are prohibited from taking profits in insider trading. As Haddock & Macey (1986, 1987) note, prohibiting insider trading also has the effect of increasing profits for informed traders (i.e., market professionals), since a competitor for information rents (the insider) has been eliminated. Macey (1991) argues that shareholders may well prefer inside trading, since it keeps the profits of trading within the firm (such as by lowering manager salaries), while prohibiting insider trading gives those profits to outside

¹¹ Bainbridge's (2000) survey of insider trading law references some 265 scholarly works.

securities professionals. On the other hand, Goshen & Parchomovsky (2001, 2006) claim that this is a desirable effect: the elimination of insiders increases the profits of non-insider informed traders (i.e., securities market professionals), which encourages more entry, and non-insider informed traders are likely to further price accuracy without distorting firm behavior, as insiders may do.

3.3.3 Too Much of a Good Thing: How Measures to Enhance Liquidity and Price Accuracy Can Go Too Far

Given that more information leads to greater price accuracy and liquidity, does it then follow that we are, societally speaking, best off to demand that firms disclose as much information as possible, with the harshest penalties for non-compliance? The answer to this question is no, for three reasons. The first is that such policies may not even promote price accuracy and liquidity due to overdeterrence. The second is that managers and entrepreneurs, when faced with uncomfortable disclosure decisions and the threat of liability, may alter their behavior in other ways that are socially undesirable. Finally, disclosure may destroy the value of information.

3.3.3.1 Overdeterrence of disclosure

Heavy-handed efforts to extract information from public companies can be counterproductive even in the extraction of information. When penalties for positive or optimistic disclosure are high enough, there will come a point at which firms will choose to disclose little or no positive information about themselves, instead putting out a host of largely specious warnings and disclaimers. That is, if there is a chance of being wrongly found liable for fraud as well as a large enough penalty when found liable, firms or entrepreneurs can actually do better by painting an inaccurately negative picture of themselves. Disclosure again becomes non-credible, creating the same sort of adverse selection problem that the disclosure rules are meant to prevent in the first place. According to Kripke (1973, 1979), this renders firm disclosure largely meaningless, with prospectuses and reports full of vague warnings and little information that would enable investors to make a sound investment decision. Easterbrook & Fischel (1984), Kitch (1995), and Spindler (2006) expand upon this point in subsequent decades. Some recent work has examined the issue empirically: Empirically, Nelson and Pritchard (2008) find that firms at greater risk of litigation make use of greater cautionary language, while Spindler (2009) finds that IPO firms that face a greater risk of litigation disclose less useful information in their prospectuses and also experience greater IPO underpricing.

3.3.3.2 Undesirable strategic behavior

Of course, if all that happened were less disclosure, with no effect on the substantive things that entrepreneurs and companies do to create value, there would not necessarily be a problem. But there will be several such effects. The most obvious is that firms may eschew the public marketplace if disclosure burdens and prospective liability are too great. Manne (1974) noted that the mandatory disclosure system may keep certain issuers out of the marketplace: all prospectuses after the passage of the Securities Act were, he claims, of fairly uniform quality, resembling those prospectuses of only the most reputable underwriters prior to the Act in terms of scope and detail. This implies that lower quality offerings are either staying out of the public markets or are offering a super-optimal degree of disclosure, which is to the ultimate detriment of investors. Supporting this view, the recent empirical work of Kamar, Karaca-Mandic & Talley (2009) suggests that increased disclosure burdens may drive some firms from the markets.

Undesirable behavior could take forms other than exiting the public market. Spindler (2007) proposes that overbearing liability at the IPO stage puts a super-optimal amount of risk on the entrepreneur. Even in a bargaining game in which the entrepreneur and shareholders maximize their joint welfare, this non-contractible risk may lead to such undesirable effects as choosing lower risk projects and entrenching management, which reduce the entrepreneur's risk exposure.

3.3.3.3 The value of information

Even setting aside the issue of strategic behavior, compelling more disclosure can still stifle innovation. This is because some information is only valuable so long as it is secret. As Easterbrook & Fischel (1984) and Kitch (1995) point out, much information loses its value once it must be disclosed. News of a planned corporate acquisition will drive up the price of the acquisition target, making the acquisition less profitable. Disclosure of plans, strategies, or preliminary project results is of obvious importance to competitors. If disclosure of such information is required, the incentives to produce that information by creating potential value is greatly dampened.

Within the firm, the same problem holds. How are agents to be incentivized to innovate when an employee's idea can be appropriated by the firm itself? Insider trading, as discussed in Manne (1966), Carlton & Fischel (1983), Haddock & Macey (1986) and Macey (1991) may provide such a mechanism: while the firm may not be able to commit not to appropriate an idea once it is revealed, employees can at least trade on the value of the information that they reveal to the firm. While the subsequent clamping down on insider trading has rendered these proposals largely moot,

Abramowicz & Henderson (2007) have proposed that some of the incentive benefits may be obtained through internal prediction markets.

3.4 CONCLUSIONS AND FUTURE DIRECTIONS?

As any casual observer can tell, the U.S. public capital markets are in a sorry state: no longer is the IPO a feasible way to raise entrepreneurial capital, and increasingly firms are finding the benefits of being a public company not worth the costs. How helpful is the extant securities law literature in guiding future policy to fix these failures? From a review of the securities law literature, one could draw either of two very different conclusions. It may be that the securities laws are in a sense not strict enough: they have failed to provide adequate deterrence of bad actions by corporate managers and their lackeys, who have undermined confidence in the public market system and contributed to recent market turmoil. Or, to the contrary, it may be that the pendulum of disclosure and enforcement has swung too far: overbearing disclosure mandates and the attendant liability alter entrepreneurial behavior for the worse, whether it be less disclosure, substantive business decisions, or the forum in which to raise capital. While the literature has gone some distance in exploring how market integrity, in the form of liquid and accurate pricing, can be furthered, it provides relatively little guidance in promoting innovation and efficiency.

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