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THE CASE FOR MANDATORY DISCLOSURE
IN SECURITIES REGULATION
AROUND THE WORLD

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Allen Ferrell*

Abstract The desirability of mandatory disclosure requirements in securities regulation has been the subject of a longstanding debate among corporate law scholars and economists. The debate has largely focused on the desirability of mandatory disclosure requirements in the United States, a country characterized by dispersed ownership structures. This article argues that there are strong theoretical reasons to believe that mandatory disclosure requirements can play a socially useful role in countries with concentrated ownership structures. Controlling shareholders will tend to prefer poor firm transparency, to protect their private benefits of control, even if the presence of a demanding disclosure regime would have the socially desirable effect of increasing competition in the capital and product markets and reducing the agency costs associated with concentrated ownership structures. Recent empirical work is consistent with mandatory disclosure requirements fulfilling the valuable role of enhancing competition and reducing agency costs.

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I. INTRODUCTION

Mandatory disclosure requirements placed on publicly-traded firms constitute the core of U.S. securities regulation. These requirements, both for firms going public for the first time as well as companies already with publicly-traded securities, are spelled out in great detail in the Securities Act of 1933, the Exchange Act of 1934, and the Securities and Exchange Commission's (SEC) complex web of regulations implementing these statutes. Among other requirements, publicly-traded firms must publicly provide detailed financial information to the markets on a regular basis. This includes the requirement to provide disclosures on an annual basis,¹ a quarterly basis² as well as when there is material information regarding changes in the firm's financial condition or operations.³ Firms going public for the first time have even more detailed disclosure requirements with strict liability for material misstatements in the registration statement.⁴

The U.S.'s emphasis on mandatory disclosure has been widely emulated around the world.⁵ A number of countries in the last decade have adopted and strengthened mandatory disclosure requirements for their public-traded firms.⁶ Moreover, a number of countries, including developing countries, are considering adopting or strengthening their mandatory disclosure requirements.⁷ Indeed, the quality of disclosure regulation has been

¹ Pursuant to the Exchange Act of 1934, sections 12-13, 15 U.S.C. section 781-m (1994), public-traded firms must disclose in their annual report detailed information on such items as the firm's financial results, properties, legal proceedings against the firm, information on the firm's officers and directors, and a discussion by management of the firm's "financial condition, changes in financial condition and results of operations." See Item 303, Regulation S-K, Securities Exchange Act of 1934, 17 C.F.R. section 249.308a (2002).

² See Form 10-Q, Forms, Securities Exchange Act of 1934, 17 C.F.R. section 249.308a (2002).

³ See Form 8-K. These disclosures must be made on a close to "real time" basis.

⁴ See Securities Act of 1933, section 5, 15 U.S.C. section 77(e) (1994).

⁵ The earliest comprehensive statute imposing mandatory disclosure requirements was first enacted in the United Kingdom in 1900. Companies Act, 1900, 63 & 64 Vict., c.48, section 10(1).

⁶ See Henry Hansmann and Reinier Kraakman, The End of History for Corporate Law in CONVERGENCE AND PERSISTENCE IN CORPORATE GOVERNANCE 52-53 (2004).

⁷ See, e.g., Asian Development Bank, CORPORATE GOVERNANCE AND FINANCE IN EAST ASIA (2000); European Commission, Towards an EU-Regime on Transparency Obligations of Issuers whose Securities are Admitted to Trading on a Regulated Market, Consultation Document of the Services of the Internal Market Directorate General (11.7.2001) (proposing EU-wide disclosure requirements).

a particular focus in the aftermath of the East Asian crisis of 1997-1998 which many have blamed, at least in part, on poor firm transparency in the region.⁸

There is, however, no academic consensus on the need for mandatory disclosure. The desirability of mandatory disclosure requirements has been the subject of a longstanding, ongoing debate among corporate law scholars and economists. A number of scholars have argued that these requirements are unnecessary, and even harmful, as market forces will generally ensure that firms disclose the optimal level of information.⁹ Roberta Romano, for instance, has argued in a series of important articles for the removal of mandatory disclosure requirements.¹⁰ Proponents of mandatory disclosure have countered by arguing that there are important informational externalities generated by the information released by firms.¹¹ One such informational externality that has received significant attention is the possibility that firm disclosures may improve the stock price accuracy of firms other than the disclosing firm.¹² Given that firms will not take into

⁸ See, e.g., Peter Boone, Alasdair Breach, Eric Friedman, and Simon Johnson, Corporate Governance in the Asian Crisis, 58 *Journal of Financial Economics* 141-186 (emphasizing overall poor corporate governance as responsible for East Asian crisis) (2000); Todd Mitton, A Cross-Firm Analysis of the Impact of Corporate Governance on the East Asian Crisis, 64 *Journal of Financial Economics* 215 (2002); Joseph Stiglitz, The Role of International Financial Institutions in the Current Global Economy, Address to the Chicago Council on Foreign Relations, February 27 (1998).

⁹ For scholars critical of mandatory disclosure, see Roberta Romano, Empowering Investors: A Market Approach to Securities Regulation, 107 *Yale L. J.* 2359 (1998); George Benston, Required Disclosure and the Stock Market: An Evaluation of the Securities Exchange Act of 1934, 63 *American Economic Review* 132 (1973); George Stigler, Public Regulation of the Securities Markets, 37 *Journal of Business* 117 (1964); Homer Kripke, *THE SEC AND CORPORATE DISCLOSURE: REGULATION IN SEARCH OF A PURPOSE* (Law & Business, 1979); cf. Jonathan Macey, Administrative Agency Obsolescence and Interest Group Formation: A Case Study of the SEC at Sixty, 60 *Cardozo L. Rev.* 909 (1994); Stephen J. Choi and Andrew Guzman, Portable Reciprocity: Rethinking the International Reach of Securities Regulation, 71 *S. Cal. L.Rev.* 903 (1998).

¹⁰ See Roberta Romano, Empowering Investors: A Market Approach to Securities Regulation, 107 *Yale L. J.* 2359 (1998) (proposing that firms select which states' regulatory regime will set their disclosure requirements); Roberta Romano, The Need for Competition in International Securities Regulation, 2 *Theoretical Inquires* 387 (2001) (defending the proposal against various criticisms).

¹¹ See Merritt Fox, Retaining Mandatory Disclosure: Why Issuer Choice is not Investor Empowerment, 85 *Va. L.Rev.* 1335, 1345-46 (1999) (arguing that certain firm disclosures will have effects on third parties, such as supplier and customers, that will not be internalized by the firm); Merritt Fox, Securities Disclosure in a Globalizing Market: Who Should Regulate Whom, 95 *Mich. L. Rev.* 2498, 2562-69 (1997); cf. Marcel Kahan, Securities Laws and the Costs of "Inaccurate" Stock Prices, 41 *Duke L.J.* 977, 1034-35 (1992).

¹² See Merritt Fox, Securities Disclosure in a Globalizing Market: Who Should Regulate Whom, 95 *Mich. L. Rev.* 2498, 2562-69 (1997); Merritt Fox, Randall Morck, Bernard Yeung and Artyom Durnev, Law, Share Price Accuracy and Economic Performance: The New Evidence, forthcoming *Michigan Law Review*. For a useful model capturing the effects of informational externalities associated with firm disclosures see Admati, Anat and Paul Pfleiderer, Forcing Firms to Talk: Financial Disclosure Regulation and Externalities, 13 *Review of Financial Studies* 479 (2000).

consideration these externalities in deciding which pieces of information to disclose, it is argued that a mandatory disclosure regime can be socially beneficial.

This Article focuses on whether mandatory disclosure can play a socially beneficial role in countries with concentrated ownership structures. With the exception of the United States and United Kingdom, which are unusual in having dispersed ownership structures, this includes the vast majority of countries. The case for mandatory disclosure in these countries does not hinge on whether there are informational externalities associated with firm disclosures, an issue that has dominated the academic debate over mandatory disclosure. Rather, the case for a demanding mandatory disclosure regime in these countries is based on the observation that a demanding mandatory disclosure regime can reduce the level of diversion of corporate resources by controlling shareholders and promote competition (both for capital and in the product market) against established firms. Neither a reduction in the diversion of corporate resources nor an increase in competition is necessarily in the interests of existing controlling shareholders.

A demanding mandatory disclosure regime, as Part III.A and Part III.B explain, can make it more difficult for controlling shareholders to divert corporate resources to themselves at the expense of minority shareholders. Controlling shareholders are therefore less likely to divert corporate resources to themselves as a firm's transparency increases. This is an important consideration as controlling shareholders' "private benefits of controls" (such as diverting corporate resources) has been consistently documented to be quite substantial in countries with concentrated ownership.¹³ Controlling shareholders will therefore have a preference for a lax disclosure regime once shares have already been sold to minority shareholders despite the costs this imposes on minority shareholders. In some circumstances, this failure to internalize the costs imposed on minority shareholders can result in net social losses.

¹³ There is an important literature documenting the size of the private benefits of control and discussing their potential consequences. See Luigi Zingales and Alexander Dyck, *Private Benefits of Control: An International Comparison*, 59 *Journal of Finance* 537 (2004); Andrei Shleifer and Daniel Wolfenzon, *Investor Protection and Equity Markets*, 66 *Journal of Financial Economics* 3 (2002); Lucian Bebchuk and Mark Roe, *A Theory of Path Dependence in Corporate Ownership and Governance*, 52 *Stan. L. Rev.* 127 (1999).

Controlling shareholders have an additional reason to prefer a lax disclosure regime. As Part III.C explains, a demanding mandatory disclosure regime can enhance competition as such a regime can reduce the cost to firms of raising capital (external finance) from outside investors. The cost of external finance can be reduced by mandatory disclosure through three mechanisms: firms being enabled to credibly commit to a lower level of diversion of corporate resources; firms being enabled to credibly signal high firm value to the markets at the time external finance is raised; and firms being able to reduce the expected level of trading in their securities by traders with private information about the firm's true value. A reduced cost of external finance increases competition as this enables cash-starved firms to compete with well-established firms that have sufficient internal sources of capital.¹⁴

The likely consequences of having a mandatory disclosure regime -- reduced private benefits of control and increased competition -- implies that a number of firms will likely be opposed to the adoption of a demanding disclosure regime, whether instituted by government or by an exchange through its listing standards. Moreover, these two reasons for preferring a lax disclosure regime can reinforce each other in powerful ways. For instance, even minority shareholders might find it in their self-interest to tolerate poor firm transparency that enables controlling shareholders to enjoy a high level of private benefits of control if the lack of a credible disclosure regime also suppresses the level of competition faced by the firm. Indeed, the desire to suppress competition (both in the market for capital and in the product market) can lead firms, *even before* they sell shares to the public, to prefer a lax disclosure regime. As a result, there will not necessarily be easily obtainable "Coasian" bargains by which firms can be induced into making the socially beneficial choice in the course of settling upon a disclosure regime.¹⁵

As Part IV emphasizes, the opposition of an important segment of firms to the imposition of a demanding mandatory disclosure regime can undermine the ability of

¹⁴ See generally Raghuram Rajan and Luigi Zingales, *SAVING CAPITALISM FROM THE CAPITALISTS* (2003) (discussing the importance of encouraging competition in product markets by expanding financing opportunities for firms).

¹⁵ The Coase Theorem states that the allocation of a particular legal entitlement will not affect efficiency if costless bargaining is possible. See Ronald Coase, *The Problem of Social Costs*, 3 *J.L. & Econ.* 1 (1960).

firms that do want to credibly commit to a demanding disclosure regime to do so. The two entities most capable of creating a credible disclosure regime -- government and stock exchanges -- will be hesitant to do so given the political influence of the opposing firms or their importance to an exchange as a listed company. Moreover, as Part IV.B explains, competition between exchanges for investors' orders will not necessarily induce exchanges to offer to firms a credible, demanding disclosure regime. The historical experience of the U.S. in the pre-mandatory disclosure period, discussed in Part IV.B, is consistent with this analysis.

The cumulative empirical evidence for these general claims is strong.¹⁶ This evidence ranges from cross-country studies that examine the effect of mandatory disclosure requirements on competition, growth and financial development¹⁷ to event studies of the effects associated with the imposition of particular mandatory disclosure regimes.¹⁸ Throughout the Article, this empirical literature will be drawn upon, whenever possible, in evaluating the case for mandatory disclosure. Part VI will specifically discuss the empirical evidence on the effects of mandatory disclosure regimes.

To date, the academic debate among legal scholars has largely ignored this literature in assessing the merits of mandatory disclosure in securities regulation. Indeed, the debate so far has largely ignored the case for mandatory disclosure for most countries around the world. The willingness and ability of firms to credibly commit to a demanding disclosure regime are especially important considerations when evaluating the need for mandatory disclosure in countries with poor overall legal protections for investors.

¹⁶ A number of the most important of these empirical studies, largely in the "law and finance" literature, have been published in only the last several years. For a survey and discussion of this literature, see Stephen Choi, *Law, Finance and Path Dependence: Developing Strong Securities Markets*, 80 *Texas Law Review* 1657 (2002).

¹⁷ See, e.g., Rafael La Porta, Florencio-de-Silanes, and Andrei Shleifer, *What Works in Securities Laws?*, Working Paper 2004.

¹⁸ See, e.g., Allen Ferrell, *Mandated Disclosure and Stock Returns: Evidence from the Over-the-Counter Market*, Working Paper 2003; Michael Greenstone, Paul Oyer and Annette Vissing-Jorgensen, *The Effects of Equity Market Regulation: Evidence from the Securities Acts Amendments of 1964*, Working Paper 2004; Merritt Fox, Randall Morck, Bernard Yeung and Artyom Durnev, *Law, Share Price Accuracy and Economic Performance: The New Evidence*, forthcoming *Michigan Law Review*.

II. THE TRADITIONAL CASE AGAINST MANDATORY DISCLOSURE

The earliest models of a firm's disclosure decision, captured in the work of Sanford Grossman and Olivier Hart among others, contained a powerful result. In a world in which a firm has private information about the quality of its product and disclosure is costless, firms will voluntarily publicly disclose their private information as a signal of their product's quality.¹⁹ The reason for this result is both simple and powerful: firms will voluntarily disclose information so as not to be confused by customers with firms with lower quality products. Firms with high quality products will therefore voluntarily commit to a disclosure regime that credibly commits the firm to full public disclosure. Firms with product quality a notch below that of the high quality firms will then voluntarily commit to a full disclosure regime so as not to be confused with firms with even lower quality. Eventually, the market completely unravels with all firms voluntarily disclosing their product quality even if their quality level is poor.

The elegant and intuitively appealing signaling story has been the main theoretical support for the view that market forces will ensure the optimal level of voluntary disclosure by firms. Most prominently, Roberta Romano, in her articles advocating the removal of mandatory disclosure requirements, relies heavily upon this signaling story for her theoretical case against the need for mandated disclosure in securities regulation.²⁰ Simply put, firms that wish to maximize the value of their shares will ensure that investors do not mistakenly assign a positive probability that the firm is withholding

¹⁹ See Sanford Grossman and Oliver Hart, *Disclosure Laws and Takeover Bids*, 35 *Journal of Finance* 323 (1980); see also Stephen A. Ross, *Disclosure Regulation in Financial Markets: Implications of Modern Finance Theory and Signaling Theory*, in *KEY ISSUES IN FINANCIAL REGULATION* 177 (Franklin Edwards ed., 1979); Sanford Grossman, *The Informational Role of Warranties and Private Disclosure about Product Quality*, 24 *Journal of Law and Economics* 461 (1981). In the Grossman-Hart model, there are sanctions for lying but no sanctions for non-disclosure.

²⁰ See, e.g., Roberta Romano, *The Need for Competition in International Securities Regulation*, 2 *Theoretical Inquires* 387, 403 ("The signaling hypothesis regarding information disclosure is a plausible scenario in today's capital markets . . . It is therefore theoretically difficult for advocates of mandated disclosure to maintain their normative claims . . ."); cf. Frank H. Easterbrook and Daniel R. Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 *Va L. Rev.* 669, 683 (1984) ("[o]nce the firm starts disclosing it cannot stop short of making any critical revelation, because investors always assume the worst. It must disclose the bad with the good, lest investors assume that the bad is even worse than it is.").

information that would reveal a low firm value and, hence, assign a low value to the firm's shares. Eventually, the market completely unravels with all firms voluntarily disclosing any private information they have concerning firm value even if their firm value is low.

The power of the signaling argument as applied to firm disclosure decisions retains some of its power despite the unrealistic assumption that disclosure is costless. Disclosure can obviously create a variety of costs for firms ranging from the cost of gathering, verifying and releasing information to the loss of competitive advantage resulting from the release of proprietary information. While these costs might lead a firm to rationally withhold disclosing some information if its disclosure is too costly, this simply means that firms will trade-off the costs and benefits of disclosure.²¹ Who better to make this trade-off, many argue, than firms who will suffer the consequences of making the wrong decision? There is no reason to believe, after all, that firms will not optimize their disclosure decision so that the marginal costs and benefits of disclosing are equated.

The signaling story, and hence its use as the linchpin for the case against mandatory disclosure, does, however, fall short as a basis for policy on two crucial dimensions. First, the signaling argument relies on the assumption that those who set firm policy, such as entrenched managers and controlling shareholders, *want* to credibly commit to a disclosure regime that will maximize the market's current valuation of the firm. For the reasons given in Part III, for many firms in most countries this is simply not true. This group of unwilling firms can even include firms selling shares to the public for the first time. Second, the signaling argument furthermore relies on the assumption that firms *can* credibly commit to any desired level of disclosure. Again, this is less likely to be true than one might initially have thought. Part IV will explain why some firms are unable to credibly commit to a high level of disclosure even if they might find it in their self-interest to do so.

²¹ See, e.g., Verrecchia, R., Discretionary Disclosure, 5 Journal of Accounting and Economics 365-380 (1983) for a model in which disclosure is costly.

III. DO FIRMS WANT TO CREDIBLY COMMIT?

The empirical evidence indicates that many controlling shareholders around the world divert corporate resources to their benefit on a substantial scale. Moreover, logic and empirical evidence suggests that controlling shareholders' ability to engage in this lucrative diversion of corporate resources can be adversely affected by the imposition of mandatory disclosure requirements. Equally important, mandatory disclosure requirements can also have the effect of increasing competition for capital and competition in the product market, by decreasing the cost of external finance to new entrants and potential competitors, to the detriment of already existing firms owned by controlling shareholders. These different considerations will now be considered in detail.

A. Controlling Shareholders and Corporate Diversion

Most firms around the world have controlling shareholders.²² The dispersed ownership structures of the United States and the United Kingdom are an exception. For this reason, it is crucial to consider the preferences of controlling shareholders when thinking about firms' disclosure decisions for most firms around the world. In the United States, in contrast, it is more important to focus on the preferences of managers of firms with dispersed ownership, who may have some degree of entrenchment against shareholder wishes, as well as those of the firm's shareholders.²³

Given the prevalence of concentrated ownership around the world, the potential conflict between the interests of controlling shareholders and those of the minority shareholders is among the most important problems facing corporate and securities law in

²² LaPorta, R., Lopez-de-Silanes, F., Shleifer, A., and R. Vishny, *Law and Finance*, 106 *Journal of Political Economy* 1113, 1146 (1998); La Porta, R., Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, *Legal Determinants of External Finance*, 52 *Journal of Finance* 1131 (1997); see also Marco Becht and Alisa Roell, *Blockholdings in Europe: An International Comparison*, *European Economic Review* 3-9 (1999).

²³ For an index measuring managerial entrenchment for U.S. firms, see Lucian Bebchuk, Alma Cohen, and Allen Ferrell, *What Matters in Corporate Governance?*, Working Paper 2004. The degree of managerial entrenchment, as measured by this index, is correlated – with 1% statistical significance – with firm valuation. Moreover, firm valuation is monotonically decreasing in the entrenchment index.

most countries.²⁴ As is widely recognized, controlling shareholders – once minority shareholders are in the picture – will tend to ignore the harm caused to minority shareholders’ interests in the course of deciding which actions the firm should undertake. More to the point, controlling shareholders will have an incentive to divert corporate assets to themselves at the expense of existing minority shareholders.

The empirical evidence strongly indicates that diversion of corporate resources by controlling shareholders is an economically important and widespread phenomenon, including in countries that have developed economies. This empirical literature consists of studies that have attempted to directly measure the “private benefits of control” accruing to the controlling shareholder (and not to other shareholders) and studies documenting the widespread existence of so-called “tunneling” – the phenomenon of corporate assets being transferred from the firm to a controlling shareholder through a variety of mechanisms.²⁵ “Tunneling” includes such activities as transferring at below-market prices assets from firms where the controlling shareholder has relatively low cash flow rights to firms where the controlling shareholder has higher cash flow rights.

Studies that have measured the “private benefits of control” enjoyed by controlling shareholders have consistently found that control of a company is typically worth a great deal, indicating that controlling shareholders are receiving benefits (including diversionary activities such as “tunneling”) not generally available to other shareholders as a result of that control. In Italy, for instance, the average value of control is worth an amazing 37% of the equity value of the firm.²⁶ More generally, control was worth, on average, an impressive 14% of the equity value of the firm in a sample of 39 countries. The sample included both developing and developed countries ranging from Colombia to the United States.²⁷ Other studies have likewise found that corporate control

²⁴ See generally Reinier Kraakman, Paul Davies, Henry Hansmann, Gerald Hertig, Klaus Hopt, Hideki Kanda, and Edward Rock, *THE ANATOMY OF CORPORATE LAW* (2004) (discussing the main issues in corporate and securities law).

²⁵ See Simon Johnson, Rafael LaPorta, and Andrei Shleifer, Tunneling, 90 *American Economic Review* 22 (2000) for examples of tunneling.

²⁶ Luigi Zingales and Alexander Dyck, Private Benefits of Control: An International Comparison, 59 *Journal of Finance* 537, 551 (2004).

²⁷ *Id.*

has, on average, a substantial economic value.²⁸ While the average is positive and substantial, there is nevertheless wide variation across countries. At one extreme, the estimated value of control in some countries, like Brazil, is in the range of 65% of the equity value of the firm. At the other extreme, corporate control in Japan is estimated to be worth negative 4% of the equity value of the firm.

What are some of the private benefits of control commonly enjoyed by controlling shareholders? Several studies have documented that private benefits of control often take the form of “tunneling” in a wide range of countries. For instance, one study found that in India it is not uncommon for more than 25% of the profits in firms where the controlling shareholder had low cash flow rights to be transferred to firms where the controlling shareholder has high cash flow rights when there is a positive shock to the firm’s cash flow.²⁹

B. Disclosure and Corporate Diversion

Widespread diversion of firm assets by controlling shareholders has implications for firms’ disclosure decisions. There are good reasons to believe that the more firms engage in diversion of corporate resources, all else being equal, the stronger controlling shareholders’ preferences for having these activities being kept hidden from public view.³⁰ A lax disclosure regime will likely have the effect of making it easier for controlling shareholders to divert corporate resources to their benefit, say “tunneling” a corporate asset at below-market prices to another firm in which the controlling shareholder has greater cash flow rights. The more information there is about what is really going on at the firm or who owns controlling stakes in the corporation the easier it

²⁸ See Tatiana Nenova, The Value of Corporate Votes and Control Benefits, 68 *Journal of Financial Economics* 104 (2003); Zingales, The Value of Voting Rights: A Study of the Milan Stock Exchange experience, 7 *Review of Financial Studies* 125-148 (1994); cf. Zingales, What determines the value of corporate votes?, 110 *Quarterly Journal of Economics* 1047 (1995). These studies find a substantial value placed on owning the control block in most cases despite the fact that control block ownership entails some potential costs as well, such as a lack of diversification.

²⁹ Marianna Bertrand, Paras Mehta, and Sendhil Mullainathan, Ferreting out Tunneling: An Application to Indian Business Groups, 47 *Quarterly Journal of Economics* 121 (2002).

³⁰ This preference can exist even if everyone knows that firms, on average, are engaged in these activities.

is for shareholders and regulators to uncover when, how and to whom diversion is occurring.

Detection of diversion through increased disclosure might have a number of unwanted consequences for the controlling shareholder. Detection might lead, of course, to legal action. Even in countries with poor legal protections for investors there is some legal response, at least sporadically, to expropriation of firm assets that is sufficiently egregious. Indeed, in extreme enough cases, public pressure for regulators to do something might provoke some action. In addition to any legal consequences, there might well be reputational costs for a controlling shareholder that has been publicly identified as particularly likely to engage in egregious conduct. Recent empirical work suggests that reputation for transparency and good governance can affect firm valuation.³¹

The empirical evidence is consistent with the view that it can powerfully be in the self-interest of controlling shareholders who are enjoying high levels of private benefits of control for there to be low levels of firm transparency.³² Some of this empirical work consists of several fairly recent empirical studies. It is worth bearing in mind, by way of caution, that none of the relevant studies can definitively establish a causal link between firm's disclosure preferences and the level of private benefits of control (as is typically the case for studies in this area).

A recent study has found that the higher the level of private benefits of control of firms in a country the lower the level of disclosure (as captured by the degree of earnings management firms engage in) by firms in that country.³³ This cross-country study consisted of a sample of 31 countries, including developing as well as developed countries. Another recent finding is that an increase in mandatory disclosure requirements

³¹ See Jordan Siegel, Can Foreign Firms Bond Themselves Effectively by Renting U.S. Securities Laws?, MIT Working Paper 2002.

³² This is not to say, of course, that the only factor affecting the level of private benefits of control is transparency, or even, more generally, the quality of the regulatory regime. Other non-legal factors have been found to be important. See, e.g., Marco Pagano and Paulo Volpin, The Political Economy of Finance, 17 Oxford Review of Economic Policy 502-519 (2001).

³³ See Christian Leuz and Felix Oberholzer-Gee, Political Relationships, Global Financing and Corporate Transparency, Working Paper 2003.

in a country is associated with a substantial lower level of private benefits of control for firms in that country.³⁴

Consistent with the view that increased disclosure can reduce the private benefits of control, Todd Mitton in an important study of firms from Indonesia, Korea, Malaysia, the Philippines, and Thailand during the East Asian financial crisis of 1997-1998 found that firms with high levels of disclosure (by virtue of having securities trading in the United States or having an auditor from a Big Six accounting firm) had substantially better stock return performance during the crisis.³⁵ One plausible explanation for these abnormal stock returns is that diversion of corporate resources is likely to be particularly severe during financial crises,³⁶ but firms with high levels of disclosure experienced lower incidences of corporate diversion given the increased transparency of any diversion that is undertaken.

Another piece of empirical evidence comes from studies of firms that cross-list. Empirical research has found that the benefits to firms from countries with weak disclosure and investor protection regimes of cross-listing onto the U.S. exchanges are often substantial. Cross-listings are associated with more accurate analyst forecasts – arguably an indication of a richer information environment – and increased firm valuation.³⁷ Improvements in firm valuation are particularly significant for firms cross-listing from countries with the weakest disclosure and investor protection regimes.³⁸

Despite the apparent substantial benefits of cross-listing, relatively few of the firms eligible for cross-listing take advantage of this opportunity. Less than 10% of firms

³⁴ See Rafael La Porta, Florencio-de-Silanes, and Andrei Shleifer, *What Works in Securities Laws?*, Working Paper 2004, p.16 (two-standard deviation increase in their “disclosure index” associated with a 13% decrease in the premium paid for control blocks).

³⁵ Todd Mitton, *A Cross-Firm Analysis of the Impact of Corporate Governance on the East Asian Financial Crisis*, 64 *Journal of Financial Economics* 215 (2002) (having an ADR resulting in a higher stock return relative to other firms during the East Asian crisis of 10.8% and having a Big Six accounting firm was associated with a higher return of 8.1%).

³⁶ See Peter Boone, Alasdair Breach, Eric Friedman, and Simon Johnson, *Corporate Governance in the Asian Crisis*, 58 *Journal of Financial Economics* 141-186 (2000) (arguing that expropriation increased during the crisis)

³⁷ M. Lang, K. Lins, and D. Miller, *ADRs, Analysts and Accuracy: Does Cross Listing Improve a Firm’s Information Environment?*, Working Paper 2002.

³⁸ See C. Doidge, G. Karolyi, and R. Stulz, *Why Are Foreign Firms Listed in the U.S. Worth More?*, NBER Paper 8538 (2001).

eligible for cross-listing onto the U.S. markets apparently do so.³⁹ Many firms are apparently satisfied with their regulatory environment and the associated high levels of private benefits of control, despite the cost in firm valuation.

Another study has investigated the effect of a country having an active media on the level of private benefits enjoyed by controlling shareholders.⁴⁰ The effects were quite strong. A one standard deviation increase in the level of the active press variable translated into a reduction in the value of the private benefits of control by some 6.4%. This evidence is consistent with an increased ability of the public to scrutinize questionable behavior, in this case through the activities of the press, limiting the ability of controlling shareholders to extract private benefits.

Other studies have focused on politically-connected firms and firm transparency. Again, the evidence is consistent, not surprisingly, with firms having a preference for avoiding demanding disclosure regimes that might publicly expose uncomfortable facts. Politically-connected firms in Indonesia during the reign of Soeharto, for example, were significantly less likely to have securities publicly-traded abroad. More specifically, these firms were significantly less likely to have debt or equity traded on the U.S. exchanges and thereby avoided U.S. disclosure requirements.⁴¹ One plausible explanation for this finding is that these firms desired to hide their questionable transactions with their political backers and state-owned banks. Causation is difficult to establish, however, as the availability of favorable financing from state banks could have reduced the need for external finance.⁴²

On a more general note, research has found that there is a negative correlation between the presence of controlling shareholders and the strength of the legal protections provided to investors.⁴³ One common explanation for this finding is that the private

³⁹ *Id.* at 1.

⁴⁰ See Luigi Zingales and Alexander Dyck, *Private Benefits of Control: An International Comparison*, 59 *Journal of Finance* 537 (2004). The level of activity of the press was proxied by the number of newspapers sold per 100,000 residents.

⁴¹ See Christian Leuz and Felix Oberholzer-Gee, *Political Relationships, Global Financing and Corporate Transparency*, Working Paper 2003.

⁴² See *id.* at 3-4 discussing this possibility.

⁴³ See, e.g., Rafael La Porta, Lopez-de-Silanes, and Andrei Shleifer, *Corporate Ownership around the World*, 54 *Journal of Finance* 471 (1999). The La Porta et al “anti-directors” index, a measure of the strength of legal protections provided investors, does not include mandatory disclosure requirements as one

benefits of control are lower, and hence the attractiveness of retaining control reduced, the stronger the legal protections of investors (such as mandatory disclosure).⁴⁴ Outside investors, such as shareholders, will be willing to pay more for claims on the firm's profits given the lower level of expected diversion of corporate resources.

Certain disclosures required under U.S. law are likely to be particularly useful in this regard. The Exchange Act of 1934 often requires companies to disclose the identity of any shareholder with more than 5% of the firm's equity.⁴⁵ Indeed, disclosure requirements are so detailed in the U.S. that firms must disclose whether corporations allow executives to use the company jet for personal use.⁴⁶ Interestingly, the private benefits of control in the United States have been measured at the modest level of 1% of equity value.⁴⁷

Of course, the mere fact that controlling shareholders might want to opt into a lax disclosure regime does not by itself indicate that such a decision is socially undesirable. It is possible that the controlling shareholder values the diverted resources as much as the shareholders who would otherwise be the beneficiary.⁴⁸ In other words, diversion of corporate resources might constitute a mere transfer with no net social loss. Moreover, the ability to engage in diversion might conceivably serve as compensation to the controller for the costs associated with monitoring the firm's managers. These costs might include a lack of diversification and liquidity associated with holding a large

of its elements. However, using an index that includes mandatory disclosure requirements appears to capture more of the important aspects of differences across countries than does the "anti-directors" index. See Rafael La Porta, Florencio-de-Silanes, and Andrei Shleifer, *What Works in Securities Laws?*, Working Paper 2004. Moreover, disclosure levels of firms in a country and that country's "anti-directors" index are, not surprisingly, highly correlated. See Christian Leuz, Dhannanjay Nanda and Peter Wysocki, *Investor Protection and Earnings Management: An International Comparison*, MIT Working Paper 2002.

⁴⁴ See, e.g., Lucian Bebchuk, *A Rent-Protection Theory of Corporate Ownership and Control*, NBER Working Paper No. 7203 (1999) (fewer private benefits of control can lead to more dispersed ownership structures).

⁴⁵ See Exchange Act of 1934, 15 U.S.C. section 781-m (1994).

⁴⁶ See David Yermack, *Flights of Fancy*, Working Paper 2004 (studying effect of disclosures concerning use of company jet on stock prices).

⁴⁷ Luigi Zingales and Alexander Dyck, *Private Benefits of Control: An International Comparison*, 59 *Journal of Finance* 537, 551 (2004).

⁴⁸ Most models of expropriation, however, do assume that there is a cost associated with diversion of corporate resources. See, e.g., Burkhardt, Gromb and Panunzi, *Why Higher Takeover Premia Protect Minority Shareholders*, 106 *Journal of Political Economy* 172-204 (1998).

control block of stock in a single company and the time and effort incurred by the controller in the course of monitoring firm management.⁴⁹

In evaluating how likely it is that there are no net social losses associated with a lax disclosure regime, two considerations need to be kept in mind. First, even if private benefits of control, including the ability to “tunnel” assets, merely represent a transfer from minority shareholders to controlling shareholders or efficient compensation for the monitoring services provided by the controller, the effects of a lax disclosure regime – adopted as a means to protect these transfers – on competition, growth and financial development must be considered in evaluating the social desirability of a lax disclosure regime. Once these effects are taken into account, it is questionable how innocuous the decision to opt into a poor disclosure regime really is. The empirical evidence, which will be discussed in Part III.C, is consistent with the effects of lax disclosure regimes on competition, growth and financial development being both detrimental and nontrivial.

Second, it is also worth emphasizing that once firms have sold shares to minority shareholders, controlling shareholders will not necessarily find a firm value-maximizing disclosure regime in their self-interest for the simple reason that some of the benefits of such a regime will accrue to the benefit of minority shareholders.⁵⁰ Minority shareholders would benefit because they were able to initially purchase their shares at a discount reflecting a higher expected level of diversion than is possible under a more demanding regime.⁵¹ Selling shares at such a discount might be the optimal course of action if it turns out that, at the time the shares were sold, there happened not to be a demanding disclosure regime available and supporting the creation of such a demanding disclosure regime was either infeasible or would have created potentially unwanted competition.

⁴⁹ See Admati, Pfleiderer and Zechner, Large Shareholder Activism, Risk Sharing, and Financial market Equilibrium, *Journal of Political Economy* 1097 (1994) (discussing the costs associated with holding large blocks). Of course, if control is guaranteed by holding shares with disproportionate voting rights, the diversification and liquidity costs of control will be reduced.

⁵⁰ See, e.g., Lucian Bebchuk and Mark Roe, A Theory of Path Dependence in Corporate Ownership and Governance in *CONVERGENCE AND PERSISTENCE IN CORPORATE GOVERNANCE* 69, 83-92 (2004)

⁵¹ See Andrei Shleifer and Daniel Wolfenzon, Investor Protection and Equity Markets, 66 *Journal of Financial Economics* 3, 17-18 (2002) (proposition 9). The Shleifer-Wolfenzon model is cast in terms of investors' legal protections. Their model is easily adopted to apply to disclosure requirements. See Michael Greenstone, Paul Oyer and Annette Vissing-Jorgensen, The Effects of Equity Market Regulation: Evidence from the Securities Acts Amendments of 1964, Working Paper 2004 for an adoption of Shleifer-Wolfenzon model to the mandatory disclosure requirement context.

C. Disclosure and Competition

1. Reducing the Cost of External Finance

Besides affecting the ability of controlling shareholders to divert corporate resources, the presence of a demanding disclosure regime has another potentially important effect. A demanding disclosure regime can lead to a lower cost of capital for firms reliant on external finance. This consequence is potentially quite important for those firms that do not have sufficient internal sources of capital to capitalize on investment opportunities. This group of firms would likely include young firms with high-growth prospects but relatively few internal sources of capital. Larger, more-established firms are more likely to have internal sources of capital as well as well-established ties to banks and other financial institutions that can provide credit.

There are at least three mechanisms by which a demanding disclosure regime can reduce the cost of external finance: by reducing adverse selection costs; reducing the level of private information held by traders; and reducing the expected level of diversion of corporate resources. Consider first the effect of demanding disclosure on adverse selection costs. A standard set of models in corporate finance indicate that there is an adverse selection cost to raising external finance that can be reduced with improved disclosure. In the absence of sufficient firm-specific public information, the market will assign a positive probability that a firm with valuable assets – such as a firm with substantial profits and promising growth prospects – is in fact a firm with low-value assets.⁵² This makes it less likely that high-value firms will raise external finance to fund attractive investment opportunities as their shares will sell at a discount to their true value. This represents the adverse selection cost to these high-value firms of raising external finance. Improved disclosure of firm-specific information at the time the firm is

⁵² The classic adverse selection papers are Myers, Stewart C. and Nicholas S. Majluf, Corporate Financing and Investment Decisions when Firms have Information that Investors do not have, 13 *Journal of Financial Economics* 187-221 (1984) and Stewart Myers, The Capital Structure Puzzle, 39 *Journal of Finance* 575 (1984).

raising capital makes it more likely that high-value firms will raise external finance given the increased ability of the market to differentiate between high-value and low-value firms.⁵³

The second reason for why the cost of external finance might be lower in a regime with demanding disclosure requirements is the effect such a regime has on the level of private information about the true value of the firm held by traders. Credible, public firm disclosures can have the effect of displacing information that was, or would have been, generated by privately-informed traders.⁵⁴ This is important because recent theoretical and empirical research indicates that securities with a high level of private-information trading have higher expected returns. And, of course, a higher expected return, all else being equal, implies a higher cost of capital. This association between levels of private information trading and expected returns suggests that there is value to a firm of not only credibly committing to meeting demanding disclosure standards at the time external finance is being raised, but also credibly committing at the same time to meeting demanding disclosure requirements in the future as well. The theoretical and empirical literature on this association will be discussed in further detail in Part V.

Finally, the availability of external finance can be enhanced by mandatory disclosure because a firm can demand more per share if it is able to credibly commit to a low level of diversion of corporate assets through such a disclosure regime. The equity of a firm will be worth more because a larger percentage of the firm's profits will end up being used for the benefit of all the shareholders. Moreover, an increase in the amount of publicly available information could also have the effect of reducing the costs to minority shareholders of monitoring controlling shareholders and management to ensure that corporate diversion is not occurring.⁵⁵ The reduced cost of external finance for firms that have attractive investment opportunities and can credibly commit to reduced levels of

⁵³ Consistent with this, voluntary levels of disclosure by firms are higher around the time firms access the capital markets for capital. See Lang, M. and R. Lundholm, Cross-Sectional Determinants of Analyst Ratings of Corporate Disclosures, 31 *Journal of Accounting Research*, Autumn 246-271 (1993)

⁵⁴ For evidence that firm public disclosures can displace private information, see Brown, Stephen, Mark Finn, and Stephen Hillegeist, Disclosure Policies and the Probability of Informed Trade, Working Paper 2001.

⁵⁵ See David Lombardo and Marco Pagano, Law and Equity Markets: A Simple Model, CSEF Working Paper No. 25 (2002) (modeling the effect of reduced monitoring costs on the equilibrium rate of return on equity).

diversion can result in a reallocation of capital from firms that have less attractive investment opportunities to those with more attractive investment opportunities.⁵⁶ These reduced agency costs suggest another potential benefit to having ongoing disclosure requirements, rather than just mandated disclosure at the time external finance is raised.

A reduced cost of external finance for firms issuing securities also has implications for the availability of venture capital financing for these firms prior to the time they ultimately issue securities to the public. The option for venture capitalists to “cash out” their investments by selling securities in the firm to the public on favorable terms in the event that the company is successful could very well make it more likely that venture capital funding will be forthcoming in the first place.⁵⁷ One study has documented that venture capital funding increases in the aftermath of countries introducing more demanding mandatory disclosure requirements.⁵⁸

The empirical evidence is consistent with the presence of a demanding disclosure regime enabling firms (such as cash-poor, high-growth firms) to raise needed external finance on favorable terms. Studies have found that many of the firms that cross-list into the United States, and thereby commit themselves to the U.S. disclosure regime, are in fact cash-poor, high-growth firms from countries with poor disclosure regimes (and poor investor protections generally) that need to raise external finance.⁵⁹ Cross-listing, either through reputational or legal bonding, apparently enables firms to credibly commit to a demanding disclosure regime.

⁵⁶ See Andrei Shleifer and Daniel Wolfenzon, Investor Protection and Equity Markets, 66 *Journal of Financial Economics* 3 (2002) (establishing this result when capital is not perfectly mobile across countries).

⁵⁷ See Bernard Black and Ronald Gilson, Venture Capital and the Structure of Capital Markets: Banks versus Stock Markets, 47 *Journal of Financial Economics* 307 (1998).

⁵⁸ See Rafangum Rajan, and Luigi Zingales Rajan, SAVING CAPITALISM FROM THE CAPITALISTS 85 (2003) discussing evidence gathered by Jorg Kukies in *Stock Markets for High-Technology Firms and Venture Capital Funding: Evidence from Europe* (PhD Dissertation, University of Chicago, 2001).

⁵⁹ See Marco Pagano, Alisa Roell, and Josef Zechner, The Geography of Equity Listing: Why do European Companies List Abroad?, CSEF Working Paper No.28 (1999) (high-growth firms in need of external finance more likely to cross-list onto the U.S. markets); W. Reese and M. Weisbach, Protection of Minority Shareholder Interests, Cross-listing in the United States, and Subsequent Equity Offerings, 66 *Journal of Financial Economics* 65-104 (2002) (firms planning to raise capital tend to cross-list).

More generally, countries whose firms have higher levels of transparency in their earnings reports enjoy lower costs of capital.⁶⁰ Consistent with this, industries and firms in countries with strong investor protection requirements rely more on external finance to raise capital. For instance, countries with stronger investor protection requirements have a larger number of firms going public (relative to the country's GDP).⁶¹

Comparing the relative success of the different securities regulations instituted by the Czech Republic and Poland in the 1990s is instructive.⁶² One of the most striking differences between these countries' two regimes was in their disclosure requirements. While Poland imposed demanding disclosure requirements on firms with publicly-traded securities, the Czech Republic did very little. For instance, securities could not begin trading on Poland's markets unless a firm prospectus was available. The Czech Republic required none. Poland required monthly, quarterly and semi-annual disclosures by firms. The Czech Republic did not require that any of these disclosures be made. Poland's level of financial development, including initial public offerings and the level of external finance raised, far exceeded that of the Czech Republic throughout the 1990s.⁶³ Perhaps not coincidentally, the private benefits of control in Poland were 11% of firm value while in the Czech Republic it was 58% of firm value.⁶⁴

2. Increasing Competition

More demanding disclosure requirements have an important effect not only on firms that rely on external finance, but also for those firms – such as large, well-established, low-growth firms – that do not. Better financing opportunities for potential

⁶⁰ See Battacharya, Daouk and Michael Welker, *The World Price of Earnings Opacity*, Working Paper 2002 (study of 34 countries over the 1985-1998 period).

⁶¹ See Rafeal La Porta, Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, *Legal Determinants of External Finance*, 52 *Journal of Finance* 1131 (1997).

⁶² See generally John C. Coffee, *Privatization and Corporate Governance: The Lessons from Securities Market Failure*, 25 *J. Corp. L.* 1 (1999) and Edward Glaeser, Simon Johnson, and Andrei Shleifer, *Coase versus the Coasians*, 116 *Quarterly Journal of Economics* 853 (2001).

⁶³ See Edward Glaeser, Simon Johnson, and Andrei Shleifer, *Coase versus the Coasians*, 116 *Quarterly Journal of Economics* 853 (2001) (comparing financial development of Czech Republic and Poland during the 1990s).

⁶⁴ See Luigi Zingales and Alexander Dyck, *Private Benefits of Control: An International Comparison*, 59 *Journal of Finance* 537, 563 (2004).

competitors is generally not in the interests of these firms.⁶⁵ Therefore, in addition to protecting any private benefits of control that may exist, these firms have an additional and separate reason to be strongly opposed to the institution of a more demanding disclosure regime. These firms will be opposed to a demanding disclosure regime being made available to (potential) competitors that rely on external finance. Recent empirical evidence points to exactly how these firms will be disadvantaged by improved disclosure requirements.

Firms in industries with significant needs for external finance (high growth opportunities relative to internal cash flows), such as the pharmaceutical industry with its substantial costs of drug development, grew substantially faster during the 1980s in countries with more demanding accounting disclosure standards than firms in those same industries in countries with weak accounting disclosure standards.⁶⁶ Equally important, the same study found that there was more competition in these external finance-dependent industries, as measured by the number of new entrants, in countries with demanding accounting standards.⁶⁷ In other words, in industries that heavily depend on external finance for funding, competition increased as a result of the presence of demanding mandatory disclosure requirements. The losers of more demanding mandatory disclosure requirements appear to be firms with sufficient sources of internal capital for their investments.

Or consider the effect on a firm from a country with a poor disclosure regime of other firms cross-listing onto a foreign exchange. Several studies have examined the effect of a firm's decision to cross-listing onto the U.S. markets on similarly-situated firms that do not cross-list. These studies have found that firms not cross-listing experience a negative stock price reaction.⁶⁸ One needs to be cautious, however, in interpreting these findings. While these studies do indicate that non-listed firms are

⁶⁵ See Rafangum Rajan, and Luigi Zingales, *The Great Reversals: the Politics of Financial Development in the 20th Century*, 69 *Journal of Financial Economics* 5 (2003) (examining the effect of openness to capital flows and trade on the politics surrounding financial development)

⁶⁶ See R. Rajan and L. Zingales, *Financial Dependence and Growth*, 88 *American Economic Review* 3, 559-586 (1998).

⁶⁷ See *id.* at 572.

⁶⁸ See Michael Melvin and Magali Valero-Tonone, *The Effects of International Cross-Listing on Rival Firms*, Working Paper 2003; Dong W. Lee, *Why do ADR Program Announcements Increase Shareholder Wealth?*, Working Paper 2002.

apparently harmed by the cross-listing decisions of other firms, it is not clear from these studies what is responsible for this negative price reaction; the prospect of increased competition due to increased access to capital for the firms' rivals or the possibility that the market draws a negative inference about the non-listing firms (such as their growth prospects).

The ability of a firm to credibly commit to a demanding disclosure regime not only increases competition in the product market, by funding new entrants, but can also increase competition between firms for capital. This can lead some firms to oppose a demanding mandatory disclosure regime *even if* they have not yet sold (although they are planning to) shares to the public. If capital is not perfectly mobile across borders (i.e. the supply of capital is not perfectly elastic), a situation which appears to be the case for most countries,⁶⁹ then an enhanced ability of some firms to receive external finance through credibly committing to a demanding disclosure regime implies that the country's interest rate increases.⁷⁰ More demand for external finance, all else being equal, implies a higher interest rate in equilibrium given the fact that capital is scarce. Firms that are planning a securities offering now face, unhappily, a higher discount rate (i.e. the economy's interest rate) for the shares they are selling. Indeed, some firms will not be able to raise sufficient capital by selling shares unless they operate in a lax disclosure regime given the higher discount rate associated with increased competition for capital.

Supporting these theoretical predictions, Davide Lombardo and Marco Pagano found that countries with higher quality legal regimes (as captured by indexes that capture a country's respect for the rule of law and the efficiency of the country's judicial system) have *higher* risk-adjusted returns.⁷¹ Also consistent with these predictions is the finding in another recent study that stock markets which impound more firm-specific information are associated with an improvement in the allocation of capital across

⁶⁹ See Geert Bekaert and Campbell Harvey, Time-Varying World Market Integration, 50 *Journal of Finance* 2, 403-444 (1995); Campbell Harvey, Predictable Risk and Return in Emerging Markets, 8 *Review of Financial Studies* 3, 773-816 (1995).

⁷⁰ There are several formal models that capture these effects on the interest rate. See David Lombardo and Marco Pagano, Law and Equity Markets: A Simple Model, CSEF Working Paper No. 25; Andrei Shleifer and Daniel Wolfenzon, Investor Protection and Equity Markets, 66 *Journal of Financial Economics* 3, 17-18 (2002).

⁷¹ Davide Lombardo and Marco Pagano, Legal Determinants of the Return on Equity, CSEF Working Paper No. 24.

industries.⁷² Interestingly, other empirical studies have found that mandatory disclosure is associated with more firm-specific information being impounded into stock prices.⁷³

Moreover, empirical research has found that there was an improvement in capital allocation in countries with strong legal protections for investors.⁷⁴ This improved allocation of capital from stronger legal protections resulted in “declining industries” receiving less funding relative to those in firms with better growth prospects. In other words, “declining industries” appear to be losers in legal systems with more demanding investor rights.⁷⁵

In short, there is an extensive (and growing) body of evidence that is consistent with a number of firms having a powerful reason to be opposed to more demanding disclosure requirements if this means that these disclosure requirements will likewise be made available to other firms. Improved disclosure can have the effect of increasing competition by enabling firms without sufficient internal sources of capital to receive funding. This competition can take the form of increased competition for scarce capital and increased product market competition. Competition, and the “creative destruction” of firms that it unleashes, is potentially quite threatening to established firms with internal sources of cash and well-established ties to banks and other financial institutions as well as those firms that wish not to compete with others for the external finance they receive.

It is worth emphasizing that the desire to suppress competition through neglect of the legal infrastructure necessary to create and support robust competition can exist even if there are no controlling shareholders who are enjoying, and wish to continue enjoying, substantial private benefits of control. Moreover, firms can have this preference for a lax disclosure regime for this anti-competitive reason even at the time they are selling shares to the public, despite the discount in share price this will cause.

⁷² Jeffrey Wurgler, *Financial Markets and the Allocation of Capital*, 58 *Journal of Financial Economics* 187 (2000) (dataset consists of 65 countries over a thirty-three year period)

⁷³ See Merritt Fox, Randall Morck, Bernard Yeung and Artyom Durnev, *Law, Share Price Accuracy and Economic Performance: The New Evidence*, forthcoming *Michigan Law Review*.

⁷⁴ Jeffrey Wurgler, *Financial Markets and the Allocation of Capital*, 58 *Journal of Financial Economics* 187 (2000)

⁷⁵ The Wurgler study did not, however, focus on mandatory disclosure requirements separate from other legal protections for investors. The two, however, are highly correlated. See footnote 43.

Of course, when there are in fact substantial private benefits of control present, these empirical studies indicate that there is likely a real, and potentially quite significant, cost in terms of foregone competition, growth and financial development resulting from a preference on the part of controlling shareholders for a lax disclosure regime as a means of retaining their ability to divert corporate resources unimpeded. This is true even if such diversion is largely a mere transfer between shareholders or such diversion represents, in part, compensation to the controller for its monitoring costs.

D. Firms That Still Want to Commit

As has been mentioned, there will undoubtedly be some firms that do want to commit to a high-quality disclosure regime. This group might include some controlling shareholders who are willing to forgo the opportunity to divert some corporate resources in order to capture the increase in the value of the controller's ownership stake associated with operating under a high-quality disclosure regime. In other words, the controller's share of the efficiency gains from selecting a higher quality disclosure regime might, if the magnitude is sufficiently large, more than offset the controller's decreased ability to divert corporate resources.⁷⁶ While substantial private benefits of control are common around the world, there is still a number of countries where the average private benefits are modest. Even in situations where private benefits of control are high, some controlling shareholders might want to attempt to capture the efficiency gains from improved corporate governance by purchasing the minority shareholder stakes at depressed prices and then commit to a firm value maximizing disclosure (and investor protections rights) regime.⁷⁷ And, finally, this group of willing firms will also likely include some firms that need to raise external finance and venture capital funding to capitalize on investment opportunities.

⁷⁶ Lucian Bebchuk and Mark Roe, A Theory of Path Dependence in Corporate Ownership and Governance in *CONVERGENCE AND PERSISTENCE IN CORPORATE GOVERNANCE* 69 (2004)

⁷⁷ See Henry Hansmann and Reinier Kraakman, The End of History for Corporate Law in *CONVERGENCE AND PERSISTENCE IN CORPORATE GOVERNANCE* 58 (discussing the possibility that controlling shareholders will use freeze-out mergers and coercive tender offers to purchase minority shares).

All this leads to the following question: Why should policymakers be concerned about the disclosure levels of those firms that want to credibly commit to a disclosure regime that maximizes firm valuation and reduces the cost of external finance? If there are firms that wish to credibly commit will not the market or a responsive government provide a means for these firms to do so? As it turns out, there are powerful reasons for why government and the market might not provide the necessary tools for this group of firms to credibly commit to a high-disclosure regime even when they find it in their self-interest to do so.

IV. CAN FIRMS CREDIBLY COMMIT?

A. The Political Economy of Vested Interests

There are four different possibilities for how a firm might credibly commit to a demanding disclosure regime. First, the government, perhaps responding to firm demand for better disclosure requirements, could provide such a disclosure regime. Second, the exchange in the firm's country, through its listing requirements, could ensure that certain disclosure standards be met for exchange-listed firms. Third, firms in countries with lax disclosure regimes might cross-list onto exchanges in countries that provide a more demanding disclosure regime. Fourth, firms in their individual capacity could attempt, through various contractual and corporate charter provisions, to create such a regime for themselves.

Whether government responds to the demands of some firms to make improved disclosure standards available to them will be impacted by the opposition of those firms – often the larger, well-established firms – to the prospect of increased competition. It is not surprising that in many instances governments around the world, perhaps responding to this powerful interest group, have failed to provide the legal infrastructure that would enable firms to commit to a high-quality disclosure regime despite the possibility that

there are firms that crave a high-quality disclosure regime.⁷⁸ The true costs to the public at large of such inaction are often not readily apparent.

In considering the likely response by domestic exchanges to a need for improved disclosure requirements, it is worth bearing in mind that a number of the likely firm beneficiaries of improved access to external finance and venture capital are likely not even listed, or eligible for listing, on the exchange given their firm size and stage of development. Indeed, some exchanges require that a firm be profitable for a certain number of years before they are even eligible for listing, exactly those firms that are least likely to have internal sources of capital or well-established ties to financial institutions. In other words, the beneficiaries of improved disclosure standards will often be outsiders to the internal decision-making process of the exchange when it is setting its listing standards. Not surprisingly, exchanges have proven quite responsive to the demands of its largest listed firms; those firms least likely to be the primary beneficiaries of a lower cost of external finance or increased venture capital funding.

The famous one-share one-vote controversy over the New York Stock Exchange's (NYSE) listing rules is a good illustration of this solicitousness. The NYSE had since 1926 an exchange listing rule expressly prohibiting dual class common stock.⁷⁹ A rule, incidentally, that had received significant academic support as good policy.⁸⁰ When General Motors, one of the larger NYSE-listed companies, issued dual class common stock in 1982 in clear violation of this rule, the NYSE refused to take any action against General Motors. Indeed, the NYSE seriously considered changing its longstanding rule prohibiting dual class common stock in response to General Motors' actions. The issue was final moot when the SEC stepped in and restricted the use of dual class common through regulation.⁸¹

There is also some evidence that a similar dynamic was at work in the pre-mandatory disclosure period in the United States. The NYSE appeared to be reluctant to

⁷⁸ See generally Rafangum Rajan and Luigi Zingales Rajan, *SAVING CAPITALISM FROM THE CAPITALISTS* (2003) describing the politics surrounding financial development.

⁷⁹ See Jeffrey Gordon, *Ties that Bond: Dual Class Common Stock and the Problem of Shareholder Choice*, 76 Cal. L. Rev. 1 (1988) for a detailed discussion of this episode.

⁸⁰ See Marcel Kahan, *Some Problems with Stock Exchange-Based Securities Regulation: A Comment on Mahoney's Exchange as Regulator*, 83 Vir. L. Rev. 1509 (1997).

⁸¹ See Regulation 19c-4, Exchange Act Release 10,304 (1988).

impose meaningful disclosure requirements on listed firms at the turn of the century due to the opposition of firms with controlling shareholders, often families, who preferred not to be bound to disclose information.⁸² Not until the exchange was under intense governmental pressure did the NYSE meaningfully improve its disclosure requirements in 1910.⁸³

The failure of government or an exchange to create a meaningful disclosure regime can, of course, be a reasonable decision. Creating a mandatory disclosure regime, with meaningful levels of enforcement, is an expensive and, perhaps even more importantly, complicated undertaking. To the extent there is court involvement in enforcement, perhaps adjudicating lawsuits or reviewing a governmental agency's enforcement actions, the court system must be up to the task. This includes tolerable levels of judicial corruption and some minimal level of expertise on the part of judges in assessing the merits of these actions. The same will be true for any private enforcement and adjudication process that might be established by an exchange. In addition, establishing workable definitions of concepts likely to be central in any mandatory disclosure regime, such as what constitutes a "material" misstatement, is likely to prove, if the U.S. experience is any guide, to be a complicated endeavor. Moreover, there will inevitably be a need in any mandatory disclosure regime for regulations and guidelines to be continually clarified and updated as business conditions change and new fact patterns present themselves.

All of this is to say that there are nontrivial costs that a country or an exchange must incur if it is going to establish a meaningful mandatory disclosure regime for firms with publicly-traded securities. Incurring these costs at any point in time will only make sense if there are sufficient number of firms with publicly traded securities, or considering going public, that might benefit from such a regime at that time.

But this creates a serious timing problem. In a situation where there is, perhaps quite reasonably, a poor disclosure and investor rights regime, the most efficient outcome

⁸² See David F. Hawkins, *The Development of Modern Financial Reporting Practices Among American Manufacturing Corporations*, in *MANAGING BIG BUSINESS* 135, 166-67 (Richard S. Tedlow & Richard R. John, Jr. eds., 1986).

⁸³ See discussion in Part IV.B.2. See generally James Davis, *Corporate Disclosure Through The Stock Exchanges* (unpublished manuscript on file with author).

might very well be the presence of controlling shareholders who can monitor management and internalize the costs of expropriation.⁸⁴ And, in fact, developing countries have a strong tendency towards concentrated ownership.⁸⁵ Controlling shareholders of firms that already have minority shareholders by the time it begins to make sense to incur the costs of establishing a mandatory disclosure regime will have an incentive to oppose a change in the disclosure regime irrespective of whether the change is being considered by government or the firm's exchange.⁸⁶ And, likewise, entrenched managers of firms with dispersed ownership structures will attempt to protect any private benefits of control they enjoy. To make matters worse, non-controlling shareholders of these firms might also find it in their interest to oppose the adoption of a more demanding disclosure regime, even if this were to reduce the incidence of corporate diversion by controlling shareholders and entrenched managers to their benefit, if the result is likely to be an increase in the level of competition faced by the firm.

This is not to say that these vested interests can never be overcome. That is obviously false. It is merely to say that the fact that firms in a country or an exchange operate under a lax disclosure regime does not imply that mandated disclosure can not substantially improve matters. To this point, the analysis has focused on the political economy implications of having firms with a vested interest in a lax disclosure regime. But how does the willingness of an exchange to impose demanding disclosure requirements through its listing standards change when competition between exchanges is introduced?

⁸⁴ See Andrei Shleifer and Robert Vishny, A Survey of Corporate Governance, 52 *Journal of Finance* 737 (1997); Bennedsen and Daniel Wolfenzon, The Balance of Power in Closely Held Corporations, 58 *Journal of Financial Economics* 113 (2000); Rafeal LaPorta, Lopez-de-Silanes, F., Andrei Shleifer, Robert Vishny, Investor Protection and Corporate Valuation, 57 *Journal of Finance* 1147 (2002).

⁸⁵ Although there does appear to be more separation of cash flow and voting rights than is optimal. See Lucian Bebchuk, A Rent-Protection Theory of Corporate Ownership and Control, NBER Working Paper No. 7203 (1999).

⁸⁶ See Andrei Shleifer and Daniel Wolfenzon, Investor Protection and Equity Markets, 66 *Journal of Financial Economics* 3, 17-18 (2002).

B. Competition Between Domestic Exchanges

Competition between exchanges is an important issue to consider. A number of commentators have argued that competition between exchanges for trading volume and company listings will ensure that firms both can and will commit to a demanding disclosure regime.

1. Theory

The desire to attract the trading volume of investors will ensure, the argument goes, that exchanges institute demanding disclosure requirements as a prerequisite to listing on the exchange. This is so because investors value disclosure and will route their stock orders accordingly. Based on this reasoning, Paul Mahoney and others have argued that exchanges should be vested with the responsibility of setting disclosure standards.⁸⁷

How this competition for trading volume and listing business will work out has been fleshed out in different ways. Paul Mahoney, for instance, argues that “[o]ne important source of risk [to investors] is the divergence of investor viewpoints about the company’s performance. The company can reduce this divergence by making financial and other disclosures.”⁸⁸ As result, this will increase the “desirability of listed companies as investment vehicles.”⁸⁹ Huddart, Hughes and Brunnermeier (HHB), to take another prominent example, have attempted to capture in a formal model the intuition that exchanges competing to maximize trading volume will offer demanding disclosure standards.⁹⁰ In the HHB model, firms will attempt to capture the trading done by uninformed, liquidity traders – traders who have no private information about the firm’s true value but need to trade given their liquidity needs – even while simultaneously attempting to attract listings from firms whose corporate insiders wish to engage in

⁸⁷ Paul Mahoney, *Exchange as Regulator*, 83 *Virginia Law Review* 1453 (1998); see also Edmund Kitch, *Competition Between Securities Markets: Good or Bad?* in *THE FUTURE FOR THE GLOBAL SECURITIES MARKET: LEGAL AND REGULATORY ASPECTS* 233 (Fidelis Oditah ed., 1996).

⁸⁸ *Id.* at 1458

⁸⁹ *Id.*

⁹⁰ Steven Huddart, John Hughes, Markus Brunnermeier, *Disclosure Requirements and Stock Exchange Listing Choice in an International Context*, 26 *Journal of Accounting and Economics* 237 (1999).

insider trading using their private information about the firm's true value. The model's implication that there will be a "race to the top" in terms of disclosure standards relies on the plausible assumption that uninformed liquidity traders prefer not to trade, all else being equal, against informed traders. An exchange with a demanding disclosure regime reduces the likelihood in their model that uninformed liquidity traders are trading against informed traders. Corporate insiders prefer to conduct their trades where they can "hide" among a large number of liquidity traders even at the expense of having some of their private information publicly revealed as a result of the exchange disclosure rules. Hence, exchanges will voluntarily offer demanding disclosure standards given their preference, a preference shared by corporate insiders, to attract the trades of liquidity traders.

Neither of these particular lines of reasoning is entirely convincing. As for the Mahoney argument, the precise connection between the desirability of a security as an investment and divergence of investor viewpoints is not spelled out. Even assuming that a decrease in the divergence of investor viewpoints will result in reduced systematic risk, this will not necessarily render the securities more attractive as an investment, as the risk-adjusted return will, in an efficient market, remain the same. Investors will simply enjoy a lower return as a result of bearing less systematic risk. At this point, the relative attractiveness of securities with high disclosure and those with low disclosure as an investment will remain the same.

Nor does the HHB model constitute a firm basis for arguing that exchanges will institute demanding disclosure requirements and, thereby, ensure that listed firms meet demanding disclosure standards even in the absence of mandatory disclosure. The HHB model normalizes all securities returns, regardless of where the security trades, to zero.⁹¹ It is this assumption that drives their conclusion that liquidity traders have a preference for high disclosure exchanges given the fact that the only difference between securities trading on different exchanges is the probability of incurring a loss by trading against informed traders. However, it is very much an open question in the finance literature whether securities with higher levels of informed trading have the same return as securities with lower levels of informed trading – an issue that will be explored in more

⁹¹ Id. at 243.

detail shortly in Part V. Fundamentally, they formally make the assumption implicit in Mahoney's argument: Exchange features that are unattractive to investors, such as lax disclosure standards, are not priced by the market.

Most importantly, neither argument addresses what happens when exchange rules affect the ability of those who control firms to engage in diversion of corporate assets or the level of competition faced by the firm. An ability, incidentally, that is not obviously affected by which exchange attracts liquidity traders. An exchange will have a powerful incentive to provide a lax disclosure regime if enough listed companies on an exchange, or firms eligible for listing on the exchange, have an interest in a poor disclosure regime even if this implies a higher cost of external finance for firms as a result of undesirable exchange rules being priced by the market. Indeed, an attempt by an exchange to maximize trading volume might very well lead it to offer a lax disclosure regime so as to maximize the number of listed securities traded on the exchange.

The experience of the U.S. in the pre-mandatory disclosure period (pre-1933) has often been relied upon in attempting to figure whether exchanges will adopt demanding disclosure requirements out of self-interest. It is on this experience that the discussion will now focus.

2. The U.S.'s Pre-Mandatory Disclosure Experience

A common claim is that the existence of demanding disclosure requirements imposed by exchanges in the U.S. in the decades immediately prior to the imposition of mandatory disclosure in the 1930s is powerful evidence that exchanges, left unencumbered, have the proper incentives when setting disclosure requirements through their listing standards.⁹² During this pre-mandatory disclosure period, the NYSE, while the most important exchange, faced domestic competition from some thirty-three other exchanges, some with significant trading volume.

And, indeed, it is true that the disclosure standards a firm had to meet as a condition to listing on the NYSE, as of 1931, were extensive. Firms had to provide

⁹² See Paul Mahoney, *Exchange as Regulator*, 83 *Virginia Law Review* 1453 (1998).

balance sheets and income statements for the prior two years and earnings statements for the prior five years. These balance sheet and income statements had to be updated periodically. Firms also had to provide a written description of how it calculated depreciation. Depreciation methods could not be changed without publicly providing details of any change in its annual report.⁹³

There are several reasons, however, for why the demanding nature of the NYSE's listing requirements, circa 1931, is not as powerful a piece of evidence against the need for mandatory disclosure as often claimed. The NYSE's requirement that firms update their financial statements – a crucial component of any meaningful disclosure regime – were in fact, in large part, a result of governmental pressure. Prior to the Panic of 1907, the NYSE placed no general obligation on listed firms to periodically update their financial information.⁹⁴ Moreover, the NYSE prior to the Panic of 1907 allowed securities of firms not listed on the exchange to nevertheless trade (so-called unlisted trading) on the exchange. The volume of unlisted trading transactions on the NYSE was substantial with very little in the way of firm disclosures by unlisted firms.⁹⁵ These unlisted firms did not have to meet the disclosure requirements contained in the NYSE's listing standards.

The Hughes Commission, established by the state of New York in the aftermath of the Panic of 1907, was charged with investigating the practices of the NYSE.⁹⁶ As a result of its investigation, the Hughes Commission Report recommended that the NYSE “adopt methods to compel the filing of frequent statements of the financial condition of the companies whose securities are listed, including balance sheets [and] income accounts.” Moreover, the Hughes Commission Report recommended that the “unlisted department, except for temporary issues, [] be abolished.”⁹⁷ Wisely, the NYSE adopted most of the Hughes Commission Report's recommendations, including the obligation to

⁹³ See generally *id.*

⁹⁴ The NYSE did in 1895, however, recommend that firms update their financial statements.

⁹⁵ See David F. Hawkins, *The Development of Modern Financial Reporting Practices Among American Manufacturing Corporations*, in *MANAGING BIG BUSINESS* 135, 150 (Richard S. Tedlow and Richard R. John, Jr. eds., 1986) (“The companies whose stocks were noted by the Unlisted Department (mainly industrials) were not required to furnish the Exchange with financial information relevant to the issue.”)

⁹⁶ Moreover, there was proposed legislation at the national level to regulate the NYSE. See James Davis, *Corporate Disclosure Through The Stock Exchanges*, p.23 (unpublished manuscript on file with author).

⁹⁷ Hughes Commission Report, p. 425.

periodically update balance sheet and income statements and the prohibition of unlisted trading.⁹⁸

Nor was the NYSE alone. The New York Curb Exchange, an important competitor to the NYSE, was strongly criticized in the Report for its lack of listing standards. After the Report's recommendations came out, the New York Curb Exchange adopted listing standards.⁹⁹ These listing standards were later significantly strengthened in the aftermath of the crash of 1929 when the New York Curb Exchange's practices were the subject of Senate hearings.

Moreover, while the NYSE had extensive disclosure requirements in place by 1931 it is highly questionable whether there was any meaningful enforcement of these requirements. At the end of the day, the only penalty that the NYSE could impose for non-compliance was de-listing. Not surprisingly, this was an action undertaken in only the rarest of cases.

Finally, when one looks at exchanges other than the NYSE the disclosure requirements, and their enforcement, were quite lax. For instance, the Chicago Stock Exchange had no requirement that financial information disclosed by listed companies ever be updated.¹⁰⁰ While unlisted trading was barred on the NYSE after 1910, unlisted trading, with little or no disclosure requirements, continued to constitute a substantial portion of trading on many of the other exchanges.

None of this is to suggest that exchanges have no incentive to impose disclosure standards. Nor does the U.S. history of listing standards even show that exchanges in the pre-mandatory disclosure period adopted insufficiently rigorous disclosure standards. A recital of disclosure standards and enforcement mechanisms cannot establish this. What the historical evidence canvassed above does undermine, though, is the common claim that the pre-1933 U.S. experience demonstrates that demanding mandatory disclosure requirements are unnecessary as these will be provided by exchanges.

⁹⁸ See David F. Hawkins, *The Development of Modern Financial Reporting Practices Among American Manufacturing Corporations*, in *MANAGING BIG BUSINESS* 135, 150 (Richard S. Tedlow and Richard R. John, Jr. eds., 1986) ("Subsequently, in 1910, under growing threats of government regulation, the New York Stock Exchange abolished its Unlisted Department.")

⁹⁹ See James Davis, *Corporate Disclosure Through The Stock Exchanges* at 24 (unpublished manuscript on file with author).

¹⁰⁰ *Id.*

Nor did most firms, on their own, voluntarily submit meaningful annual reports before 1910. Indeed, many important firms, such as the American Sugar Refining Company, at this time released no annual reports. The annual reports that were released tended to be quite short with relatively little in the way of detail. Major companies, such as the International Silver Company and the American Tin Plate Company, whose stock was traded on the NYSE, released very few details of any sort in their annual report. The Eastman Kodak annual report of 1903, replicated in the Appendix, is representative of a number of annual reports of this time period. This being said, there were nevertheless some companies, most notably U.S. Steel starting with its annual report of 1903, that did provide relatively in-depth financial information.¹⁰¹ In short, the overall level of disclosure contained in the annual reports during this time period was low, but not uniformly low.

In considering the relevance of the U.S. experience for other countries, it is worth noting that in many countries there simply is no meaningful competition between domestic exchanges. Many countries have a single, dominant domestic exchange where most order flow is executed. This is not surprising given the powerful liquidity network externalities of trading: traders want to trade where other traders already are. Moreover, many exchanges around the world are far from independent, market organizations. Government supervision and oversight of exchanges has historically been far greater, for example, in Continental Europe than the U.S.¹⁰²

C. International Competition for Listings

Competition between a country's domestic exchanges is not, of course, the only source of competition. There is increasing international competition between exchanges, which undoubtedly can powerfully change the incentive structure of exchanges. Perhaps the most dramatic example of this is the response of the Scandinavian stock exchanges to competition for investors' orders from the London Stock Market. In response to this

¹⁰¹ Some have argued that U.S. Steel's 1903 annual report was the first modern annual report. The annual report contains some forty pages of detailed financial information on the company.

¹⁰² See John Coffee, *The Rise of Dispersed Ownership*, 111 *Yale Law Journal* 1 (2001).

competitive challenge, the Scandinavian stock exchanges, beginning with the Stockholm Stock Exchange in 1993, demutualized converting themselves into for-profit, shareholder-owned organizations. In the process, it moved wholeheartedly to an electronic trading platform and permitted remote access to their trading platforms by overseas investment banks.

This international competition does not stop at order flow but extends to competition for listings. Listing standards, as well as execution services for investors' orders, are an important part of the "product" being offered to firms by exchanges. The most important example of this phenomenon is the NYSE's sustained efforts, with considerable success, to attract cross-listings from firms around the world. Approximately 15% of all NYSE-listed firms are foreign firms.¹⁰³

A firm's listing on the U.S. markets, especially for firms from developing countries with poor disclosure requirements (as well as poor investor legal protections along a variety of other dimensions) does in fact constitute an important mechanism by which a firm can commit to a higher level of disclosure.¹⁰⁴ Firms that list on a U.S. exchange are subject to many of the basic U.S. disclosure requirements.¹⁰⁵ These mandated disclosures include disclosure of the identity of shareholders with more than five percent of the shares along with the standard Exchange Act reports. One noticeable exception is that foreign cross-listing firms are exempted from the requirement that they disclose information concerning transactions with management when the firm is not already disclosing this information to its shareholders.¹⁰⁶

The ability of firms to cross-list onto foreign exchanges, and thereby bond themselves to more demanding disclosure regimes, does reduce the need for mandatory disclosure with respect to firms whose decision makers find a more demanding disclosure regime in their self-interest. There is some evidence that cross-listing is a successful

¹⁰³ See NYSE FACTBOOK (2003).

¹⁰⁴ See generally John Coffee, *The Future as History: The Prospects for Global Convergence in Corporate Governance and its Implications*, 93 *Northwestern Law Review* 641 (1999); Renee Stulz, *Globalization of Equity Markets and the Cost of Capital*, 12 *Journal of Applied Corporate Finance* 8 (1999) for arguments along these lines.

¹⁰⁵ See Securities Act Release No. 6493, Fed. Sec. L. Rep. (CCH) 83,435 (Oct. 6, 1983).

¹⁰⁶ See generally Edward Rock, *Securities Regulation as Lobster Trap*, 23 *Cardozo Law Review* 675, 680-682 (2002) for further discussion of the disclosure requirements of cross-listing firms.

strategy for these firms and that the source of this success is, in part, due to bonding.¹⁰⁷ Cross-listings have been found to be beneficial to firms. They are associated with more accurate analyst forecasts and increased firm valuation.¹⁰⁸ Improved firm valuation is particularly significant for firms cross-listing from countries with weak disclosure and investor protection regimes.¹⁰⁹

At the same time, the existing evidence also indicates that cross-listing is still a highly imperfect substitute for having a strong disclosure regime in the firm's home country. SEC enforcement actions against cross-listed firms are rare and often ineffective. Misconduct occurring in foreign countries is hard to detect and a low enforcement priority for the SEC. The traditional enforcement mechanisms are simply not well-suited to cross-border actions.¹¹⁰

Finally, cross-listing is often not a feasible strategy for many firms which are at a relatively early stage of development and need external finance.¹¹¹ The disclosure regime for many firms is therefore largely limited to whatever is being offered by that firm's country or domestic exchange.¹¹² Moreover, of course, the possibility of cross-listing does not address the set of firms that are content with a lax disclosure regime even when this creates social costs.

D. Firms Acting in their Individual Capacity

¹⁰⁷ See Doidge, Karolyi and Stulz, *Why are Foreign Firms Listing in the U.S Worth More?*, NBER Paper 8538 (2001) (arguing that other explanations for cross-listing cannot explain the pattern of cross-listings)

¹⁰⁸ M. Lang, K. Lins, and D. Miller, *ADRs, Analysts and Accuracy: Does Cross Listing Improve a Firm's Information Environment?*, Working Paper 2002; see Todd Mitton, *A Cross-Firm Analysis of the Impact of Corporate Governance on the East Asian Financial Crisis*, 64 *Journal of Financial Economics* 215 (2002).

¹⁰⁹ See C. Doidge, G. Karolyi, and R. Stulz, *Why Are Foreign Firms Listed in the U.S. Worth More?*, NBER Paper 8538 (2001).

¹¹⁰ See generally Jordan Siegel, *Can Foreign Firms Bond Themselves Effectively by Renting U.S. Securities Laws*, MIT Working Paper 2002.

¹¹¹ The empirical literature has found that firm size is an important determinant of whether a firm cross-lists suggesting that for smaller firms cross-listing is not a feasible strategy. See Marco Pagano, Alisa Roell, and Josef Zechner, *The Geography of Equity Listing: Why do European Companies List Abroad?*, CSEF Working Paper No.28 (1999)

¹¹² Consistent with this, empirical research has found that local financial development is more important to small firms' ability to receive financing than it is for larger firms who are likely to have access to additional sources of capital. See Luigi Guiso, Paola Sapienza, and Luigi Zingales, *Does Local Financial Development Matter?*, CRSP Working Paper 528 (2003).

What if a demanding disclosure regime is not available to a firm from its home country, domestic exchange or through cross-listing? Can a firm credibly commit to a demanding disclosure regime through charter provisions or other contractual arrangements? Can private contract remedy, in other words, deficiencies in governmental and exchange regulation?

The answer is very likely no, at least much of the time. All the difficulties of establishing a mandatory disclosure regime apply *a fortiori* to firms acting in their individual capacity. The ability of any individual firm, through its charter provisions or other contractual arrangements, to recreate for itself a credible mandatory disclosure for itself is highly limited regardless of the benefits. For example, the firm will find it difficult to commit to disclosing bad information in the future. While this might be the optimal commitment *ex ante*, firms will sometimes find it in their self-interest *ex post* not to publicly release bad news.¹¹³ Without binding contracts, spelled out in sufficient detail in advance and actually enforced through the imposition of real penalties for non-compliance by courts or private adjudicators, this will be virtually impossible to do.¹¹⁴ Moreover, there are obvious economies of scale associated with implementing and running a mandatory disclosure regime, such as a settled format for the presentation of information, not easily achievable by a firm in isolation.

In addition, there is some suggestive empirical evidence that a firm's ability to commit to a demanding disclosure regime is affected by whether a country has the infrastructure necessary to make such a commitment credible. Specifically, a recent empirical study has found that the number of auditors a country has (scaled by population) affects the opacity of firms' disclosures in that country.¹¹⁵ An increase in the

¹¹³ A common conclusion of the theoretical literature on firms' disclosure decisions is that firms tend to have an incentive not to disclose bad news. There is strong evidence that U.S. firms do attempt to avoid reporting to the markets poor earnings. See, e.g., Burgstahler and Dichev, Earnings Management to avoid earnings decreases and losses, 24 *Journal of Accounting and Economics* 99 (1998); cf. Patel Degeorge and R. Zeckhauser, Earnings Management to exceed Thresholds, 72 *Journal of Business* 1-33 (1999).

¹¹⁴ See generally Edward Rock, Securities Regulation as Lobster Trap, 23 *Cardozo Law Review* 675, 684-686 (2002); Lucian Bebchuk and Mark Roe, A Theory of Path Dependence in Corporate Ownership and Governance, 52 *Stan. L. Rev.* 127 (1999).

¹¹⁵ See Battacharya, Daouk and Michael Welker, The World Price of Earnings Opacity, Working Paper 2002, p. 16.

number of auditors in a country decreases the earnings opacity of firms' disclosures.¹¹⁶ Firms in isolation will likely be unable to create the infrastructure, such as a well-established auditing profession, necessary to support a credible disclosure regime.

Indeed, the consistent finding in the law and finance literature that “law matters” for firm valuation, specifically that the lack of certain legal rules and institutions can harm firm valuation, indicates that firms are often unable to employ contracting arrangements as an effective substitute for their desired legal regime.¹¹⁷

E. Implications for Mandatory Disclosure

The fact that there will often be no credible means for firms to commit to a demanding disclosure regime implies that making available to these firms such a regime, whether mandatory or not, would constitute a substantial and much-needed improvement for many countries. One could image a number of ways such a change could occur including making it easier for firms to cross-list onto foreign exchanges.

The advantage of having a demanding disclosure regime be mandatory lies in the fact that not all firms will want to credibly commit, as was discussed in Part III, to such a regime even when it is socially beneficial for them to do so. Second, and on a more practical note, a crucial aspect of any disclosure regime is that firms be credibly bound to disclose in the future, perhaps many years later, information that the firm might not, at that point in time, wish to. Even if firms find it in their strong interest to bind themselves ex ante to a demanding disclosure regime, say because the firm wishes to raise external finance, there will be strong incentives for a firm to later switch to a less demanding disclosure regime. Perhaps a less demanding disclosure regime will present the

¹¹⁶ Id.

¹¹⁷ Eric Friedman and Simon Johnson provide an interesting argument, building on the work of Michael Jensen, Agency Costs of Free Cash Flow, Corporate Finance and Takeovers, 76 American Economic Review 323 (1986), that firms that find themselves stuck in a weak regulatory environments use debt as a way, in part, to reduce expropriation. The use of debt, they point out, has significant costs of its own, including lower levels of financing of investment opportunities and increased exposure to economic crises. See Simon Johnson and Friedman, Looting and Propping in Weak Legal Environments, MIT Working Paper 1999.

controlling shareholder with greater possibilities for diversion of corporate resources or an improved ability for managers to hide bad news from the market.

The most obvious and straightforward way to accomplish the necessary commitment, especially in countries with weak overall legal infrastructures, is to make the disclosure requirements mandatory. There is no evidence, at this point, to indicate that firms, especially firms in countries with weak legal infrastructures, can in fact credibly bind themselves not to engage in opportunistic mid-stream switching through purely contractual devices, such as supermajority voting rules in the firm charter.¹¹⁸ In sharp contrast, there is growing and substantial evidence, some of which has already been discussed, that mandatory disclosure requirements can have a beneficial effect. These empirical studies will be discussed at further length in Part VI.

Finally, it should not be overlooked that as a practical matter, for many countries, the decision they are facing is whether to have a mandatory disclosure regime or to leave matters as they currently are. It is therefore important that policy analysis should shed some light on this choice.

V. THE DUPLICATIVE INVESTMENT ARGUMENT FOR MANDATORY DISCLOSURE

While there are strong arguments that mandatory disclosure can be beneficial, this does not mean, of course, that all arguments for mandatory disclosure are convincing. The “duplicative investment” argument for mandatory disclosure is one of these. Given its prominence and plausibility, this argument merits careful attention.¹¹⁹ At bottom, this argument ultimately depends on whether firms are willing and able to credibly commit to a demanding disclosure regime.

¹¹⁸ But see Roberta Romano, *The Need for Competition in International Securities Regulation*, 2 *Theoretical Inquires* 387 (suggesting that contractual devices and supermajority voting rules are sufficient to prevent opportunistic mid-stream switching); cf. Edward Rock, *Securities Regulation as Lobster Trap*, 23 *Cardozo Law Review* 675 (2002) (emphasizing importance of credible ex ante commitment)

¹¹⁹ See, e.g., John Coffee, *Market Failure and the Economic Case for a Mandatory Disclosure System*, 70 *Va. L. Rev.* 717, 733 (1984) (“A major significance of a mandatory disclosure system is that it can reduce these [duplicative investment] costs.”); Frank Easterbrook and Daniel Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 *Va. L.Rev.* 669, 682 (1984).

The “duplicative investment” argument for mandatory disclosure requirements is based on the highly plausible assumption that firms are the cheapest cost producers of at least some firm-specific information relevant to firm valuation. Mandatory disclosure is a way of ensuring that it is firms, rather than traders, that produce this information. In the absence of mandatory disclosure, this information might, instead, be generated by traders who wish to capitalize on this information in their trading. If the cost to traders of generating this private information is higher than the cost to the firm of disclosing the information, then mandatory disclosure can play, the argument goes, the socially beneficial role of ensuring that these unnecessary costs are avoided.¹²⁰

Paul Mahoney has argued that this reasoning is unconvincing because there is no clear evidence that public disclosures, required by mandated disclosure, actually contains information that has not already been impounded into the stock price by privately-informed traders prior to the public disclosure.¹²¹ But there is, in fact, substantial evidence that the information contained in mandatory disclosures can have the effect of displacing private information not already reflected in the stock price.

Consider the empirical literature on the effect a firm’s mandated public disclosure has on the bid-ask spread¹²² of that firm’s stock. If the public information contained in the firm’s mandatory disclosure acts as a substitute for private information then the effect of increased public disclosure by a firm should be to reduce informational asymmetry – the disparity between uninformed and informed investors. And this should, in turn, result in a reduction of the bid-ask spread given the well-established fact that a reduction in informational asymmetry in a stock will reduce the bid-ask spread of that stock all else being equal.¹²³

And, indeed, this is what studies have found. The SEC requirement, first imposed in 1970, that firms report their performance broken down by business segment, when the

¹²⁰ Often relied upon in this context is the seminal paper by Jack Hirshleifer, *The Private and Social Value of Information and the Reward to Incentive Activity*, 61 *Am. Econ. Rev.* 561 (1971) which provides a model in which there can be socially inefficient levels of investment in generating information.

¹²¹ See Paul Mahoney, *Mandatory Disclosure as a Solution to Agency Problems*, 62 *University of Chicago* 1047, 1097 (1995).

¹²² This is the difference between the price a dealer is willing to buy an investor’s security for and what a dealer is willing to sell the same security to an investor for.

¹²³ See generally Maureen O’Hara, *MARKET MICROSTRUCTURE THEORY* (1995) (Cambridge, MA: Blackwell Publishers).

firm is in more than one line of business, has been found to reduce bid-ask spreads.¹²⁴ On a similar note, the mandated disclosure of the value of oil and gas reserves was also found to reduce bid-ask spreads.¹²⁵ Firm disclosures of management's forecasts of what the future holds for the company also reduce bid-ask spreads.¹²⁶

The actual reason that the duplicative investment argument is not a reason standing *alone* to favor mandatory disclosure is that there are good reasons, both theoretical and empirical, to believe that higher levels of informed trading do in fact result in higher expected returns. And the higher the expected return on a firm's security, the higher the cost of external finance to that firm will be. If those in charge of the firm wish to minimize the cost of external finance, they will take this fact into account in deciding whether to commit to a demanding disclosure regime.¹²⁷ An exchange, for instance, with a lax disclosure regime might for this reason be unattractive to a firm *if* one were willing to assume that those in charge of the firm care to minimize the cost of external finance. If one is not willing to make such an assumption, then it is this refusal that forms the real basis of the case for mandatory disclosure.

Why might higher levels of informed trading result in higher expected stock returns? Fortunately, several important papers have recently addressed this question.¹²⁸ Consider an uninformed investor who buys an optimally diversified portfolio. Despite diversifying, this investor will still nevertheless do worse on average than investors with private information who are better able to select stocks in constructing their portfolio. Whether the uninformed investor transacts frequently or not, the investor will likely end up holding poorly performing stocks relative to the portfolio held by informed investors.¹²⁹ A reduction in the amount of private information held by other traders will

¹²⁴ Greenstein, M., and H. Sami, The Impact of the SEC's Segment Disclosure Requirement on Bid-Ask Spreads, 69 *The Accounting Review* (January), 179-199 (1994)

¹²⁵ Boone, J.P., Oil and Gas Reserve Value Disclosures and Bid-Ask Spreads, 17 *Journal of Accounting and Public Policy* 55-84 (1998).

¹²⁶ Coller, M. and T. Yohn, Management Forecasts and Information Asymmetry: An Examination of Bid-Ask Spreads, 35 *Journal of Accounting Research* 181-192 (1997).

¹²⁷ Cf. Ian Ayres and Stephen Choi, Internalizing Outside Trading, 101 *Mich. L.Rev.* 337-339 (2002).

¹²⁸ See Easley, D. and O'Hara, M., Information and the Costs of Capital, 59 *Journal of Finance* 1553 (2004) (modeling the effect of private information on expected stock returns); Nicolae Garleanu and Lasse Pedersen, Adverse Selection and Re-Trade, Working Paper (2003) (modeling the effect of future private information on expected stock returns).

¹²⁹ *Id.* at 1564-1565.

reduce this difference in the portfolios held by informed and uninformed traders, and, as a result, the risk to uninformed investors that they will end up holding comparatively poorly performing stocks in their portfolio.

This reasoning implies that the inferior ability of uninformed investors to pick stocks cannot be diversified away. Consider an uninformed investor who decides to purchase a diversified portfolio and to hold it indefinitely. If there is private information at the time the investor constructs the portfolio then it will still be the case that they will be more likely to hold stocks that are comparatively poor performers. Moreover, the decision to hold the same portfolio indefinitely will incur a real cost if the investor needs to rebalance his portfolio in response to changes over time in wealth, liquidity needs and risk preferences. Uninformed rational investors, knowing of this cost *ex ante*, will require a higher rate of return to compensate them for the costs created by this inflexibility.

One might object that this reasoning relies on the assumption that there are two categories of investors: those who hold private information and those who do not. What if the analysis is moved back a step? Suppose it is unclear *ex ante* whether any particular investor will acquire private information at some point in the future? What if all investors know is that in the future there will be asymmetrical information, but not whether they themselves will be the holders of private information?

If this is true then it might appear as if informational asymmetry does not create, on net, costs for investors. If an investor ends up being a holder of private information then he will earn more, given his increased ability to buy attractive stocks and sell unattractive stocks, than those who do not have this information. On the other hand, if an investor ends up being an uninformed investor then he will earn less than his informed counterparts by exactly the amount that the informed investors benefit from their private information. Viewed in this way, these two effects of informational asymmetry are *ex ante* a wash and, as a result, investors will not demand a higher rate of return on stocks that have higher levels of informational asymmetry.

But this reasoning ignores, as a recent model by Nicolae Garleanu and Lassa Pedersen illustrates, the following. In the presence of informational asymmetry, investors

will anticipate that the portfolios they will hold in the future will differ from what would otherwise be the case in a situation where there was no informational asymmetry.¹³⁰ Given the presence of private information, there will be times when an informed investor will refuse to sell a stock despite having a liquidity reason to do so. This will occur if the investor has sufficiently good private news about the stock. At the same time, there will be times when an informed investor will sell a stock if he has sufficiently bad private news about the stock, despite having no other reason to alter his portfolio.¹³¹

In other words, the introduction of informed traders changes the portfolio decisions that would otherwise be made in order to take advantage of private information. This represents a cost, albeit a cost informed investors are willing to bear to take advantage of their information. Given that the direct effect on investors of future private information is zero, as the bid-ask spread does not represent a net cost, but that there is a change in the portfolio decisions of investors from what would otherwise be the case, it follows that adverse selection increases costs through its effect on portfolio decisions.

There is empirical evidence that informational asymmetry does, in fact, appear to have an important effect on stock returns.¹³² David Easley, Soeren Hvidkjaer and Maureen O'Hara employ an empirical measure, developed in a series of earlier papers,¹³³ that measures how much private information-based trading is occurring in a stock (the so-called the PIN measure) to investigate the effect of private information on expected stock returns.¹³⁴

Looking at NYSE-listed stocks for the 1983-1998 period they found that stocks with higher probabilities of private information-based trading, controlling for a number of factors, had higher rates of return than otherwise comparable stocks with lower levels of

¹³⁰ See Nicolae Garleanu and Lasse Pedersen, *Adverse Selection and Re-Trade*, Working Paper (2003) which models the effect of these allocative inefficiencies on expected stock returns.

¹³¹ *Id.* at 10.

¹³² Another possibility, with mixed empirical support, is that wider bid-ask spreads result in higher expected returns given the increase in transaction costs faced by investors. In other words, the bid-ask spread is treated as if it were an exogenous cost. See Amihud and Mendelson, *Asset Pricing and the Bid-Ask Spread*, 17 *Journal of Financial Economics* 223 (1986).

¹³³ See David Easley, Nicholas Kiefer, Maureen O'Hara, and Joseph Paperman, *Liquidity, information, and less-frequently traded stocks*, 51 *Journal of Finance* 1405 (1996).

¹³⁴ Easley, David, Soeren Hvidkjaer, and Maureen O'Hara, *Is Information Risk a Determinant of Asset Returns?*, 57 *Journal of Finance* 2185 (2002).

private information-based trading.¹³⁵ Importantly, the probability of private information-based trading still affected stock returns even after bid-ask spreads were controlled for. Indeed, bid-ask spreads did not have any explanatory power in explaining stock returns in their study.

While important research, the Easley, Hvidkjaer and O'Hara study does have some shortcomings that should be kept in mind. First, market beta and the coefficients on the book-to-market and firm size had no statistical significance in explaining the cost of capital in their study. This is inconsistent with prior empirical research that has found these factors to have explanatory power in explaining stock returns. Moreover, it is conceptually puzzling that commonly identified sources of systematic risk, in particular stock market co-movement, have no measurable effect on stock returns.

Second, the study did not control for the level of public information concerning firm value. While more private information was associated with a higher expected return, they did not control for whether this association still held when controlling for the amount of public information available. This failure to control for the level of public information is problematic given the fact that private and public information, whether they are substitutes or complements, could very well be correlated. This would call into question the results of their regressions.

VI. THE EMPIRICAL EVIDENCE

While there are strong reasons to believe that mandatory disclosure requirements can be socially beneficial, this obviously does not mean that the actual implementation and administration of any particular mandatory disclosure regime will prove to be so. It is not hard to imagine the various ways in which government regulation of disclosure could go awry. Regulators will inevitably have imperfect information concerning which pieces of information the disclosure of which will improve the performance of the capital markets. Moreover, regulators will have imperfect incentives to seek out the needed information.

¹³⁵ They controlled for market beta, firm size, book-to-price ratio and bid-ask spreads.

An example of a regulatory regime gone astray would be a mandatory disclosure regime that focuses on requiring irrelevant information to be released. Indeed, some commentators have argued that this is in fact what the Securities and Exchange Commission has done in its regulations implementing the Securities Act of 1933 and the Exchange Act of 1934.¹³⁶ Even if disclosure requirements mandate the release of potentially relevant information, firms might subvert the regulatory regime by meeting the technical requirements of the disclosure regime while actually avoiding disclosing specific pieces of information they would rather keep hidden.¹³⁷

At the end of the day, it is fair to say that whether any particular mandatory disclosure regime, as actually instituted and administered, is socially beneficial is an empirical question. Whatever the benefits, there might be more than offsetting costs. It is on the empirical evidence that directly attempts to measure the effects of mandated disclosure, some of which has already been discussed, that the discussion will now focus.

A. What to Test for?

A major weakness in the empirical literature on the effects of mandatory disclosure has been a lack of a firm theoretical basis for the testing that has been done. Fortunately, recent theoretical research has begun to provide the necessary theory to provide a solid basis for focusing on stock returns, volatility, and the size of a country's equity market. Understanding this theory is crucial as it provides the necessary framework with which to interpret the findings of the empirical literature on mandatory disclosure.

1. Stock Returns

¹³⁶ The studies of the effect of SEC disclosures on bid-ask spreads, see footnotes 124-126, tend to undercut this argument.

¹³⁷ See generally Homer Kripke, *THE SEC AND CORPORATE DISCLOSURE: REGULATION IN SEARCH OF A PURPOSE* (Law & Business, 1979) for a critique of the effectiveness of the SEC's disclosure regime.

Empirical research on mandatory disclosure has typically measured the effects of changes in mandatory disclosure on the stock returns of firms affected by these changes. Measuring these effects does have a solid theoretical basis. If an unexpected improvement in mandatory disclosure requirements reduces agency costs, such as reducing the diversion of corporate resources, this should result in positive abnormal returns for the set of companies affected by the change.¹³⁸ The lower level of future expected agency costs will be capitalized into the current stock price to the benefit of current shareholders.

Whether stock returns of firms subject to more demanding disclosure requirements are affected, compared to unaffected firms, once the benefits of lower agency costs have been capitalized into the stock price depends on whether the costs borne by shareholders on an ongoing basis to minimize agency costs are reduced by the change in mandatory disclosure. If more demanding disclosure requirements reduce these costs, say monitoring and auditing costs, then risk-adjusted stock returns should be *lower*.¹³⁹ This is because with lower expected costs, shareholders can be induced to hold equity with a lower expected stock return. Net of costs, shareholders will be doing just as well as before. On the other hand, if the costs borne by shareholders are unaffected by a more demanding disclosure regime, stock returns of affected firms should not be affected once the future benefits of reduced agency costs are capitalized into the stock price.

2. *Volatility*

Several empirical studies of mandatory disclosure have measured the volatility of stock returns pre- and post-mandatory disclosure. Assuming that the effect of mandatory disclosure, if it is working, is to cause the release of information by firms earlier in time than it otherwise would have been, say bad news about a company's earnings, than the variance-bound finance literature indicates that this should result in lower stock return

¹³⁸ See Andrei Shleifer and Daniel Wolfenzon, Investor Protection and Equity Markets, 66 *Journal of Financial Economics* 3 (2002).

¹³⁹ See Davide Lombardo and Marco Pagano, Legal Determinants of the Return on Equity, CSEF Working Paper No. 24.

volatility.¹⁴⁰ Earlier release of information ensures that the information has less of an impact on a firm's stock price assuming a positive discount rate. In other words, information concerning a future event is more heavily discounted than information concerning an event in the immediate future. As a result, information released earlier in time will have less of an impact on a firm's stock price.

Unfortunately, there is also an empirical literature that suggests that high levels of volatility can be a sign of more informed stock prices. In cross-country studies, markets with high levels of stock price synchronicity (stocks tending to move together) tend to be in less-developed markets.¹⁴¹ Moreover, firms with high levels of firm-specific volatility have stock prices that better predict the future earnings of the company.¹⁴² To date, however, there has been no formal model explaining why high levels of firm-specific volatility should be an indication of more informed stock prices.¹⁴³

3. Size of the Equity Market

A number of studies have examined the effect of legal rules, such as mandatory disclosure requirements, on financial development. One standard proxy for financial development is the size of a country's stock market capitalization held by non-controlling shareholders scaled by a country's GDP. Another popular proxy is the number of listed firms per capita. Increases in financial development can, in theory, be caused by legal rules, such as mandatory disclosure requirements, that reduce private benefits of control and thereby enable more extensive use of external finance by firms.

¹⁴⁰ See Kenneth West, Dividend Innovations and Stock Price Volatility, 56 *Econometrica* 37-61 (1988); Stephen LeRoy and Richard Porter, The Present-Value Relation: Tests Based on Implied Variance Bounds, 49 *Econometrica* 555-574 (1981).

¹⁴¹ See Randall Morck, Bernard Yeung, and Wayne Yu, Informational Content of Stock Markets: Why do Emerging Markets have Synchronous Stock Price Movements?, 58 *Journal of Financial Economics* 215 (2000).

¹⁴² See Artyom Durnev, Randall Morck, Bernard Yeung, and Paul Zarowin, Does Greater Firm-Specific Return Variation Mean More or Less Informed Stock Pricing?, Working Paper.

¹⁴³ See Artyom Durnev, Randall Morck and Bernard Yeung, Value Enhancing Capital Budgeting and Firm Specific Stock Return Variation, 59 *Journal of Finance* 65, 95-96 (2004) for some informal suggestions on why there might be this association.

On a cautionary note, however, establishing such a causal link through correlations between financial development and legal rules is difficult given the need to convincingly control for country-specific factors besides differences in legal regimes across countries. Moreover, reverse causation is also a plausible possibility. In the reverse causation story, financial development creates a shareholder constituency that demands, and ultimately receives, improved legal protections.¹⁴⁴

B. Candidates for Testing: Mandatory Disclosure Regimes

Obvious candidates for measuring the effects, if any, of mandatory disclosure are any fundamental changes in the scope of mandatory disclosure in the United States. There have been two such changes. The Securities Act of 1933 and the Exchange Act of 1934 represent the first of these fundamental changes. These two statutes placed extensive mandatory disclosure requirements on exchange-listed firms (Exchange Act of 1934) and firms issuing to the public securities (Securities Act of 1933). The Securities Act Amendments of 1964 represents the second fundamental change in mandatory disclosure requirements in the United States.¹⁴⁵ The Securities Act Amendments of 1964 extended the mandatory disclosure requirements of the Exchange Act of 1934 to most non-listed firms (the over-the-counter market).

In addition to these two fundamental changes, there have been several important changes to mandatory disclosure in the U.S that are promising candidates for measuring the effects of mandatory disclosure requirements. These changes include the requirement imposed by the SEC in December of 1980 that managers, in the Managerial Discussion and Analysis section of the annual report, discuss managers' analysis of the future prospects of the company. A second important change occurred in 1999 when the SEC mandated that the Exchange Act of 1934's disclosure requirements be extended to firms trading on the OTC Bulletin Board. These firms constitute most of the remaining over-

¹⁴⁴ See John Coffee, *The Rise of Dispersed Ownership*, 111 *Yale Law Journal* 1, 7-10 (2001).

¹⁴⁵ Act of August 20, 1964, Pub. L.No.88-467, section 3(c), 78 Stat. 565, 566-69.

the-counter firms not already subject to mandatory disclosure requirements as a result of the Securities Act Amendments of 1964.

While the United States has a substantially higher incidence of dispersed ownership structures than other countries, the effect of mandatory disclosure in the U.S. is still quite useful in assessing the possible effects of mandatory disclosure in other countries for several reasons. First, a nontrivial portion of companies in the United States have concentrated ownership structures.¹⁴⁶ The mean ownership of the three largest shareholders in the United States is approximately 20%.¹⁴⁷ Moreover, the levels of concentrated ownership in the U.S. earlier in time in some markets, such as the over-the-counter market circa 1962, was substantial.¹⁴⁸ Second, mandatory disclosure arguably serves a similar function in the U.S. as in countries with concentrated ownership in terms of controlling agency costs even though there are differences in the nature of the agency problem. The typical agency problem in the U.S. takes the form of managers not acting in the interests of shareholders.¹⁴⁹ Finally, many of the studies of mandatory disclosure have focused on the U.S given the availability of data. Ignoring these studies would be to ignore much of the available evidence on the effects of mandatory disclosure.

A third source for examining the effects of mandatory disclosure are cross-country studies that measure the effect of mandatory disclosure requirements on financial development and firms' cost of capital. There is substantial variation across countries both in terms of their disclosure requirements and in their actual enforcement of these requirements. These differences are often substantially larger than variation in the levels of mandated disclosure across U.S. firms.

¹⁴⁶ See generally Clifford Holderness and Dennis Sheehan, *The Role of Majority Shareholders in Publicly-Held Corporations: An Exploratory Analysis*, 20 *Journal of Financial Economics* 317 (1988); Andrei Shleifer and Robert Vishny, *Large Shareholders and Corporate Control*, 94 *Journal of Political Economy* 461 (1986).

¹⁴⁷ See LaPorta, R., Lopez-de-Silanes, F., Shleifer, A., and R. Vishny, *Law and Finance*, 106 *Journal of Political Economy* 1113, 1146 (1998).

¹⁴⁸ See SEC, *SPECIAL STUDY OF THE SECURITIES MARKETS*, Volume IV (1963).

¹⁴⁹ See, e.g., Lucian Bebchuk, *The Case for Empowering Investors*, forthcoming *Harvard Law Review* (discussing and reviewing the literature on the agency problem between managers and widely-dispersed shareholders); Lucian Bebchuk, Alma Cohen and Allen Ferrell, *What Matters in Corporate Governance?*, Working Paper 2004 (empirical evidence that entrenched managers harm firm value)

C. Empirical Studies of Mandatory Disclosure Regulation

1. Studies of the Securities Act of 1933 and the Exchange Act of 1934

George Stigler conducted the first empirical study of the effects of mandatory disclosure.¹⁵⁰ His groundbreaking study focused on the Securities Act of 1933 which regulates the disclosure requirements of new issues of securities. He compared the performance of new issues of securities pre-mandatory disclosure (1920s) to post-mandatory disclosure (1950s). The study concluded that there was no meaningful change in the stock return performance of new issues of securities pre- and post-mandated disclosure. However, the study did find that the variance of returns of new issues was substantially lower in the post-mandated disclosure period.¹⁵¹ A subsequent study confirmed Stigler's results that new issues did not perform better in the post-mandated disclosure and that variance of new issues was lower post-mandated disclosure.¹⁵² Based on these results, Stigler concluded that the Securities Act of 1933 was unnecessary.

However, there are serious questions as to whether Stigler's results are very informative of the desirability of the Securities Act of 1933. First, Stigler's post-mandatory disclosure time period is several decades after the change in disclosure. It is unclear why one would expect, at this late period, stock return performance of new issues to be affected by mandatory disclosure requirements even assuming mandatory disclosure is socially desirable. The effects of mandatory disclosure, if any, were presumably capitalized into stock prices years earlier. Second, Stigler used no control group, beyond the market index, thereby making it almost impossible for him to control for changing market conditions over this long period of time.

Carol Simon has also examined the Securities Act of 1933.¹⁵³ Her study found that the cross-sectional variance of monthly abnormal returns of new issues in the pre-

¹⁵⁰ George Stigler, Public Regulation of the Securities Markets, 37 *Journal of Business* 117 (1964).

¹⁵¹ *Id.* at 122.

¹⁵² Greg Jarrell, The Economic Effects of Federal Regulation of the Market for New Security Issues, 24 *J.L. & Econ.* 613 (1981)

¹⁵³ Carol Simon, The Effect of the 1933 Securities Act on Investor Information and the Performance of New Issues, 79 *Am. Econ. Rev.* 295 (1989).

mandated disclosure period (1926-1933) was larger than the cross-sectional variance of monthly abnormal returns of new issues in the post-mandated disclosure period (1934-1939) for non-NYSE unseasoned companies.¹⁵⁴ Using the cross-sectional variance as a proxy for investor uncertainty about a firm's future prospects, she concludes that the Securities Act of 1933 reduced investor uncertainty for this group of firms.

As with Stigler's study it is difficult to draw any firm conclusions from these results. Perhaps the most serious problem with the study is the failure to provide a strong theoretical basis for using the cross-sectional variance as a proxy for investor uncertainty. Moreover, as with the Stigler study, there is no control group that was used to control for changing market conditions over the time period studied.

In perhaps the most influential of all the mandated disclosure studies, George Benston examined the relative effect of the Exchange Act of 1934 on two sets of firms.¹⁵⁵ This study compared the effects that the imposition of mandated disclosure had on a set of firms that were not voluntarily disclosing sales information prior to the Exchange Act of 1934 relative to a set of firms that were already voluntarily disclosing sales information. The set of voluntarily disclosing firms, in other words, served as Benston's control group. Benston found that there was no difference in stock return performance between the two groups around the period of the enactment of the Exchange Act of 1934. Moreover, while the variance of stock prices for both groups declined, there was no relative change in the variance of the two groups.¹⁵⁶ Based on these results, Benston – along with a number of legal academics – concluded that the Exchange Act of 1934 was not socially beneficial.¹⁵⁷

The strength of Benston's conclusions rest on how convincingly the study is able to control for changing market conditions through using the set of voluntarily disclosing firms as a control group. There are, however, serious problems with Benston's control group. First, further examination of this group of voluntarily disclosing firms reveals that many of these firms were not disclosing a number of pieces of information later required

¹⁵⁴ For all other firms, she finds no statistically significant difference in the cross-sectional variance.

¹⁵⁵ George Benston, *Required Disclosure and the Stock Market: An Evaluation of the Securities Exchange Act of 1934*, 63 *Am. Econ. Rev.* 132 (1973).

¹⁵⁶ See *id.* at 148-49.

¹⁵⁷ See scholars cited at note 9.

to be disclosed under the Exchange Act of 1934.¹⁵⁸ Second, the Exchange Act of 1934 introduced new liability standards that changed the legal consequences of making misleading disclosures. This important change introduced by the Exchange Act of 1934 would affect both disclosing and non-disclosing firms.¹⁵⁹

2. Studies of the 1964 Securities Act Amendments

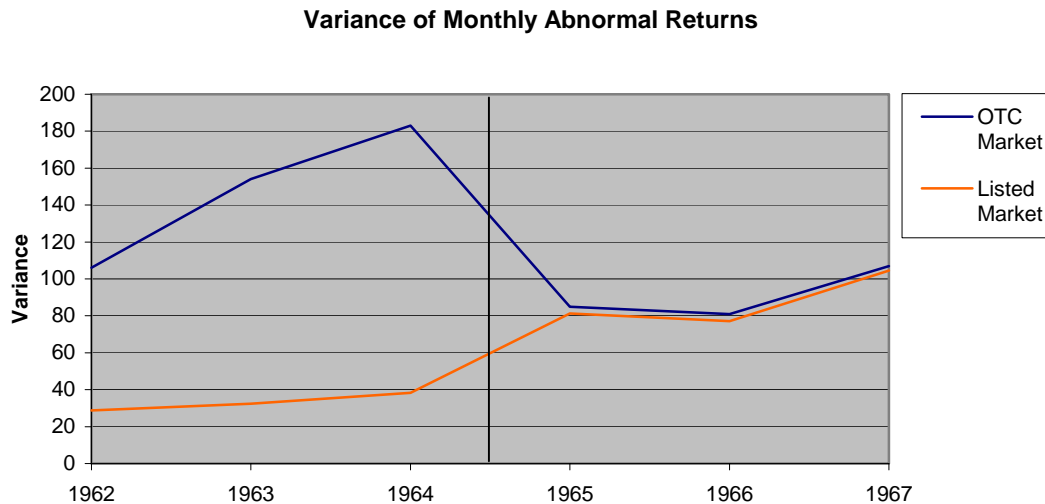
A recent study by the author has looked at the effects of the 1964 Securities Act Amendments' imposition of mandatory disclosure on the over-the-counter market.¹⁶⁰ Unlike some of the earlier studies, there exists a natural control group to control for changing market conditions for the time period studied (1962-1968), i.e. the listed companies that had been subject to mandatory disclosure requirements since 1934. The study used a unique database that consisted of stock price information three years prior to the effective date of the 1964 Securities Act Amendments (1962-65) and three years after these mandatory disclosure requirements were imposed (1965-68).

The study found that there was a substantial reduction in the volatility of over-the-counter stocks in the aftermath of the Securities Act Amendments. In the post-mandatory disclosure period (1965-68), there was no statistically significant difference in the volatility of the over-the-counter stocks and that of the listed stocks. In the pre-mandatory disclosure period, in contrast, over-the-counter stocks experienced significantly higher levels of volatility compared to the listed market. This can be seen in the following graph of the yearly average variances of stocks in the over-the-counter market and the listed market. The black line marks the passage of the Securities Act Amendments.

¹⁵⁸ See Merritt Fox, Retaining Mandatory Disclosure: Why Issuer Choice is not Investor Empowerment, 85 Va. L.Rev. 1335 (1999)

¹⁵⁹ Id.

¹⁶⁰ Allen Ferrell, Mandatory Disclosure and Stock Returns: Evidence from the Over-the-Counter Market, Working Paper 2003.



In terms of abnormal stock returns, the study found that over-the-counter stocks experienced a positive abnormal return of approximately 6% in 1963. The year 1963 was chosen as this was the year the market first learned that the Securities Act Amendments were being considered and were likely to be enacted. Consistent with this finding, a contemporaneous study has found a positive abnormal return in the over-the-counter market in 1963 in the range of 8%.¹⁶¹

3. Studies of Other Mandated Disclosure Changes in the U.S.

A recent study has found that the requirement, first imposed in December of 1980, that managers discuss their firms' likely future prospects improved firms' share price accuracy.¹⁶² They based this conclusion on two findings. First, they found that in the immediate aftermath of this requirement, the number of firms with below average returns temporarily increased.¹⁶³ This suggested that poorly-performing firms were forced to disclose information that they would have otherwise attempted to keep hidden

¹⁶¹ Michael Greenstone, Paul Oyer and Annette Vissing-Jorgensen, *The Effects of Equity Market Regulation: Evidence from the Securities Acts Amendments of 1964*, Working Paper 2004. The small difference in the two abnormal returns findings is not surprising given the fact that this study used a database consisting of a somewhat different mix of over-the-counter firms.

¹⁶² See Merritt Fox, Randall Morck, Bernard Yeung and Artyom Durnev, *Law, Share Price Accuracy and Economic Performance: The New Evidence*, forthcoming *University of Michigan Law Review*.

¹⁶³ *Id.*

as a result of this requirement. In addition, they found that the group of firms with average stock return performance had lower levels of stock price synchronicity. Using stock price synchronicity as a proxy for share price accuracy, this suggests that average performing companies had more informed stock prices.

A second study has examined the effect of the imposition in 1999 of mandatory disclosure requirements on OTC Bulletin Board companies.¹⁶⁴ These firms are typically much smaller than NASDAQ or NYSE-listed firms. OTC Bulletin Board firms that did not wish to comply with the new mandatory disclosure requirements could elect to be removed from the OTC Bulletin Board. The study found that firms that were already complying with the mandatory disclosure requirements experienced significant positive abnormal stock returns. However, firms that elected to move (approximately 76% of all firms not already in compliance) and firms that were not already in compliance but choose not to move experienced significantly lower returns than those of the firms already in compliance. These findings suggest that for small, illiquid firms the benefits of mandatory disclosure can often be outweighed by the costs that it imposes for a significant number of these firms.

4. Cross-Country Evidence

Several studies have found that more demanding mandatory disclosure regimes are correlated with higher levels of financial development.¹⁶⁵ This is consistent with the hypothesis that mandatory disclosure increases the use of external finance as a result of increasing the ability of controlling shareholders to credibly commit to return the firms' profits to investors rather than having them diverted to themselves.

Increases in a country's mandated disclosure requirements, as measured by a "disclosure index," has been found to be associated with an increase in listed firms per

¹⁶⁴ See Brian Bushee and Christian Leuz, *Economic Consequences of SEC Disclosure Regulation: Evidence from the OTC Bulletin Board*, forthcoming 39 *Journal of Accounting and Economics* (2005).

¹⁶⁵ Most of the "law and finance" studies have not focused, however, on mandatory disclosure requirements but rather have used indexes, such as the "anti-directors" index, that measure the strength of a country's investor rights along other dimensions.

capita (as well as increases in other proxies for financial development).¹⁶⁶ A two-standard deviation increase in a country's "disclosure index" was associated with an impressive 52% rise in the number of listed firms per capita.¹⁶⁷ Interestingly, a country's "disclosure index" score generally had more explanatory power for that country's level of financial development than the "anti-directors" index that focuses on corporate law rights shareholders have.

Consistent with these findings, another recent study employing the same "disclosure index" found that in a dataset consisting of forty countries over the 1992-2001 period countries with more demanding disclosure requirements had significantly lower costs of external finance.¹⁶⁸ This effect on cost of capital was strongest in countries with segmented capital markets, i.e. countries in which there were impediments to foreign capital flowing into the country. Mandatory disclosure requirements, however, did continue to reduce firms' cost of external finance, even in countries relatively open to international capital flows.

D. Evidence from the State Competition Literature

Some commentators have stressed that the beneficial effects of allowing firms to select their state of incorporation, and thereby their governing corporate law, provides powerful evidence that mandatory disclosure requirements should be removed.¹⁶⁹ If regulatory competition between the states works well in the corporate law area, it should work as well in the securities field. More specifically, proponents of state competition have relied heavily on the argument that the empirical evidence indicates that the

¹⁶⁶ See Rafael La Porta, Florencio-de-Silanes, and Andrei Shleifer, What Works in Securities Laws?, Working Paper 2004. The "disclosure index" is the average of six disclosure proxies: requirements that a prospectus be delivered to potential investors; disclosure of insiders' compensation; disclosure of ownership by large shareholders; disclosure of inside ownership; disclosure of contracts outside the normal course of business; and disclosure of transactions with related parties.

¹⁶⁷ *Id.* at 16.

¹⁶⁸ See Luzi Hail and Christain Leuz, International Differences in Cost of Equity Capital: Do Legal Institutions and Securities Regulation Matter?, Working Paper 2004.

¹⁶⁹ See, e.g., Romano, Empowering Investors, 107 Yale L.J. at 2383 ("The most important data bearing on the question whether the federal securities regime should be eliminated is . . . the research on the impact on shareholder welfare of state competition for charters.")

corporate law of Delaware, the winner of this competition for incorporations, improves firm valuation.

Even granting the premise that the evidence on the merits of state competition in the provision of corporate law is central to evaluating the desirability of mandatory disclosure, this argument is unconvincing. The evidence that Delaware improves firm value is actually quite weak. While there is one study documenting that Delaware incorporation increases firm valuation,¹⁷⁰ subsequent empirical studies have failed to find that Delaware law consistently improves firm valuation. Two of these subsequent studies found that Delaware incorporation increased firm value in the early 1990s, but in the later half of the 1990s the Delaware firm valuation effect was either nonexistent or negative.¹⁷¹ Another study found no effect of Delaware incorporation on firm value in the 1990s.¹⁷²

VII. CONCLUSION

As the Article has discussed, the theoretical case for mandatory disclosure for countries with concentrated ownership is strong. In other words, the case for mandatory disclosure is strong for virtually all countries around the world. There are powerful reasons to believe that controlling shareholders will prefer a lax disclosure regime as a means to protect their private benefits of control and, equally important, to suppress competition in both the market for capital and in the product market. These theoretical claims are consistent with an impressive, and growing, body of evidence in the “law and finance” literature that documents both the detrimental effect a demanding disclosure regime can have on existing controlling shareholders, in terms of reduced private benefits of control and increased competition, and the beneficial effects a mandatory disclosure regime can have for shareholders and, more generally, for financial development.

¹⁷⁰ Daines, Robert, Does Delaware Law Improve Firm Value?, 62 *Journal of Financial Economics* 559 (2001).

¹⁷¹ Gompers, Paul, Ishii, Joy and Andrew Metrick, Corporate Governance and Equity Returns, 118 *Quarterly Journal of Economics* 107 (2003); Guhan Subramanian, The Disappearing Delaware Effect, 20 *Journal of Law, Economics and Organization* 32-59 (2004).

¹⁷² Lucian Bebchuk and Alma Cohen, The Costs of Entrenched Boards, Working Paper 2003.

APPENDIX

Eastman Kodak Co.,

DIRECTORS ANNUAL REPORT

Year Ending December 31,

1903

DIRECTORS:

GEORGE EASTMAN,
HENRY A. STRONG,
CHARLES S. ABBOTT,
GEORGE ELLWANGER,
WALTER S. HUBBELL,
WILLIAM H. CORBIN,
SIR JAMES PENDER,
LORD KELVIN.

EASTMAN KODAK COMPANY,

OF NEW JERSEY.

PRINCIPAL OFFICE, 83 MONTGOMERY ST., JERSEY CITY, N.J

EXECUTIVE OFFICES, ROCHESTER, N.Y.

REPORT OF THE DIRECTORS

To be presented at the third annual meeting of the shareholders, to be held at 83 Montgomery St., Jersey City, N. J., on Tuesday, April 5th, 1904, at twelve o'clock noon.

The Directors submit herewith the audited statement of account for the year ending the 31st of December, 1903, being the first full year of business of the company.

In the balance sheet presented the earnings of all the subsidiary companies are included for the period mentioned.

The balance sheet shows carried to surplus for the twelve months the amount of \$612,023.64 after paying quarterly dividends for the year at the rate of 6% per annum on its preferred stock and warrants and 10% on its common stock and warrants, and after charging off liberal amounts for depreciation on the various plants and \$78,404.18 for special reserves.

Attention is again called to the fact that the Company is paying dividends upon a large amount of capital which has been in but which has not been invested. The amount uninvested at the close of the period was about \$3,000,000.

The progress of the company during the past year was fully covered by the directors' preliminary report which was sent to the shareholders early in January.

The Directors retiring in conformity with the By-Laws are Messrs. George Eastman, Sir James Penders and Lord Kelvin. These gentlemen, being eligible, offer themselves for re-election. A director is also to be elected to fill the vacancy caused by the death of Mr. Edwin.

The Auditors, Messrs. Price, Waterhouse & Company, also retire and offer themselves for re-election.

By order of the Board.

W. S.
HUBBELL,
Secretary

EASTMAN KODAK COMPANY OF NEW JERSEY

COMBINED BALANCE SHEET, 311

LIABILITIES

CAPITAL STOCK:

Preferred Stock authorized...	\$10,000,000	
of which there has been issued,	\$6,170,368.01	
Common Stock authorized, ...	25,000,000	
of which there has-been issued,	<u>19,356,000.67</u>	
	\$25,526,368.68	

LESS: Calls unpaid	705,292.50	\$24,821,076.18
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CAPITAL STOCK OF SUBSIDIARY COMPANIES

OUTSTANDING		42,000.00
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CURRENT LIABILITIES:

Accounts Payable,	554,031.28	
Preferred Stock, Dividends payable January 1 st , 1904	90,080.07	
Common Stock, Dividends payable January 1 st , 1904	<u>470,872.56</u>	
<u>\$1,114,983.91</u>		

SURPLUS:

Balance of 31 st December, 1902 per Balance Sheet	\$468,999.29	
Profits of Combined Companies for the year Ending 31 st December 1903.	<u>2,925,691.16</u>	
	\$3,394,690.45	

DEDUCT:

Dividends and Interest,		
6% on Preferred Stock.....	\$368,058.57	
10% on Common Stock	<u>1,866,804.77</u>	
	\$2,234,863.34	

On Outstanding Stock of Sub- sidiary Companies	<u>400.00</u>	
	\$2,235,863.34	

Special Reserves	<u>78,404.18</u>	
	<u>\$2,313,667.52</u>	

\$1,081,022.93

\$27,081,022.93

AND ITS SUBSIDIARY COMPANIES.

31ST DECEMBER, 1903.

ASSETS:

COST OF PROPERTY, including Real Estate, Buildings, Plant, Machinery, Patents and Good Will,

\$17,513,685.54

CURRENT ASSETS:

Merchandise, Materials and Supplies,	2,512,325.17	
Accounts and Bills Receivable,	1,043,996.45	
Railway Bonds and other Investments,	1,753,594.58	
Call Loans,	650,000.00	
Cash at Banks and on Hand,	3,200,269.58	
Miscellaneous,	<u>285,211.70</u>	
		\$ 9,545,397.48
		<u>\$27,059,083.02</u>

We have examined the books of the Eastman Kodak company of New Jersey, and of Kodak Limited for the year ending December 31 1903 and we have been furnished with certified returns from the American and European Branches, The Kodak Gesellschaft and the Societe Anonymè Francaise for the same period and we certify that the Balance Sheet at that date is correctly prepared therefrom.

We have satisfied ourselves that during the year only actual additions and extensions have been charged to cost of property and that ample provision has been made for Depreciation.

We are satisfied that the valuations of the Inventories of stocks on hand, as certified by the responsible officials, have been carefully and accurately, full provision has been made for Bad and Doubtful Accounts Receivable and for all ascertainable Liabilities.

We have verified the cash and securities by actual inspection and by certificates from the depositories, and are of opinion that the stocks and bonds are fully worth the value at which they are stated in the Balance Sheet.

And we certify that in our opinion the Balance Sheet is properly drawn up so as to show the true financial position of the Company and its Subsidiary Companies, and the Profits thereof for the year ending at that date.

(Signed) PRICE,, WATERHOUSE & Co.

Chartered Accountants

54 William Street,
New York City
28th March, 1904