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*Abstract***:** Mandatory disclosure is a defining characteristic of U.S. securities regulation. Issuers selling securities in a public offering must file a registration statement with the SEC containing detailed disclosures, and thereafter comply with the periodic disclosure regime. This regime has been highly controversial among legal academics. Some scholars argue market forces will produce optimal levels of disclosure in a regime of voluntary disclosure, while others argue that various market failures necessitate a legal mandatory disclosure system. To date, however, both sides in this debate have assumed, *inter alia*, that market actors rationally pursue wealth maximization goals. In contrast, this paper draws on the emergent behavioral economics literature to ask whether systematic departures from rationality, such as herd behavior or the status quo bias, might result in a capital market failure. The paper concludes that such a market failure could occur, especially in emerging markets, but also contends that one should not jump to the conclusion that legal intervention in the form of a mandatory disclosure system is necessary, especially insofar as the highly evolved U.S. capital markets are concerned. The paper concludes with a cautionary note against the potential for behavioral economics to be glibly invoked as a justification for government intervention.

Keywords: mandatory disclosure, securities regulation, behavioral economics
JEL Classification: G38, K22

MANDATORY DISCLOSURE: A BEHAVIORAL ANALYSIS

Stephen M. Bainbridge*

Mandatory disclosure is a—if not the—defining characteristic of U.S. securities regulation.[1] Congress intended the securities laws to "substitute a philosophy of full disclosure for the philosophy of caveat emptor . . . ."[2] Issuers selling securities in a public offering thus must file a registration statement with the Securities and Exchange Commission (SEC or Commission) containing detailed disclosures[3] and provide investors with a prospectus containing most of the same information.[4] Although issuers conducting a private placement of securities are spared that burden, they generally must provide investors with at least some basic disclosures.[5] Public companies periodically must file disclosure statements with the SEC, including quarterly and annual reports.[6] Public

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[1] Europe & Overseas Commodity Traders, S.A. v. Banque Paribas London, 147 F.3d 118, 126 (2d Cir. 1998) ("Through mandatory disclosure, Congress sought to promote informed investing and to deter the kind of fraudulent salesmanship that was believed to have led to the market collapse of 1929.").

[2] SEC v. Capital Gains Research Bureau, Inc., 375 U.S. 180, 186 (1963).

[3] See Securities Exchange Act of 1933 §§ 5-7, 15 U.S.C. §§ 77e- 77g (1994).

[4] See id. §§ 5, 10, 15 U.S.C. §§ 77e, 77j.

[5] SEC v. Ralston Purina Co., 346 U.S. 119, 125-26 (1953) (in order for issuer to qualify for section 4(2) private placement exemption, generally it must be shown that the investors "have access to the same kind of information that the act would make available in the form of a registration statement"). Many of the regulatory safe harbor exemptions for limited offerings likewise require disclosure, at least to unaccredited investors. See, e.g., 17 C.F.R. § 230.502(b) (1999) (setting forth disclosure requirements applicable to most Rule 505 and 506 offerings under Reg. D).

[6] I am using the phrase "public company" to refer to an issuer having one or more classes of equity securities registered with the SEC under the Securities Exchange Act of 1934. In general, this encompasses exchange listed corporations and most over-the-counter companies. See 15 U.S.C. § 78l (setting forth registration

companies also must provide shareholders with an annual report and a proxy statement before soliciting proxies from them.[7] Anyone making a tender offer for more than 5% of the stock of a public company must file and disseminate a disclosure statement,[8] as must the management of the target of such a tender offer.[9] And the list goes on. Despite[10] the centrality of mandatory disclosure to the U.S. securities regulation scheme, it has proven highly controversial. Back in the 1980s, there was an extensive scholarly debate, which pulled in many leading corporate law academics,[11] but ultimately proved inconclusive.[12] Although the discourse eventually petered out, perhaps from sheer exhaustion, the utility of a mandatory disclosure regime has not lost its significance as a subject for inquiry.

The debate thus far has played out within the narrow confines of neoclassical economics. Although some scholars argued market forces will produce optimal levels of disclosure in a regime of voluntary disclosure, while

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requirements). Such companies must file an initial registration statement on Form 10, an annual report on Form 10-K, quarterly reports on Form 10-Q, and interim reports on Form 8-K as necessary. See id. § 78m (setting forth periodic disclosure requirement).

[7] See 17 C.F.R. § 240.14a-2 (stating that proxy rules 14a-3 to 14a- 15 apply to solicitation of proxies with respect to registered securities). The annual report to shareholders is required by Rule 14a-3(b). See id. § 240.14a- 3(b). Rule 14a-3(a) requires that anyone soliciting proxies with respect to registered securities, which includes outsiders or insurgent shareholders, as well as the incumbent board of directors, must provide a written proxy statement to each person whose proxy is solicited. See id. § 240.14a-3(a).

[8] See 15 U.S.C. § 78n(d). Comparable disclosure obligations are placed on issuers with respect to self-tender offers and other going private transactions. See 17 C.F. R. §§ 240.13e-1-13e-4.

[9] See 17 C.F.R. § 240.14e-2.

[10] Or, perhaps, because of.

[11] For bibliographic references, see infra note 29.

[12] See Frank H. Easterbrook & Daniel R. Fischel, The Economic Structure of Corporate Law 314 (1991) (concluding from an extensive review of the literature that "[w]e are left . . . with arguments rather than proof. And the arguments are themselves inconclusive."); see also Michael P. Dooley, Fundamentals of Corporation Law 395 (1995). Despite these concessions, more recent empirical evidence tends to support the critics of mandatory disclosure. See infra notes 159-164 and accompanying text.

others argued that various market failures necessitate a mandatory disclosure system, all shared certain basic assumptions, of which a strong form of rational choice theory is the most important for our purposes. Market actors are assumed to rationally pursue wealth maximization goals.[13]

In the intervening years, however, there have been two important developments in the jurisprudence of law and economics that suggest new avenues of inquiry. The first is the burgeoning literature on social norms, in which law and economics scholars have begun to focus on the role of non-legal norms in regulating behavior.[14] Although the social norms approach can be shoehorned into traditional rational choice models, the power of non-legal norms to influence behavior could make socially suboptimal behavior sufficiently sticky to result in a persistent market failure. Second, an emergent literature on behavioral economics challenges the basic rational choice model. Drawing on experimental economics and cognitive psychology, this literature asserts that one can identify systematic departures from rational decisionmaking, even in market settings.[15]

One of the distinguishing characteristics of these new subdisciplines is their emphasis on empiricism. Whether based on sociological investigations or psychology experiments using university students, the literature frequently sets out to model and test behavior in rigorous ways. In that respect, this article is more akin to traditional law and economics scholarship than to the new empirical literature. I admittedly break no new empirical ground, but instead conduct a thought experiment that relies on the results of empirical studies conducted by others.

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[13] See, e.g., Easterbrook & Fischel, supra note 12, at 300 (discussion focuses on whether the "self-interest model of disclosure" leads to optimal disclosure).

[14] In the law and economics literature, the seminal work (and obligatory cite) is Robert C. Ellickson, Order without Law: How Neighbors Settle Disuptes (1991).

[15] For overviews of behavioral economics and its growing influence on legal scholarship, see Christine Jolls et al., A Behavioral Approach to Law and Economics, 50 Stan. L. Rev. 1471 (1998); Russell B. Korobkin & Thomas S. Ulen, Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics, ___ Cal. L. Rev. ___ (forthcoming 2000); Donald C. Langevoort, Behavioral Theories of Judgment and Decision Making in Legal Scholarship: A Literature Review, 51 Vand. L. Rev. 1499 (1998); Cass R. Sunstein, Behavioral Law and Economics: A Progress Report, 1 Am. L. & Econ. Rev. 115 (1999). For applications to securities law issues, see Robert B. Thompson, Securities Regulation in an Electronic Age: The Impact of Cognitive Psychology, 75 Wash. U.L.Q. 779 (1997).

The design of my thought experiment was prompted by the recent promulgation of the Organization for Economic Co-operation and Development's Principles of Corporate Governance, which despite its name includes a fair amount of recommendations relating to securities regulation.[16] Of particular relevance to the topic at hand, the OECD Principles recommend a U.S.-like system of mandatory disclosure, including disclosure of material information relating to: financial and operating results, including audited financial statements; company objectives, including soft disclosure of non-financial objectives, such as business ethics and employment policies; major shareholdings; voting rights; compensation, conflict of interest, and biographical information about directors and key executives; risk factors; and corporate governance policies, especially relating to shareholder rights.[17] The OECD Principles also recommend annual audits by an independent auditor.[18] Finally, they urge countries to develop fair, timely, and efficient mechanisms for disseminating information to investors; in particular, selective disclosure is discouraged.[19]

These principles purport to "build upon experiences from national initiatives in Member countries," which presumably includes the U.S. experience with mandatory disclosure, and are expressly intended to assist governments to evaluate and reform their corporate governance laws.[20] The OECD and the World Bank recently agreed to cooperatively promote good corporate governance practices along the lines suggested by the OECD Principles.[21] As such, the OECD Principles may prove especially influential with respect to the development of securities regulation in emerging markets.

To be clear, this is not an article about the OECD Principles. Instead, those principles and their potential influence on emerging capital markets prompted a thought experiment that sheds light on the debate over mandatory disclosure.

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[16] See Ad Hoc Task Force on Corporate Governance, OECD Principles of Corporate Governance (April 16, 1999), <http:// www.oecd.org/daf/governance/principles.htm> [hereinafter OECD Principles].

[17] See id. at 15-20.

[18] See id. at 17.

[19] See id. at 17.

[20] See id. at 1.

[21] See News Release, World Bank and OECD Step Up Co-Operation to Promote Improved Corporate Governance, May 27, 1999, <http://www.oecd.org/news_ and_events/release/nw99-51a.htm>.

Imagine a small, highly homogeneous nation-state with emerging primary and secondary capital markets. A relatively small number of domestic corporations have issued shares in those markets. Should the national securities regulators follow the OECD's recommendations by imposing a mandatory disclosure regime on their new markets?[22] What if there is a strong social norm against disclosure among business executives? Might systematic departures from rationality, such as herd behavior or the status quo bias, result in a capital market failure?

Part I of this article briefly sets the stage by summarizing the mandatory disclosure debate as it has played out thus far. Part II conducts the thought experiment described above, concluding that in such an emerging market systematic decisionmaking biases could (in theory) lead to capital market failure. Although this analysis illustrates the potential of behavioral economics as a tool for predicting how decisionmakers will respond to legal rules, Part III argues that one must avoid thoughtlessly leaping from identification of a possible market failure to a conclusion that legal intervention in the form of a mandatory disclosure system is necessary, especially insofar as the highly evolved U.S. capital markets are concerned. Even in the highly stylized thought experiment, behavioral economics provides (at best) weak support for mandatory disclosure. As applied to real world U.S. capital markets, behavioral economics provides no such justification. To be clear, the conclusion is not that the U.S. should move to a regime of voluntary disclosure. Instead, this article's somewhat more modest claim is that proponents of the mandatory disclosure can not rely on a behavioral economics-based market failure story to justify that regime.

Although this paper is primarily about securities regulation, the cautionary tale it tells has broader implications. One frequently hears it asserted that law and economics is inherently ideological and, more specifically, an ideological tool of the right. Subject to the reductio absurdum that everything is inherently ideological, however, economic analysis of the law is not an intrinsically conservative methodology.[23] Neoclassical economic analysis' association with the

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[22] A mandatory disclosure regime is not the only desideratum of a successful emerging capital market, of course. For a provocative essay on the characteristics of such a market, see Bernard S. Black, The Legal and Institutional Preconditions for Strong Stock Markets: The Nontriviality of Securities Law (Jan. 2000) <http://papers.ssrn.com/paper.taf?ABSTRACT_ ID=182169>.

[23] See Robin Paul Malloy, Is Law & Economics Moral?-Humanistic Economics and a Classical Liberal Critique of Posner's Economic Analysis, 24 Val. U.L. Rev. 147, 148-51 (1990).

right derives from two sources: (1) many of economic analysis' most prominent practitioners are to be found on the political right; and (2) the philosophical underpinnings of neoclassical economic analysis resemble principles of classical liberalism that the left has disavowed, most notably a belief in the efficiency and justice of organizing society on the basis of voluntary market transactions, rather than by state fiat. Both attributes can be ascribed at least in part to law and economics' origins at Chicago and, in particular, the early influence of the anti-interventionist Henry Simons.[24]

Some of the Chicago School's critics have seized upon behavioral economics to identify market failures and, accordingly, justify legal intervention in a variety of settings. Cass Sunstein, for example, who once argued that "the problem [in many settings] is one of too little rather than too much regulation,"[25] has become a leading proponent of behavioral economics.[26] While acknowledging that both behavioralist and public choice analyses call into question the ability of government to make things better rather than worse, he asserts that behavioral economics justifies "skepticism about antipaternalism, [albeit] not an affirmative defense of paternalism."[27] Despite Sunstein's carefully nuanced disclaimer, it seems probable that behavior economics increasingly will be invoked by those who favor government intervention precisely because behavioral economics offers a new line of argument in favor of regulating private conduct.[28]

This article does not deny that behavioral economics is an important development, whose insights need to be taken into account. While behavioral economics is one of the tools corporate law scholars ought to have in their kit,

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[24] See generally Nicholas Mercuro & Steven G. Medema, Economics and the Law: From Posner to Post-Modernism 52 (1997) (tracing development of anti-interventionist strain of law and economics).

[25] Cass R. Sunstein, After the Rights Revolution 3 (1990).

[26] See, e.g., Jolls et al., supra note 15; Sunstein, supra note 15.

[27] Jolls et al., supra note 15, at 1541.

[28] For purposes of this article, I treat the preference for a limited state as pre-analytic. This is not to say that I do not believe that a variety of cases can be made for the limited state, both from consequentialist (or prudential) and nonconsequentialist perspectives, but only to say that doing so is outside the scope of this article. See generally F.A. Hayek, The Road to Serfdom (1944) (defense of the limited state within a classical liberal/libertarian framework); Russell Kirk, The Politics of Prudence 223-38 (1993) (defense of the limited state within a conservative framework).

however, its limits and its liberty implications suggest that it also is a tool that needs to be used thoughtfully and cautiously.

I. The Mandatory Disclosure Debate

Cognizant of the pitfalls awaiting anyone who attempts to briefly summarize a lengthy and voluminous debate, not least of which is failing to cite any number of classic works,[29] my intent in this section is to do no more than to set the stage for the analysis that follows. Hence, a very brief description of the debate, structured so as to lead into the subsequent analysis, must suffice.

Start with the perfectly plausible assumptions that investors value disclosure and that corporations desire to minimize their cost of capital. Or, more precisely, assume that the marginal benefit of an additional unit of disclosure (however measured) declines as more is produced, while the marginal cost of producing additional units rises as more are produced. Further assume that at $t = 0$ the capital markets are in a disequilibrium state in which the marginal benefit of additional disclosure to investors exceeds the marginal cost to a firm of providing such disclosure.[30] (See Figure 1).

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Under those conditions, potential gains from trade exist. Both investors and the firm will be better off if the latter provides additional disclosure.[31] Absent

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[29] For excerpts from a number of the classic articles, as well as a bibliographic listing of other significant contributions to the debate, see Marc I. Steinberg, Securities Regulation 328-41 (2d ed. 1993). For a recent review of the mandatory disclosure system and a trenchant critique of its foundational normative premises, see Alan R. Palmiter, Toward Disclosure Choice in Securities Offerings, 1999 Colum. Bus. L. Rev. 1, 10-29.

[30] Even in some highly developed countries, disclosure practices appear to be sub-optimal. German accounting standards and disclosure practices, for example, have been widely criticized as permitting firms to hide income in silent reserves and, more generally, as failing to provide the sort of detailed disclosures needed by financial analysts. Christian Leuz & Robert E. Verrecchia, The Economic Consequences of Increased Disclosure 5 (July 1999), < http://papers.ssrn.com/paper.taf?ABSTRACT_ID=171975>.

[31] If investors value disclosure, voluntary disclosure will lower the cost of capital. Investors will be willing to pay more (a/k/a demand less of a return) for securities of companies that make voluntary disclosure. This basic application of price theory is confirmed by a recent study of German firms that switched from the disclosure regime mandated by German law to an international reporting regime

some market failure, neoclassical economics predicts that the firm will voluntarily provide additional disclosures until an equilibrium is reached in which the marginal benefit of providing an additional unit of disclosure equals the marginal cost of producing that additional unit.[32] (See Figure 2).

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A basic premise of welfare economics is that a market failure is a necessary (but not sufficient) justification for government intervention.[33] Hence,

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(either U.S. GAAP or the International Accounting Standards). Firms that made such a switch exhibited lower bid-ask spreads and higher trading volumes, which the authors assert to be a useful proxy for the information asymmetry component of the cost of capital, than did firms sticking with the German disclosure regime. Leuz & Verrecchia, supra note 30.

In turn, the corporate managers who actually make disclosure decisions frequently have large and nondiversified investments in firm-specific human capital. Management therefore suffers more than anyone if the firm fails. Suboptimal disclosure practices thus put management at risk. The information asymmetry between firms and investors increases the latter's risk and therefore manifests itself in reduced liquidity. To overcome investor reluctance to hold risky, illiquid shares, firms must issue capital at a discount, which leads to a higher cost of capital. In theory, a credible commitment to provide increased levels of disclosure reduces the possibility of information asymmetries, which in turn should reduce the discount at which firm shares are sold, and thus result in a lower cost of capital. Id. at 1. Information asymmetries between issuers and investors are only one component of the firm's overall cost of capital, of course, and the only component directly reducible by disclosure. Because a lower cost of capital makes it less likely that the firm will fail, however, management has a strong interest in ensuring adequate levels of disclosure. See Easterbrook & Fischel, supra note 12, at 288 ("entrepreneurs and managers, not the investors, pay the price").

[32] See Dooley, supra note 12, at 390 ("management has positive incentives to disclose information about the firm up to the point where the marginal cost of additional disclosure is equal to the marginal benefit to the firm in reducing its cost of capital"). For a more detailed explanation of how market forces produce such an equilibrium by exhausting potential gains from trade, see Mercuro & Medema, supra note 24, at 13-18, 25-39.

[33] Cf. Robert Cooter & Thomas Ulen, Law and Economics 43-49 (1st ed. 1988) (setting forth basic aspects of welfare economics, including the notion that public policy can be used to correct market failures).

the debate thus far has generally focused on identifying market failures that would prevent achievement of a Pareto optimal equilibrium within a regime of voluntary disclosure.[34] Welfare economics classically recognizes four basic sources of market failures: producer monopoly; the good to be produced is a public good; externalities; and informational asymmetry between producer and consumer.[35] The latter three have all been invoked to justify mandatory disclosure, although each remains highly contested.

A. The Public Goods-Based Market Failure Story

Coffee argues that "because information has many characteristics of a public good, securities research tends to be underprovided . . . . A mandatory disclosure system can thus be seen as a desirable cost reduction strategy through which society . . . secure[s] both a greater quantity of information and a better testing of its accuracy."[36] While it is conventional to treat information as a public

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[34] Various other justifications for the mandatory disclosure system have been offered, as well. One of the more common is that mandatory disclosure is necessary to prevent fraud. While essentially wrong, this argument does play some role in the analysis that follows. See infra notes 44-50 and accompanying text. Another is that disclosure fosters good corporate practices; hence, the sobriquet "therapeutic disclosure." See, e.g., Steinberg, supra note 29, at 340-41 ("the Commission's disclosure policies . . . have played a positive role in influencing the establishment of improved standards of [corporate] conduct."). As Steinberg correctly acknowledges, id. at 341, it may be questioned whether this is a proper purpose for the federal securities laws. I have argued elsewhere that it is not. See Stephen M. Bainbridge, The Short Life and Resurrection of SEC Rule 19c-4, 69 Wash. U.L.Q. 565, 614 n.242 (1991). Still other justifications include vague notions of investor protection and the maintenance of investor confidence. These and other similar justifications are canvassed (and mostly rebutted) in Easterbrook & Fischel, supra note 12, at 296-300. Finally, issuers might rationally prefer a mandatory disclosure regime specifying which disclosures must and must not be made as a safe harbor against the risk that a jury, acting with the benefit of hindsight, might determine that the issuer's voluntary disclosures omitted material facts and, thus, constituted securities fraud. See infra note 168.

[35] See Cooter & Ulen, supra note 33, at 45.

[36] John C. Coffee, Jr., Market Failure and the Economic Case for a Mandatory Disclosure System, 70 Va. L. Rev. 717, 722 (1984). See also Dooley, supra note 12, at 392-93 (describing public goods analysis as "[t]he most sophisticated economic argument in favor of mandated disclosure").

good,[37] slapping the public good label on securities-related information is not enough to justify government intervention. It must first be shown that firms in fact will not voluntarily disclose optimally and that government mandates will lead to efficient levels of disclosure.[38] Those points are still controverted.[39]

B. The Externalities-Based Market Failure Story

Several third party effects-externalities-have been identified as potential sources of capital market failure. In most cases, effective disclosure requires not only historical information about the firm, but also its future plans, as well as comparative data about its competitors and its industry in general. An individual firm will resist producing the latter types of information, because competitors might free ride on its general disclosures about the industry and might use information about future plans to their own competitive advantage. Hence, such information will tend to be underproduced.[40]

Some scholars also argue that a mandatory disclosure system offers positive network externalities.[41] Standardized modes of disclosure clearly

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[37] See, e.g., Robert Cooter & Thomas Ulen, Law and Economics 102-03 (2d ed. 1996).

[38] Behavioral economics actually argues against Coffee's public goods- based argument for regulation. Experimental behavioral economics consistently finds that contributions to public goods are substantially higher than predicted by rational choice theory. See Korobkin & Ulen, supra note 15, at 98- 99 (describing studies).

[39] Compare Coffee, supra note 36, at 722 ("the theory of self-induced disclosure . . . has only limited validity"), with Easterbrook & Fischel, supra note 12, at 288 (public goods "arguments share a problem, because they leap from the benefit of disclosure to the benefit of mandatory disclosure"); see also Henry G. Manne, Economic Aspects of Required Disclosure under Federal Securities Laws, in Wall Street in Transition 21, 40-43 (1974) (critiquing public goods argument).

[40] See Easterbrook & Fischel, supra note 12, at 290-91; cf. Merritt B. Fox, Retaining Mandatory Securities Disclosure: Why Issuer Choice is not Investor Empowerment, 85 Va. L. Rev. 1335 (1999) (arguing that the issuer's private disclosure costs and benefits are less than the social costs and benefits, resulting in inefficiently low levels of disclosure).

[41] See id. at 291-92.

facilitate investor analysis by creating economies of scale.[42] Investors and managers only need learn how to deal with a single set of disclosure standards. Comparisons across companies are facilitated. The lawyers and accountants who assist firms to prepare disclosures will develop expertise that can be applied across many firms, lowering costs. Individual firms, however, may lack incentives to develop or comply with such standards.

C. The Information Asymmetry-Based Market Failure Story

While there is an obvious information asymmetry between issuers and investors, "[o]ne must be careful to avoid the fallacy that if some information is good, more must be better."[43] In light of management's incentives to voluntarily disclose up to the point at which marginal cost equals marginal benefits, the question is whether a system of voluntary disclosure induced by competitive market pressures will optimally ameliorate the asymmetry of information between investors and issuers. At its simplest level, the information asymmetry argument is that, "in the absence of a compulsory corporate disclosure system some issuers will conceal or misrepresent information material to investment decisions."[44]

No one disputes the importance of a steady flow of truthful information to both the primary and secondary capital markets. If the market can efficiently price securities, the market will also efficiently allocate capital investment. Capital will flow in the directions indicated by changes in market prices. In order to efficiently price securities, investors must have a constant flow of complete and accurate information. If management misrepresents or omits to disclose material information, both investors and society thus suffer. To be sure, management has incentives to provide ex ante assurances that it will provide a steady stream of truthful information. Basic principles of agency cost economics, however, predict that mangers sometimes break those promises. In particular, managers will often have an incentive to withhold bad news.[45] Consistent with that prediction, an

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[42] Cf. Uri Geiger, Harmonization of Securities Disclosure Rules in the Global Market-A Proposal, 66 Fordham L. Rev. 1785, 1795 (1998) (discussing benefits of harmonized disclosure rules).

[43] Easterbrook & Fischel, supra note 12, at 299.

[44] Joel Seligman, The Historical Need for a Mandatory Corporate Disclosure System, 9 J. Corp. L. 1, 9 (1983).

[45] For example, Mitu Gulati has identified situations in which management is likely to behave opportunistically by failing to make interim disclosure of bad news. See Mitu Gulati, When Corporate Managers Fear a Good Thing is Coming to an End: The Case of Interim Nondisclosure, 46 UCLA L. Rev. 675, 732-39 (1999). The hypothesized tendency to underdisclose negative information is

analysis of securities fraud litigation by Arlen and Carney found that managers typically committed fraud in order to conceal bad news, such as an earnings decline, that might have placed their jobs in jeopardy.[46]

Under a regime of voluntary disclosure, if management wants to lower the firm's cost of capital, its promises must have credibility. Investors will not be willing to pay more for securities unless management provides a credible promise-a bond-that guarantees it will disclose bad information just as promptly as good information. Law can facilitate private ordering by providing such a bond.[47] Query, however, whether one needs the full panoply of disclosure and procedural rules imposed by U.S. securities law in order to provide such a bond.[48] A credible commitment-based disclosure regime requires an antifraud rule like present Rule 10b-5, perhaps with somewhat expanded liability for nondisclosures, such as affirmative duties to update or disclose soft information.[49] Less obvious is the necessity for the detailed disclosures specified by Regulation S-K or the

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consistent with behavioral economics. There is a systematic bias towards optimism which reinforces the natural tendency of a seller to puff. Hence, Thompson suggests "[t]here is an arguable basis for tilting disclosure policy toward making sure that the disclosure sufficiently includes negative statements." Thompson, supra note 15, at 787.

[46] See Jennifer Arlen & William J. Carney, Vicarious Liability for Fraud on Securities Markets: Theory and Evidence, 1992 U. Ill. L. Rev. 691, 701.

[47] Nonlegal constraints (such as reputational intermediaries) might suffice to prevent fraud, as Easterbrook and Fischel suggest, but invoking a legal antifraud regime as a backstop for such constraints likely reduces the cost of doing so, as they acknowledge. See Easterbrook & Fischel, supra note 12, at 280-83. See generally Stephen M. Bainbridge, Securities Act Section 12(2) After the Gustafson Debacle, 50 Bus. Law. 1231 (1995) (discussing role of antifraud provisions within mandatory disclosure system).

[48] But see Edward Rock, Securities Regulation as Lobster Trap: A Credible Commitment Theory of Mandatory Disclosure (Sept. 7, 1999) (unpublished draft on file with Cincinnati Law Review) (noting that it is easy for firms to opt into the SEC disclosure system but hard to exit therefrom, and contending that the mandatory disclosure regime thus provides a credible commitment to providing a particular package of disclosures to be made in a standardized form).

[49] See generally Stephen M. Bainbridge, Securities Law-Insider Trading 29-41 (1999) (overview of Rule 10b-5).

various ancillary features of the present mandatory disclosure regime, such as the proxy and tender offer rules, in order to make a credible commitment to investors.

In any case, a mandatory disclosure system laying out detailed required disclosures will not prevent issuers from fraudulently violating their commitments. Issuers who are going to commit fraud still will make fraudulent disclosures-they will simply use the approved form to do so.[50] Hence, rigorously enforced proscriptions of fraud seem far more important than the mandatory disclosure system, insofar as one is concerned about bonding the credibility of managerial disclosure promises.

II. The Thought Experiment

Assume an emerging capital market in a small country. Publicly-traded corporations are managed by a local business elite. Executives live and work in close geographical proximity. They came out of the same social milieu, attended the same schools, and belong to the same clubs. They are ethnically and religiously homogeneous, sharing common values. Foreign investment is rare. No statute mandates disclosure, and voluntary disclosure is uncommon.[51]

Suppose that the capital demands of this elite oligarchy expand, as the emerging market's economy expands. Presumably the elites will initially tap their own resources, those of their families, and those of other local elites. The close-knit nature of the community should facilitate informal exchange of relevant information between creditors and debtors.[52] Eventually, however, if the demand for capital continues to expand, the elite will have to reach beyond their narrow community to find new investors. When the elites seek to tap impersonal sources of capital, they will no longer be able to depend on informal community-based information exchange networks. Instead, they will need to offer general information to investors at large.

As the demand for capital expands, will firms voluntarily undertake more extensive disclosure obligations? Opponents of mandatory disclosure systems contend that market forces will lead to an equilibrium at which optimal levels of

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[50] Dooley, supra note 12, at 390 ("[N]o disclosure system can present fraud. Directing people to tell the truth does not prevent them from lying.").

[51] There probably is no real world equivalent of the hypothetical market. Reportedly, every securities market has some form of disclosure regulation. See Geiger, supra note 42, at 1825. The quality of disclosure varies widely, however. See infra note 164 and accompanying text (discussing criticism of German disclosure system); see also supra notes 30-31 (same).

[52] See infra Part II.D.

disclosure will be forthcoming, as we saw in Part I. Defenders of mandatory disclosure, by contrast, contend that various market failures impede or even prevent movement towards a Pareto optimal voluntary disclosure regime. In either case, however, the debate thus far has taken place within the narrow confines of neoclassical economics. In particular, both critics and defenders of mandatory disclosure typically assume rationality.

Neoclassical economics is premised on rational choice theory, which posits an autonomous individual who makes rational choices that maximize his satisfactions.[53] Although rational choice theory remains an appropriate starting point for any economic analysis, the emergent school of behavioral economics has identified a number of "decision-making biases-i.e., tendencies to make judgments or decisions in ways that systematically depart from the economist's rational choice/expected utility model."[54] The extent to which behavioral economics calls into question more traditional modes of economic analysis remains sharply contested. At the very least, however, it seems clear that attention must be paid to the possibility that a behavioral economics analysis might shed light on legal problems.

To date, behavioral economics has not (and may not ever) develop a single theory that explains or predicts the full range of human behavior, as rational choice theory claims to do.[55] Instead, it offers a pragmatic collection of "situation-specific mini-theories useful in the analysis of discrete legal problems."[56] This section explores four such mini- theories--herd behavior, habit/tradition, the status quo bias, and social norms--that plausibly suggest that the prevailing norm of nondisclosure posited in our thought experiment will

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[53] See Richard A. Posner, The Problems of Jurisprudence 353 (1990). See generally Thomas S. Ulen, Rational Choice and the Economic Analysis of Law, 19 L. & Soc. Inquiry 487 (1994) (useful summary of rational choice theory).

[54] Langevoort, supra note 15, at 1503 (emphasis deleted). It is the systematic nature of these biases that is critical. Standard economic analysis recognizes that individual decisionmakers may depart from rationality, but assumes that such departures come out in the wash-they cancel each other out so that the average or equilibrium behavior of large groups will be consistent with rational choice. By asserting that decisionmakers exhibit systematic biases, behavioral economics denies that claim. See Donald C. Langevoort, Theories, Assumptions, and Securities Regulation: Market Efficiency Revisited, 140 U. Pa. L. Rev. 851, 862 (1992).

[55] Korobkin & Ulen, supra note 15, at 25.

[56] Id. at 23.

exhibit more stickiness than the critics of mandatory disclosure would predict.[57] (See Figure 3).

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It is unclear precisely how sticky suboptimal levels of disclosure would prove, however. To be sure, there is a fair bit of evidence for each of the

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[57] The analysis mainly focuses on systematic decisionmaking biases and cognitive errors on the part of the corporate managers who make disclosure decisions, largely treating the consumers of such disclosures (i.e., investors) as exogenous. A complete behavioral analysis of the disclosure system would also require examination of systematic decisionmaking biases of investors and of other players in the process, such as lawyers and accountants. Investors, for example, are said to make decisions based on recently learned or easily remembered information rather than on complete data sets. See Langevoort, supra note 54, at 859. This availability bias especially calls into question the desirability of periodic disclosure regimes, such as that mandated by the Securities Exchange Act, because it suggests investors will overreact to newly disclosed information. Cf. Donald C. Langevoort, The Epistemology of Corporate-Securities Lawyering: Beliefs, Biases and Organizational Behavior, 63 Brook. L. Rev. 629 (1997) (discussing corporate lawyers' role in the on-going disclosure process from a behavioral economics perspective). There is also evidence that the way in which information is presented to investors can affect their decisionmaking, presumably because the availability heuristic skews their analysis of probabilities. In one study, a group of university staff was presented with the choice of investing their retirement funds in a bond account or a stock account. All employees were given data on the returns of the two accounts, but the way the data was presented differed. Some employees were given the distribution of one-year returns, while others were shown a distribution of 30-year returns. (Presumably the former distribution showed higher volatility than the latter.) The latter group tended to invest in stocks, while the former group tended to invest in bonds. Jolls et al., supra note 15, at 1534. See also Elaine A. Welle, Freedom of Contract and Securities Laws: Opting out of Securities Regulation by Private Agreement, 56 Wash. & Lee L. Rev. 519, 580-81 (1999) (asserting that the systematic decisionmaking biases identified by behavioral economics show that investors will irrationally waive securities rights); cf. Jon D. Hanson & Douglas A. Kysar, Taking Behavioralism Seriously: The Problem of Market Manipulation, 74 N.Y.U. L. Rev. 630 (1999) (claiming that manufacturers take advantage of cognitive errors by consumers to manipulate product markets).

systematic biases described below. At least insofar as that evidence relies on laboratory work, however, critics remain free to dismiss the results as simply an artifact of experimental design.[58] Judge Posner, for example, relied on this tactic in critiquing the evidence for the endowment effect:

> Most individuals, including virtually all university students-the principal experimental subjects of behavioral economics, which relies much more heavily than standard economics does on experiments-are buyers but not sellers. When we do have something to sell, we usually sell through middlemen, such as real estate brokers, rather than directly to the ultimate consumer. Experimental situations in which the subjects are asked to trade with each other are artificial, and so we cannot have much confidence that the results generalize to real markets.[59] [cm

Fair enough; the behavior of undergraduates swapping coffee mugs probably doesn't tell us very much about the behavior of institutional investors buying IPO stocks in the primary capital market. Indeed, Posner's critique seems especially applicable to the problem at hand. In a primary capital market, investors by definition act as Posner's purchasers. Even in the secondary capital markets, where some investors act as sellers, they do so through middlemen-typically stockbrokers. Yet, as the evidence recounted herein suggests, Posner's critique is too facile. In at least some areas, including some aspects of capital markets, the evidence of systematic decisionmaking biases simply cannot be dismissed so easily.

A more telling critique is the need for better evidence as to the persistence of these biases over time.[60] As a general matter, the corrective powers of market forces and learning by decisionmakers remains contested.[61] It seems reasonably

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[58] See Jennifer Arlen, Comment: The Future of Behavioral Economic Analysis of Law, 51 Vand. L. Rev. 1765, 1769 (1998) ("we cannot be confident that an observed bias really does affect actual decisions-as opposed to being simply an artifact of experimental design-until we can explain why the bias exists").

[59] Richard A. Posner, Rational Choice, Behavioral Economics, and the Law, 50 Stan. L. Rev. 1551, 1566 (1998).

[60] See Arlen, supra note 58, at 1769 ("Learning may mute various biases-and possibly produce new biases. In the real world, biases also may be muted or altered by market forces, the experience of operating within an organization, or expert advice.").

[61] See Langevoort, supra note 15, at 1521. Compare Arlen, supra note 58, at 1768-69 (such forces will have a corrective effect), with Korobkin & Ulen, supra note 15, at (any such corrective effects do not merit much weight as a defense of rational choice).

well-settled, however, that the corrective effect of such forces is contextual, varying from one setting to another.[62] A number of systematic biases operate only in certain circumstances.[63] A critical question thus is whether the systematic biases described below will persist over an extended period of time, such that a persistent market failure plausibly can be posited.

A. Herd Behavior

Why do lemmings leap off that cliff in Norway? What explains fads like Beanie Babies and Pokemon? In our thought experiment, the existing practice of business executives is one of nondisclosure. Might those decisionmakers emulate the lemming, collectively persisting in that practice even if it is inefficient?

Herd behavior occurs when a decisionmaker imitates the actions of others, while ignoring his own information and judgment with regard to the merits of the underlying decision.[64] Various explanations for herd behavior have been offered, some of which are more easily squared with rational choice theory than others.[65] For example, following the crowd may have a reputational pay-off even if the chosen course of action fails. Because even a good agent can make decisions resulting in a bad outcome, the market evaluates the agent by looking at both the outcome and the action before forming a judgment about the agent. If a bad outcome occurs, but the action was consistent with approved conventional wisdom, the hit to the manager's reputation from an adverse outcome is reduced.[66] As Keynes famously remarked, "it is better for reputation to fail conventionally than to succeed unconventionally."[67]

Herding can also be seen as a response to bounded rationality and information asymmetries. Under conditions of complexity and uncertainty, actors who perceive themselves as having limited information but can observe the actions of presumptively better-informedpersons may attempt to free-ride by

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[62] See Langevoort, supra note 15, at 1521 (noting variations in effectiveness of feedback mechanisms).

[63] See Arlen, supra note 58, at 1768.

[64] Marcel Kahan & Michael Klausner, Path Dependence in Corporate Contracting: Increasing Returns, Herd Behavior and Cognitive Biases, 74 Wash. U.L.Q. 347, 355-56 (1996).

[65] See generally Peter H. Huang, Herd Behavior in Designer Genes, 34 Wake Forest L. Rev. 639, 645-653 (1999) (detailed review of theories of herd behavior).

[66] Kahan & Klausner, supra note 64, at 356.

[67] John Maynard Keynes, The General Theory of Employment, Interest, and Money 158 (1936).

following the latter's decisions. Importantly, this explanation for herding suggests that the introduction of new information may alter the equation. Hence, herding motivated by an information asymmetry produces short-lived fads in which consumer preferences prove quite brittle.[68]

Perhaps less easily squared with wealth maximization versions of rational choice theory is the so-called conformity effect. When one's decisions are publicly observable by peers, conformity has a positive psychic pay-off, whose existence has been experimentally demonstrated.[69]

There is lots of evidence that smart, seemingly rational decisionmakers are prone to herd behavior. I have shown elsewhere, for example, that the popularity of participatory management among corporate managers owes much to herd behavior.[70] My conclusion is confirmed by various studies, including one by Lawler and Mohrman that reported: "In a number of cases we studied, the CEO of the company had seen a TV program or read a magazine article praising [quality] circles and decided to give them a try."[71]

There is also evidence of herding behavior in capital markets, albeit mainly of herding by investors.[72] Several studies have found evidence of herding

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[68] See David Hirshleifer, The Blind Leading the Blind: Social Influence, Fads, and Informational Cascades, in The New Economics of Human Behavior 188, 191-93 (Mariano Tammasi & Kathryn Ierulli eds., 1995).

[69] Kahan & Klausner, supra note 64, at 363-65.

[70] See Stephen M. Bainbridge, Privately Ordered Participatory Management: An Organizational Failures Analysis, 23 Del. J. Corp. L. 979, 1002- 04 (1998). Participatory management is a generic term for any system of industrial relations purporting to involve employees in workplace decisionmaking; e.g., quality circles and self-directed work teams. See id. at 981.

[71] Edward E. Lawler III & Susan A. Mohrman, Quality Circles after the Fad, Harv. Bus. Rev., Jan.-Feb. 1985, at 64, 66-67. See also Martha A. Gephart & Mark E. Van Buren, Building Synergy: The Power of High Performance Work Systems, Training & Development, Oct. 1996, at 21, 28 (American Society for Training and Development report that observed that many companies adopt team-based management structures, inter alia, "in response to success stories from other companies.").

[72] See Langevoort, supra note 15, at 1523 ("Hubris, loss framing, and herd behavior are explanations being found in finance journals for the activities of professional money managers and corporate CEOs."). The idea that fads and other psychological factors affect stock prices has an old pedigree, including Keynes' famous beauty contest hypothesis, see Keynes, supra note 67, at 155 (describing

among institutional investors.[73] Chevalier and Ellison, for example, found that young mutual fund managers tend to herd into popular market sectors and conventionally weighted portfolios.[74] Other recent work shows that globalization of securities markets increases the volatility of cross-border capital flows by strengthening the incentives of institutional investors to herd.[75] Klausner and Kahan contend that herding by lawyers explains the persistence of suboptimal provisions in bond indentures.[76]

On the other hand, a recent study of herding in international equity markets found little evidence of investor herding in developed capital markets, while finding significant herding in emerging markets.[77] The authors compared cross-sectional absolute deviations of return to overall market returns, positing that return dispersions should decrease in the presence of herding behavior.[78] They tested five equity markets: U.S., Hong Kong, Japan, South Korea, and Taiwan. They found no evidence of herding in the U.S. or Hong Kong,[79] limited

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hypothesis), and Mackay's 1841 description of the South Sea Bubble and the Dutch tulip mania, see Charles Mackay, Extraordinary Popular Delusions and the Madness of Crowds (1841).

[73] See Donald C. Langevoort, Selling Hope, Selling Risk: Some Lessons for Law from Behavioral Economics About Stockbrokers and Sophisticated Customers, 84 Cal. L. Rev. 627, 644 (1996).

[74] See Judith Chevalier & Glenn Ellison, Career Concerns of Mutual Fund Managers, 114 Q.J. Econ. 389 (1999).

[75] See Guillermo A. Calvo & Enrique G. Mendoza, Rational Herd Behavior and the Globalization of Securities Markets (March 6, 1998) <http://papers.ssrn.com/paper.taf?ABSTRACT_ID=114723>.

[76] See Kahan & Klausner, supra note 64, at 358 (to be clear, they posit herding as one of several reasons for that persistence).

[77] See Eric C. Chang et al., An Examination of Herd Behavior in Equity Markets: An International Perspective (Aug. 20, 1999) <http://papers.ssrn.com/paper.taf?ABSTRACT_ID=181872>.

[78] See id. at 2.

[79] See id. at 17. Their results for U.S. equity markets are consistent with an earlier study whose authors used cross-section standard deviations (CSSD) of returns as a proxy for the average proximity of individual returns to the market average, positing that returns earned by investors who herd will not deviate substantially from the overall market return and, accordingly, will exhibit a small CSSD. That study likewise found no evidence of herding in U.S. markets. See W.G. Christie

evidence of herding in Japanese markets during downturns, and strong evidence of herding in South Korea and Taiwan.[80] They speculate that investor herding is common in emerging markets due to, inter alia, inadequate disclosure by firms. Investors who lack information about firms will tend to trade on exogenous signals, such as the behavior of other market participants.[81]

In any event, even assuming managers likewise herd, the stickiness of suboptimal herd behavior will depend on the source of herding in the relevant market. If managerial herding in our thought experiment is mainly an artifact of information asymmetries, wide dissemination of evidence that disclosure reduces capital costs should break the cycle of following the herd's current nondisclosure pattern. Indeed, the herd might rapidly shift directions towards disclosure.[82] On the other hand, the reputational and conformity explanations for herding are consistent with a greater likelihood that suboptimal behavior will prove sticky.[83] Because the latter explanation has considerable plausibility,[84] legal intervention (in the form of a mandatory disclosure system) may be necessary to redirect the herd.

The potential utility of legal intervention as a response to herding also depends on a potential linkage between herd behavior and network externalities. Herding can produce a temporary fad, but the fad is more likely to persist if it conveys network externalities. Some products become more valuable as the number of persons using them increases. Each person who adopts the product thus confers positive externalities on other users. Personal computers (PCs) are a

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& R.D. Huang, Following the Pied Piper: Do Individual Returns Herd Around the Market?, Fin. Analysts J., July- Aug. 1995, at 31.

[80] See Chang et al., supra note 77, at 16-17.

[81] See id. at 14.

[82] In such cases, herding is said to result in an information cascade- i.e., a "chain of conforming behaviors" among many actors. Langevoort, supra note 73, at 644. Cascades are said to be "brittle," and thus sensitive to public dissemination of new information. Hirshleifer, supra note 68, at 198.

[83] See Hirshleifer, supra note 68, at 192 ("most theories of conformity . . . imply rigid behavior in the face of changing circumstances").

[84] See Kahan & Klausner, supra note 64, at 356 (positing that the reputational explanation "of herd behavior seems to fit many contracting situations"); cf. id. ("one senses that a lawyer's reputation suffers more from the failure of a contract that he has customized himself than from the failure of a standard contract that he, along with many others, have used before in similar contexts").

commonly cited example of this phenomenon. The value of Microsoft's Windows operating system, for example, depends in part on how many people use it and thus create markets for compatible hardware and software. The more people who use Windows, the larger the market for ancillary products becomes, thus encouraging the development of more ancillary products of higher quality and lower price.[85] Herding and network externalities thus can tend to reinforce one another. If the product or practice in question generates network externalities, and is consistent with conventional wisdom, the practice or product will prove quite sticky.

A practice of nondisclosure seems a poor candidate for generating network externalities. Conversely, disclosure does seem a likely candidate. As more companies disclose, more people will find it useful to develop expertise in analyzing disclosures, which makes the capital markets more efficient, which makes disclosure more valuable to other issuers, and so on. If so, law could have three beneficial effects on this process. First, it begins a cascade of disclosure by shifting the conventional wisdom. Second, an antifraud component will make disclosure credible, which makes disclosure more valuable, which increases the network effect. Third, and most important, just as product standards increase the value of network products by speeding adoption and facilitating development of both the product and ancillary markets, legal disclosure rules provide a standard around which disclosure practices can cluster.[86]

B. Habit and Tradition

Rational choice theory assumes that past behavior is irrelevant to current choices or, due to declining marginal utility, is negatively correlated to current decisions.[87] In contrast, behavioral economists regard habit as a heuristic device,

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[85] See Michael Klausner, Corporations, Corporate Law, And Networks Of Contracts, 81 Va. L. Rev. 757, 763 (1995) (describing network externalities in PC industry). But see Stanley J. Liebowitz & Stephen E. Margolis, Winners, Losers & Microsoft: Competition and Antitrust in High Technology (1999) (disputing the validity of network externalities and related market failures in the PC industry).

[86] Cf. Easterbrook & Fischel, supra note 12, at 303-04 (acknowledging the provision of standardized disclosure as one justification for a mandatory disclosure system).

[87] See Korobkin & Ulen, supra note 15, at 69. See also Richard H. Thaler, The Winner's Curse: Paradoxes and Anomalies of Economic Life 106 (1992) (describing process of habit formation, which assumes that the utility of current consumption depends on past levels of consumption).

because repetitive behavior reduces decisionmaking costs.[88] Because habits can influence behavior at an unconscious level, they can result in suboptimal decisions in particular circumstances.[89] The decisionmaker will not pause to reflect on whether the habitual course of conduct leads to a utility maximizing outcome in the case at bar.

While habitual behavior is explained as an unconscious heuristic, the somewhat similar concept of tradition depends on the conscious utility individuals derive from consistency.[90] Having the same thing for breakfast every morning saves me the trouble of trying to decide what to eat at an hour at which I function suboptimally. In contrast, having turkey for Thanksgiving dinner every year is a conscious decision motivated by the pleasure I derive from the happy memories associated with past Thanksgiving meals shared with friends and family.[91]

As an explanation for why the posited pattern of nondisclosure might persist, habit is probably more powerful than tradition. Because tradition depends on a conscious calculation of the utility to be derived from consistency with past practices, it is more subject to correction by evidence that that practice is undesirable. As Korobkin and Ulen amusingly observe, "a person made ill by fruitcake is unlikely to eat it even at Christmas despite the long-time family tradition to do so."[92] In contrast, a habit of nondisclosure could prove sticky or, at least, more sticky than rational choice theory would predict.

Assuming habitual nondisclosure proves sticky, some may argue that a legal disclosure obligation addresses the problem by providing a credible precommitment strategy.[93] Suppose a firm in our hypothetical economy decided

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[88] See Korobkin & Ulen, supra note 15, at 70.

[89] See id. Habits need not lead to suboptimal results, of course. A beneficial habit is "one in which current consumption has favorable effects in the future, such as . . . attending church, jogging, or playing tennis on a regular basis." Michael Grossman, The Economic Approach to Addictive Behavior, in The New Economics of Human Behavior 157, 158 (Mariano Tommasi & Kathyrn Ierulli eds., 1995).

[90] See Korobkin & Ulen, supra note 15, 70-71.

[91] Cf. Calvin Trillin, The Tummy Trilogy 259-62 (1994) (advancing various reasons for substituting spaghetti carbonara for turkey as the centerpiece of Thanksgiving dinner).

[92] Korobkin & Ulen, supra note 15, at 70.

[93] But see supra notes 48-51 and accompanying text (discussing limitations of credible commitment argument as a justification for mandatory disclosure).

to avail itself of the reduction in capital costs presumably available to firms that provide optimal disclosure. Investors aware that executives habitually favor nondisclosure will not give much credence to disclosure promises from such executives, however. Attaching legal penalties to nondisclosure removes at least some of the temptation for corporate decisionmakers to behave habitually when making disclosure decisions. The risk of legal liability may encourage directors to make conscious decisions, rather than relying on an unconscious heuristic. On the other hand, as already noted, credible commitment-based justifications for a mandatory disclosure regime have only limited traction. Precommitment strategies do not prevent cheating and, moreover, do not require the full panoply of U.S.-style mandatory disclosure.[94]

The efficacy of legal intervention as a response to habit ultimately depends on whether decisionmakers are rational or myopic with respect to the habit of nondisclosure. Some behavioral economists regard habitual consumer behavior as rational if the consumer takes into account the future effects of current behavior when determining his optimal course of conduct.[95] A smoker thus behaves rationally, in this sense, so long as he takes into account the likelihood of future health problems when deciding how much to smoke.[96] Consumers are regarded as myopic if they fail to do so.[97] There is a fair bit of evidence that habitual consumer behaviors frequently are rational rather than myopic.[98] From this evidence, some behavioral economists conclude that increasing the price of harmful habits (like smoking) should discourage them.[99] Other behavioral economists are less persuaded that government intervention affects habitual behavior, especially when such behavior becomes an addiction or visceral craving.[100] In any event, only if the habit of nondisclosure appears to be

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[94] See supra text accompanying notes 49-51 (critiquing credible commitment-based arguments).

[95] See Grossman, supra note 89, at 158.

[96] See Gary S. Becker et al., An Empirical Analysis of Cigarette Addiction, 84 Am. Econ. Rev. 396 (1994).

[97] See Grossman, supra note 89, at 158.

[98] See id. at 163-67 (summarizing studies).

[99] Id. at 167.

[100] See Korobkin & Ulen, supra note 15, at 74 (contending that "government policies that attempt to encourage or coerce behavior that allows individuals to avoid the ill-effects of visceral cravings are often less successful than rational choice theory would predict").

rational in the limited sense used in this paragraph, does the case for legal intervention become plausible.

C. The Status Quo Bias

The so-called "status quo bias" posits a systematic decisionmaking bias pursuant to which actors favor maintaining the status quo rather than switching to some alternative state.[101] The status quo bias can lead to market failure where decisionmakers' preference for the status quo perpetuates suboptimal practices. Put another way, rational choice theory predicts greater instability than one in fact observes. Current practices tend to be sticky, even when such stickiness cannot be explained on efficiency grounds.[102] In our thought experiment, a preference for the status quo of nondisclosure thus might swamp capital cost reduction-based incentives to provide optimal levels of disclosure.[103]

The existence of a status quo bias has been well-documented in the experimental economic and psychological literature.[104] Many empirical demonstrations of this decisionmaking bias have focused on the so-called endowment effect. Subjects commonly place a higher monetary value on items they own than on those that they do not own, even if the two items have the same market value.[105] Accordingly, subjects must be paid more to give something up than they would be willing to pay to acquire the same object.[106] Although the discrepancy between what one is willing to pay and what one is willing to accept narrows as the actor gains experience with the market, it also appears to persist.[107]

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[101] See Russell Korobkin, The Status Quo Bias and Contract Default Rules, 83 Cornell L. Rev. 608, 625 (1998).

[102] See Russell Korobkin, Inertia and Preference in Contract Negotiation: The Psychological Power of Default Rules and Form Terms, 51 Vand. L. Rev. 1583, 1584 (1998) ("The consequence [of the status quo bias] is that completely alienable legal entitlements will be 'sticky'-that is, tend not to be traded-even when such stickiness cannot be explained by [high] transaction costs.").

[103] Cf. Korobkin & Ulen, supra note 15, at 69 (suggesting that the status quo of at will employment swamps a preference parties otherwise would have for a rule requiring just cause for dismissal).

[104] See, e.g., Kahan & Klausner, supra note 64, at 359-62 (summarizing studies); Korobkin, supra note 102, at 625-30 (same).

[105] See Korobkin & Ulen, supra note 15, at 62. See generally Thaler, supra note 87, at 64-67 (describing studies of the endowment effect).

[106] See Thompson, supra note 15, at 781.

[107] See Thaler, supra note 87, at 64.

The classic demonstration of the endowment effect was a laboratory experiment in which students were initially endowed either with a coffee mug or six dollars cash.[108] Mug holders were asked to identify the minimum amount they would accept to sell the mug, while cash holders were asked to specify the maximum amount they would be willing to pay to purchase a mug. Subjects were told that a market clearing price would be determined and trades executed between mug holders willing to accept that amount and cash holders willing to pay that price. It turned out that the price demanded by mug holders was about twice that cash holders were willing to pay, so that very few trades took place. Strikingly, similar results obtained in a later experiment involving boxed ball point pens with a visible price tag of $3.98.[109]

Of especial interest to legal scholars is the recent empirical work by Russell Korobkin. Korobkin argues that selecting a default rule makes it part of the status quo, altering decisionmakers' preferences with respect to contract terms by making them favor the chosen default and, accordingly, making them less likely to bargain out of that default.[110] Korobkin conducted a series of experiments (using law students) that provide strong empirical support for his thesis.[111] These results argue, inter alia, that penalty defaults will not lead to parties selecting an optimal rule through private ordering. Instead, provided we redefine the concept of majoritarian default as the rule most parties would select in the absence of any controlling legal authority if they could bargain costlessly, lawmakers should strive to provide socially efficient majoritarian defaults.[112]

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[108] See id. at 65-66 (describing experiment).

[109] See id. at 65. The import of these studies has been called into question by those who doubt the utility of experiments using college undergraduates, especially when seeking to predict the behavior of market actors. See supra text accompanying note 59 (quoting Judge Posner's critique of such studies). In a more recent article, Judge Posner argues that much (if not all) of the endowment effect is explained by rational attempts to send credible signals about personal characteristics. Gertrud M. Fremling & Richard A. Posner, Market Signaling of Personal Characteristics (undated working paper), < http://www.law.uchicago.edu/Publications/Working/Index.html>.

[110] See Korobkin, supra note 101, at 631.

[111] See id. at 639.

[112] A plausible policy compromise between a voluntary disclosure regime and the mandatory disclosure regime would be a default rule, which could be structured in one of two ways: an opt-out rule, requiring disclosure unless the firm, say, adopts an article of incorporation opting for nondisclosure; an opt- in rule, in which

Experimental tests demonstrate that theendowment effect is somewhat persistent. In the classic coffee mug experiment, subjects participated in several trading rounds, an experimental design intended to permit learning to take place over successive trials.[113] The substantial difference between mug holders' willingness to accept price and cash holders' willingness to pay price nevertheless persisted.[114]

Various explanations have been proffered for the status quo bias. One theory posits that the status quo bias is related to the economic concept of path dependence. Rational choice theory posits that decisionmakers choose among available alternatives without regard to past decisions. In contrast, path dependence asserts that initial choices can have a lock-in effect, resulting in a stable but inefficient local equilibrium. The difficulty with this explanation, as applied to the problem at hand, is that the lock-in effect will be strongest where the practice in question generates network externalities that raise the cost of deviating from the status quo.[115] As we have seen, however, a nondisclosure practice is a poor candidate for generating network externalities.[116] To the extent that path dependence explains the status quo bias, that bias is unlikely to generate market failures relevant to our thought experiment.

An alternative explanation for a status quo preference is provided by the anchoring phenomenon, which refers to the effect initial reference points have on subsequent decisionmaking. Actors presented with a decision framed with an

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nondisclosure is the default but providing a disclosure regime that firms may voluntarily opt to follow. For modified versions of such a default rule, allowing issuers to choose the disclosure regime to which they will be subject, see Stephen J. Choi and Andrew T. Guzman, Portable Reciprocity: Rethinking the International Reach of Securities Regulation, 71 S. Cal. L. Rev. 903 (1998); Roberta Romano, Empowering Investors: A Market Approach to Securities Regulation, 107 Yale L.J. 2359 (1998). Standard rational choice theory, building on the Coase theorem, posits that the choice of default rule should not matter. Korobkin's work suggests that the choice of a default rule would matter quite a lot. If the law selects an opt-in rule, but opt-out is the efficient rule, the status quo bias will perpetuate suboptimal disclosure practices, and vice-versa.

[113] See Thaler, supra note 87, at 65.

[114] See Korobkin, supra note 101, at 628.

[115] Cf. Korobkin, supra note 102, at 1593-97 (evaluating network externalities as an explanation for the status quo bias).

[116] See supra notes 85-86 and accompanying text.

initial reference demonstrably allow that reference point to affect their decisionmaking processes.[117] One study asked professional accountants to estimate the prevalence of management fraud. One group of subjects was asked whether they believed management fraud occurred in more than 10 out of each 1000 companies audited, while a second group was asked whether they believed fraud occurred in more than 200 of every 1000 companies. Accountants asked the latter question gave a significantly higher response than accountants asked the former, showing that the subjects failed to adequately adjust their estimate of the incidence of fraud from the initial reference point to which they were exposed.[118] Although tests of the anchoring phenomenon have concentrated on the effect of numbers as reference points, it seems plausible that conventional wisdom might also serve as just such an anchoring point. If so, the anchoring phenomenon will tend to reinforce the status quo bias and thus perpetuate the hypothesized practice of nondisclosure.

Still another explanation for the status quo bias is loss aversion. Behavioral economists have demonstrated that people evaluate the utility of a decision by measuring the change effected by the decision relative to a neutral reference point. Changes framed in a way that makes things worse (losses) loom larger in the decisionmaking process than changes framed as making things better (gains) even if the expected value of the two decisions is the same.[119] Hence, a loss averse person (as are most people) will be more perturbed by the prospect of losing $100 than pleased by that of gaining $100. A bias towards the status quo is a natural result of loss aversion, because the decisionmaker will give the disadvantages of a change greater weight than its potential advantages.[120]

While loss aversion is an observable fact, one must ask what causes it. Korobkin argues that the source of loss aversion is regret avoidance--i.e., one is more likely to feel regret when one deviates from the status quo and gets a bad

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[117] See Kahan & Klausner, supra note 64, at 362 (citing studies).

[118] See Korobkin & Ulen, supra note 15, at 54 (describing studies).

[119] See Thaler, supra note 87, at 70. Interestingly, securities sales techniques often (albeit, presumably unconsciously) take advantage of the framing effect. Hence, Thompson amusingly proposes "something like the Surgeon General's warnings on cigarette ads: 'Securities are often marketed to put you in a loss frame, emphasizing fear of missed opportunity, thereby increasing your tolerance for risk.' Or, 'Stress and fear of regret can lead to greater willingness to rely on others, such as brokers who may have self-interest in your transaction.'" Thompson, supra note 15, at 782.

[120] See Thaler, supra note 87, at 72.

outcome than when one abides by the status quo and gets a bad outcome.[121] Put another way, decisionmakers both seek to avoid feeling regret and experience greater regret when undesirable consequences follow from action than from inaction. Hence, decisionmakers tend towards inertia. If so, managers might follow the status quo of nondisclosure in order to minimize the regret that would accompany a bad outcome for the company. If loss aversion is the principal explanation for the status quo bias, however, that bias assumes less importance in our thought experiment than might otherwise be the case. First, the decision to disclose or not disclose firm financial information to investors is a rather different one than the decision to give up a tangible asset with which one has been endowed. What loss is suffered by a corporate manager who decides to buck the nondisclosure status quo? Losses resulting from a shift to expansive disclosure will be felt, at least in the first instance, by the firm and not the managers who decided to disclose.[122] To be sure, an observable loss to the firm may result in reputational harm for the manager.[123] In the present context, however, losses suffered by the firm will be in the nature of an opportunity cost-a foregone reduction in cost of capital-rather than an out-of-pocket loss. As such, the prospect of harm to the manager's reputation seems much lower.

Second, if loss aversion were endemic, the market economy could not exist.[124] Loss aversion primarily affects owners of goods bought for consumption rather than investment.[125] In an investment transaction, such as the disclosure and investment decisions at issue in our thought experiment, the seller does not experience a loss when trading. Similarly, buyers do not perceive the money spent

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[121] See Korobkin, supra note 102, at 657-59 (positing regret avoidance as an explanation of the status quo bias); Korobkin, supra note 103, at 1619- 20 (same).

[122] On the other hand, Korobkin's study of default rules asked subjects to model the behavior of lawyers negotiating a contract on behalf of a client. See Korobkin, supra note 101, at 634. Given that he found evidence of the status quo bias in that situation, id. at 640-41, we cannot foreclose the possibility that managers acting on behalf of a firm similarly might exhibit such a bias. Indeed, Korobkin suggests that agents may be even more loss averse than principals. See id. at 660.

[123] Note, however, that this answer to the question invokes the reputational and psychological factors that drive herd behavior and, accordingly, collapses the status quo bias into the herding phenomenon.

[124] Cf. Jolls et al., supra note 15, at 1484 ("even in the mugs markets, there was trading; there was just not as much trading as the [rational choice] theory would predict").

[125] See Thaler, supra note 87, at 72 n.3.

on such purchases as a loss.[126] Accordingly, the status quo bias should not prevent firms from shifting from a status quo of nondisclosure to a new regime that provides optimal levels of disclosure.

Finally, loss aversion does not imply that decisionmakers will never accept the risk of losses, but only that they will demand a premium for bearing that risk. The status quo bias likely has effects only at the margin. Hence, if investors value disclosure but managers' loss aversion perpetuates a nondisclosure status quo, investors should be able to overcome managerial inertia by paying a premium for securities of corporations that provide optimal disclosure.[127] As such, the status quo bias is not inconsistent with the standard economic model's claim that a regime of voluntary disclosure will lead to full disclosure. At most, the status quo bias simply implies that the premium investors must pay for disclosure will be higher than the rational choice-based model predicts. In other words, if there is a market failure here, it is a relatively low magnitude one. In turn, this implies the need for (at most) a very limited form of legal intervention designed to shift the status quo from one of nondisclosure to disclosure. Once the status quo has shifted, the premium will disappear, and the new disclosure-orientedstatus quo would become self-perpetuating. At that point, which may describe the U.S. situation, the justification for continued legal intervention would dissipate.

There appears to be little evidence that the status quo bias is a serious problem in U.S. capital markets. To the contrary, the experimental evidence arguably implies that the endowment effect does not result in capital market failure. Recall that the endowment effect is well-documented in the laboratory experiments involving students trading coffee mugs. Instructively for the capital market, however, the endowment effect appears to vanish when people do not physically possess the commodity in question. Subjects trading tokens or vouchers demonstrate only a weak endowment effect.[128] Because securities transactions more closely resemble the token or vouchers context then

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[126] See id.

[127] See Korobkin, supra note 101, at 659 ("the status quo bias should diminish when it is nearly certain that the benefits to be gained by deviating from the status quo will exceed the costs and, consequently, there is little or no reason to fear the possibility of future regret"). To be sure, I am assuming away wealth effects, which in the real world would constrain investors' ability to pay a premium for disclosure. Cf. id. at 653 (discussing relationship between wealth effects and status quo bias).

[128] See generally Arlen, supra note 58, at 1778-79 (summarizing studies).

experiments involving physical possession of a tangible commodity, these results call into question the extent to which the status quo bias results in capital market failure.[129]

D. Social Norms

Behavior is regulated by both law and social norms. A standard example of the distinction between the two is that leaving a tip after one eats in a restaurant is a social norm, while paying for one's food is a legal requirement.[130] Accordingly, we can roughly define a social norm as a social attitude specifying the behavior an actor ought to exhibit in a given situation.[131]

Although economists only recently began exploring the role norms play in regulating behavior, an astonishingly rich literature has developed in just a few years. We can relate this literature to our thought experiment by positing nondisclosure to be a norm in the relevant community of business leaders that make corporate decisions in our hypothetical emerging market.[132] Deviation from

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[129] Cf. Jolls et al., supra note 15, at 1486 (noting that the behavior of participants in the futures markets is consistent with the predictions of rational choice theory, because most participants are professionals whose jobs are on the line and because the costs of arbitrage are low). On the other hand, one laboratory test of the status quo bias asked MBA and business students to choose an investment from among four options: a high-risk stock, a lower risk stock, a government security, and a municipal bond. Some participants were told they had inherited cash and were asked to choose between the available investment options. Others were told that the inheritance was already invested in one of those forms and were asked whether they would change the type of investment. Confirming the presence of the status quo bias, any given investment option was chosen much more frequently when it was presented as the status quo than when it was presented in a neutral setting. The preference for the status quo, moreover, increased as the number of alternative investments increased. See William Samuelson & Richard Zeckhauser, Status Quo Bias in Decision Making, 1 J. Risk & Uncertainty 7 (1988).

[130] See Kaushik Basu, Social Norms and the Law 1 (undated), <http://papers.ssrn.com/paper.taf?abstract_id=42840>.

[131] See Korobkin & Ulen, supra note 15, at 84.

[132] For an argument that social norms (such as the nondisclosure norm posited in the thought experiment) are likely to be less efficient than legal rules, see Eric A. Posner, Law, Economics, and Inefficient Norms, 144 U. Penn. L. Rev. 1697 (1996).

that norm has no legal consequences, but may result in a variety of social sanctions.

While the old adage opines "familiarity breeds contempt," personal proximity to others in fact positively affects behavior. As James Q. Wilson observes, "something in us makes it all but impossible to justify our acts as mere self-interest whenever those acts are seen by others as violating a moral principle."[133] Rather, "[w]e want our actions to be seen by others-and by ourselves-as arising out of appropriate motives."[134] Communal life strengthens this instinct by, inter alia, providing a network of reputational and other social sanctions that shape incentives. Because people care about how they are perceived by those close to them, communities provide a cloud of witnesses whose good opinion we value.[135] We hesitate to disappoint those people and thus strive to comport ourselves in accordance with communal norms. Because close knit groups involve a continuing relationship, the threat of punishment in future interactions deters the sort of cheating possible in one-time transactions.[136] Close knit groups know a lot about one another, moreover, which reduces monitoring costs and thus further encourages compliance with group norms.[137] Members of close knit groups therefore tend to internalize group norms, which allows members of the group to rely on social sanctions rather than legal rules.[138] In the worst case scenario, the threat of expulsion gives the group a strong sanction by

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[133] James Q. Wilson, What is Moral, and How do we Know it?, 95 Commentary 37, 39 (1993).

[134] Id.

[135] Cf. Richard McAdams, The Origin, Development, and Regulation of Norms, 96 Mich. L. Rev. 338 (1997) (positing that people value the esteem of others and that compliance with social norms earns one esteem, while violating such norms causes one to lose esteem).

[136] See Robert C. Ellickson, Order Without Law: How Neighbors Settle Disputes 179 (1991). But see Rafael La Porta et al., Trust in Large Organizations, Nat'l Bur. Econ. Res. Working Paper 5864 (Dec. 1996) (citing experimental evidence that "people expect certain fair or cooperative behavior of their opponents even when they do not expect to see them again").

[137] See Ellickson, supra note 136, at 180-81.

[138] See Korobkin & Ulen, supra note 15, at 87. The literature sometimes treats conformity with norms due to the social costs of a violation and due to the internalization of group norms as competing explanations for the phenomenon. See id. Both seem plausible theories, however, and both are probably necessary to a complete understanding of norms. See id.

which to enforce compliance with group norms, because membership in close knit groups satisfies the human need for belonging.

Because violation of social norms has a cost, compliance with such norms is not necessarily inconsistent with rational choice. Compliance with an equilibrium setting norm (driving on the right is a good example) is a perfectly rational solution to a collective action problem.[139] Compliance with preference-setting norms is by definition rational, albeit tautologically, because they determine the content of the decisionmaker's utility function.[140] The interesting cases for our purposes are those in which social norms cause actors to behave in ways that differ from those predicted by rational choice.

Numerous such cases have been posited, although the extent to which they in fact depart from rationality varies. A classic example is the norm of tipping in restaurants.[141] A frequent customer of a particular restaurant rationally ought to tip well, so as to ensure quality service on the next visit. But why would a rational customer tip when visiting a restaurant in a distant city to which the traveller will never return? To be sure, one arguably could tell a rational choice story explaining this frequently observed behavior, but only at the risk of reducing rational choice to a mere tautology.

Nonetheless, the social norms literature appears an especially inapt positive account of U.S. capital markets. Monitoring actors' compliance with social norms becomes harder as the relevant community becomes larger and less closely knit. Social sanctions are also far more effective as applied within a close knit group than amongst strangers. Donald McCloskey, for example, contends that the importance of trust to market exchange explains why members of the same ethnic group frequently can deal profitably with one another.[142] Although kinship doubtless is a powerful explanation for norm compliance, we also observe norm compliance in other social groups, including some commercial settings.[143] Diamond exchanges, commodity trading associations, and the historical law merchant all exhibit norm compliance.[144] Critically, however, each of these

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[139] See Basu, supra note 130, at 3-4.

[140] See id. at 3.

[141] See, e.g., Korobkin & Ulen, supra note 15, at 85.

[142] See Donald McCloskey, Bourgeois Virtue, Am. Scholar, Spr. 1994, at 177, 183-84.

[143] See Robert Cooter, The Law and Economics of Anthropology, Ency. L. & Econ (forthcoming), <http://encyclo.findlaw.com/lit/0640art.htm>.

[144] See id.

settings is characterized by a dense social network embedded in an intimate society that provides a framework for repeat transactions.[145] Hence, for example, Robert Ellickson assumes that social norms arise in close knit groups, but is agnostic as to whether such norms emerge in other settings.[146]

It should be apparent that the heterogeneous U.S. capital markets, with ethnically diverse and geographically dispersed actors, and their myriad types and sizes of firms and investors, do not exhibit the characteristics that lead to a high degree of norm compliance. To be sure, small sub-sets of actors within these markets may form communities in which social norms play an important role. Brokers working on the floor of an exchange seem a plausible example. In general, however, the set of actors relevant to the mandatory disclosure debate--corporate managers, their lawyers and financial advisors, institutional and individual investors-is far too heterogeneous for social norms to play a significant part in control of their behavior.

On the other hand, in a small emerging market with a limited and homogeneous business community, a nondisclosure norm might have enough teeth to deter deviations from it. Such a market might more closely resemble the diamond exchanges and similar commercial settings in which norms figure more prominently than do U.S. capital markets. Conceding that various social sanctions, including loss of esteem, shunning, and refusals to deal would be important to actors in such a market, however, does not tell us whether actors would comply with the norm even though doing so increases the firm's cost of capital. The more close knit the relevant community the more likely compliance becomes, but even families have their black sheep.[147]

In any event, one could not justify legal intervention simply by a showing that the nondisclosure norm is sticky. One must also show that law can change

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[145] See id. A caveat is suggested by Lisa Bernstein's classic study of the diamond market. She acknowledged that "geographical concentration, ethnic homogeneity, and repeat dealing may be necessary preconditions to the emergence of a contractual regime based on reputation bonds." Lisa Bernstein, Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry, 21 J. Leg. Stud. 115, 140 (1992). Such conditions, however, may not be necessary to the maintenance of such a regime once it has established itself. See id. Instead, as the diamond industry departed from those conditions it shifted to a regime based on information technology and intermediaries. See id. at 143-44.

[146] See Ellickson, supra note 136, at 184.

[147] Cf. Acts 5:1-10 (recounting violation of group norm of communal ownership in the early church by Ananias and Sapphira, with dire consequences).

behavior motivated by social norms, a point of some dispute in the literature. Some scholars contend that law can create or destroy norms. By raising the cost of compliance with a social norm, law can destroy the norm, albeit without changing individual value systems or utility functions. Alternatively, however, by expressing social values, law may be able to destroy (or create) a norm by changing individuals' preferences.[148] In our context, a mandatory disclosure law initially would fulfill the former function-assuming it was enforced, the legal sanctions imposed for violating the disclosure laws would raise the cost of complying with the nondisclosure norm. Over time, however, decisionmakers might internalize the new pro- disclosure norm, as perhaps U.S. managers have done.

There are a number of objections to this thesis, however. First, query whether legal reform would precede cultural change, especially in the teeth of rent-seeking by special interest groups. The objection is especially pertinent in this context, because the interest group whose norms are to be reshaped (corporate managers) likely wield significant political power with respect to changes that affect their interests.[149]

Second, the thesis reflects an optimism about the ability of law to effect social change that may not be warranted.[150] Much (probably most) social intercourse is carried on with little regard to legal rules. Here we must take into account Robert Ellickson's observation that "large segments of social life are located and shaped beyond the reach of law."[151] Ellickson famously studied the way in which residents of Shasta County, California resolved disputes over trespassing cattle. He found that laypersons had only rudimentary knowledge of trespass law and that what little they did know was partly erroneous.[152] Strikingly, in some respects legal specialists (lawyers and insurance adjusters) knew even

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[148] See, e.g., Robert Cooter, Expressive Law and Economics (Jan. 1998), <http://papers.ssrn.com/paper.taf?Abstract_ID=111408>.

[149] See Manne, supra note 32, at 33-36; infra note 172 and accompanying text.

[150] Cf. Gerald N. Rosenberg, The Hollow Hope: Can Courts Bring About Social Change (1991) (arguing that courts, in particular, have only limited ability to effect social change). In any event, if it is true that law can readily destroy social norms, that may be cause for concern rather than rejoicing. Cf. Mary Ann Glendon, A Nation Under Lawyers 268 (1994) ("the heavy machinery of law is being wheeled out to deal with . . . matters to which it is poorly suited").

[151] Ellickson, supra note 136, at 4.

[152] See id. at 49-50 (trespass law); see also id. at 70-71 (fence law).

less trespass law than did laypersons.[153] To be sure, the use of law in a securities disclosure regime driven by public enforcement differs from the use of law in private dispute resolution, but Ellickson's finding nonetheless casts doubt on the ability of law to reshape cultural norms.[154] At the very least, just as one proverbially must hit the mule over the head to get its attention, law may have to use a heavy hand in order to change behavior determined by social norms.

III. Getting from Market Failure to Regulation

The chief claim of behavioral economics relevant to the work of lawyer-economists is that public policy cannot always be based on the assumption of rational choice.[155] Yet, it is far from clear that behavioral economics is ready to supplant rational choice as a guide to public policy. In the problem at hand, for example, we have identified a number of well-established systematic biases in decisionmaking that might cause suboptimal levels of corporate disclosure to be more sticky than rational choice theory predicts. It is a long way from such an identification, however, to a conclusion that a market failure justifying legal intervention exists (or persists) in U.S. capital markets.

Preliminarily, it seems worthwhile to review the scope of the inquiry. The issue here is whether the government should intervene in corporate disclosure practices by mandating specific disclosures in a specific format. The issue is not whether the government should prohibit securities fraud. One can tell a very plausible behavioral economics story about the cognitive foibles of investors that make them vulnerable to securities fraud.[156] A complete behavioral analysis of securities regulation would require one to evaluate that story. As we have seen, however, prevention of securities fraud is not a very plausible explanation for the mandatory disclosure regime. If one wants to prevent issuers from taking advantage of cognitive errors by investors, the appropriate place to do so is in the anti-fraud regime not the disclosure regime.[157]

A. Is There Evidence of Capital Market Failure?

As applied to the emerging capital market posited in our thought experiment, behavioral economics can be invoked by those (such as the OECD) who argue in favor of mandatory disclosure. In theory, all four identified

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[153] See id. at 50-51 (trespass law); see also id. at 70-71 (fence law).

[154] Cf. Korobkin & Ulen, supra note 15, at 89 (in communities that respect the law, law can reinforce social norms with which it is consistent).

[155] See Arlen, supra note 58, at 1768.

[156] See supra note 57.

[157] See supra notes 48-50.

systematic biases appear problematic in such markets. As applied to the U.S. markets, however, the behavioral economics story becomes far less compelling. Only herd behavior and habit seem plausible market failure candidates in that setting. Given the now well-established disclosure norms in U.S. markets, moreover, habit and herd behavior should reinforce--rather than undermine--voluntary disclosure. (As should the status quo bias.) Yet, the question remains: is there evidence of a persistent market failure that can be attributed to cognitive biases?

Assuming arguendo that capital markets are subject to the sorts of cognitive biases described above, market forces can correct at least some of those errors. The relevant literature is that surrounding the so-called anomalies that some commentators contend undermine the validity of the efficient capital markets hypothesis. Empirical analysis of stock market returns admittedly has identified some anomalies inconsistent with market efficiency.[158] Once exposed to the light of day, however, at least some of these anomalies disappeared. In other words, the capital market corrected whatever errors had been causing the anomaly. No sooner had the so-called small firm effect been identified, for example, than the effect stopped working.[159]

The absence of a persistent market failure in U.S. capital markets arguably is confirmed by two important phenomena. First, domestic issuer behavior in private placements. In response to investor demand and insistence by reputational intermediaries such as underwriters, issuers making private placements provide disclosures comparable to those made in registered public offerings subject to the mandatory disclosure system.[160] Second, the behavior of international issuers. Foreign issuers with securities traded on U.S. secondary markets often provide greater disclosure than U.S. law requires of such issuers.[161] Even more strikingly, many international issuers have voluntarily adopted U.S.-style accounting standards that promote transparency.[162] One study of the German disclosure regime found, for example:

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[158] For a summary of the anomalies, see Victor Brudney & William W. Bratton, Brudney and Chirelstein's Corporate Finance: Cases and Materials 133- 36 (4th ed. 1993).

[159] See Burton G. Malkiel, A Random Walk Down Wall Street 203 (6th ed. 1996). For a defense of the efficient capital markets hypothesis against a spate of recent attacks, see id. at 194-224.

[160] See Palmiter, supra note 29, at 21.

[161] See id. at 22.

[162] See id.

German managers have had difficulty explaining their (German GAAP) financial results to foreign investors and have claimed that a lack of international acceptance of German financial statements has led to disadvantages for firms seeking to raise capital abroad. In response to these problems and their financial needs, many German firms have increased their disclosure voluntarily and have adopted reporting strategies that bring them closer to international practice.[163]

As the critics of mandatory disclosure have long claimed, it is thus plausible that investor demand and the threat of ex post liability for fraud will generate optimal levels of disclosure even if the mandatory disclosure regime were to be repealed.

B. But Can the Regulator Do Any Better?

Assume arguendo that capital markets fail to produce optimal disclosure through voluntary corporate action. The mere existence of such a market failure does not--standing alone--justify legal intervention. In addition to the standard prudential arguments in favor of limited government, which counsel caution in concluding that a purported market failure requires government correction, behavioral economics itself argues against presuming the desirability of intervention:

> Proposals designed to address biases generally entail the intervention of judges, legislators, or bureaucrats who are [themselves] subject to various biases. The very power of the behavioralist critique-that even educated people exhibit certain biases--thus undercuts efforts to redress such biases. In addition, the decisions of government actors also may be adversely influenced by political concerns--specifically interest group politics. Thus interventions to "cure" bias-induced inefficiency may ultimately produce outcomes that are worse than the problem itself.[164]

In other words, the claim that law can correct market failures caused by decisionmaking biases or cognitive errors treats regulators as exogenous to the system. Once the state is endogenized, however, regulators must be treated as actors with their own systematic decisionmaking biases. It thus becomes evident

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[163] Leuz & Verrecchia, supra note 30, at 5 (citations and footnote omitted). See also OECD Principles, supra note 16, at 19 ("Companies often make voluntary disclosure that goes beyond minimum disclosure requirements in response to market demand."). But see Roberta Romano, The Genius of American Corporate Law 99 (1993) ("empirical studies suggest that foreign firms' restatements under U.S. GAAP are not informative, for firms' restatements are not accompanied by significant positive stock price effects").

[164] Arlen, supra note 58, at 1769.

that behavioral economics loops back on itself as a justification for legal intervention.

A particularly trenchant objection to mandatory disclosure, for example, is that it functions in ways not unlike price controls. A regulatory regime is unlikely to peg prices at the equilibrium point at which marginal cost and marginal benefit are equal. As with any legal rule, the mandatory disclosure regime thus is likely to be under- and/or over-inclusive. Under-inclusive disclosure rules harm investors by denying them information they need. Over- inclusive rules harm investors by requiring the firm to spend money on unnecessary disclosures, which essentially comes out of the investors' pockets. Investors presumably do not want management to engage in disclosure that produces diminishing returns; i.e., investors will not want management to spend a dollar on disclosure unless that expenditure produces at least a dollar's worth of benefit to the shareholders. Under a regime of voluntary disclosure, management has an incentive to provide disclosure until it achieves that equilibrium. Because management's wealth is closely tied to the firm's financial well-being, it has an incentive to achieve an efficient trade-off between lowering the cost of capital and spending money on disclosure.[165] The government has no comparable incentive. Moreover, different firms are likely to achieve equilibrium at different levels of disclosure.[166] Hence, government regulation by definition will be both over- and under-inclusive. To be sure, government could address the problem of under- inclusiveness by requiring issuers to disclose any additional information necessary to make the mandated disclosures intelligible and understandable. In determining the cost of disclosure,

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[165] See supra note 31. Of course, behavioral economics tells us that management disclosure decisions may depart from rationality. While this objection potentially complicates the analysis posited in the text, it is not fatal. Managerial decisionmaking biases will not disappear simply because the state adopts a mandatory disclosure regime. "If corporations habitually tend toward cognitive conservatism, overcommitment, overoptimism, and selfish inference, there is a considerable likelihood that the subjective forward- looking elements of their disclosure and publicity will have the potential to mislead." Donald C. Langevoort, Organized Illusions: A Behavioral Theory of Why Corporations Mislead Stock Market Investors (and Cause Other Social Harms), 146 U. Pa. L. Rev. 101, 157 (1997). Again, behavioral economics-based arguments in favor of mandatory disclosure thus appear to loop back on themselves.

[166] Manne, supra note 39, at 28 ("It is only logical to conclude . . . that there were competitive reasons why some firms did and others did not engage voluntarily in this disclosure" pre-1933).

however, management would have to factor in the possibility of liability for fraud if they failed to disclose information a court, acting with the benefit of hindsight, thought should have been disclosed.[167] Hence management might tend to over-invest in disclosure. In any case, there is no way for the government to avoid the problem of over- inclusiveness.[168]

As a practical matter, legislators and regulators necessarily have less information about the needs of a particular firm than do that firm's managers and directors. A fortiori, legislatures will make poorer decisions than the firm's directors. Put another way, legislators and regulators are no less subject to bounded rationality and other cognitive biases than any other decisionmakers.[169]

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[167] The hindsight bias is a well-established component of behavioral economics, positing that decisionmakers tend to assign an erroneously high probability of occurrence to a probabilistic event simply because it ended up occurring. Jolls et al., supra note 15, at 1523. On the potential for juries affected by the hindsight bias to be too willing to impose negligence liability, see id. at 1523-27.

The hindsight bias itself may make out a case for mandatory disclosure in the following way: Suppose that an investor lost his shirt and brought an action against the firm in whose shares he made the disastrous investment. The issue is bound to arise as to whether the firm duped or inadequately informed this and other investors. In light of the fact that the losses occurred, it is not implausible assume that the hindsight bias might lead the trier of fact to find fraud by the firm, simply because the loss occurred. Ex post the loss, the disclosure is bound seem inadequate and the loss inevitable. To the extent that mandatory disclosure functions as a safe harbor against these sorts of lawsuits, the firm would prefer a regime of mandatory disclosure to taking their chances on the outcome of subsequent fraud litigation. See supra note 34. I'm grateful to Tom Ulen for this point.

[168] Cf. Dooley, supra note 12, at 392 (mandatory disclosure may "inhibit the development of more efficient forms of disclosure that firms and investors would evolve if left to their own devices").

[169] Cf. Jolls et al., supra note 15, at 1518 ("When beliefs and preferences are produced by a set of probability judgments, made inaccurate by the availability heuristic, legislation will predictably become anecdote- driven."). Hence, for example, a few well-publicized securities fraud cases could result in the adoption of onerous securities regulation even if the vast majority of corporate managers are honest and trustworthy. Indeed, just such an over-reaction to the 1929 market crash probably drove the adoption of the U.S. securities regime. Cf. id. (noting

In the present thought experiment, regulators in our emerging capital market will observe that most developed economics have some form of mandatory disclosure.[170] Hence, the availability heuristic may skew their analysis of the necessity for mandatory disclosure, while herding could lead them to follow the example of more developed economies.

Public choice theory provides still another reason market failure is not a sufficient justification for government intervention. Again, the problem is one of treating an endogenous factor as exogenous. A welfare economics model that posits legal intervention as a solution to market failure ignores the fact that regulators are themselves actors with their own self-interested motivations. The capital, product, and labor markets give corporate directors incentives to attract capital at the lowest possible cost. Voluntary disclosure thus should be designed to meet specific firm needs relating to monitoring and information transmission. In contrast, the incentives of legislators and regulators are driven by rent-seeking and interest group politics, which have no necessary correlation to corporate profit-maximization.[171] Accordingly, mandatory disclosure is likely to be driven by the political concerns of the governmental actors drafting the mandates.[172]

IV. Conclusion

For corporate and securities law scholars, behavioral economics probably is the most exciting intellectual development of the last decade. In the face of burgeoning evidence of systematic cognitive errors and decisionmaking biases, we can no longer glibly assume rationality on the part of corporate managers or investors. Instead, those errors and biases must become a standard part of both positive and normative analysis.

"the well-known 'pollutant of the month' syndrome, where regulation is driven by recent and memorable instances of harm").

[170] See OECD Principles, supra note 16, at 14 (noting that most OECD countries have broad disclosure regimes).

[171] See Jonathan R. Macey, Corporate Law and Corporate Governance: A Contractual Perspective, 18 J. Corp. L. 185, 205 (1993) ("there is no reason to believe that politicians and bureaucrats are any more benign, selfless, and impartial than the corporate managers, directors, and controlling shareholders whose authority would be displaced in a legal regime governed by mandatory rules").

[172] Cf. Manne, supra note 39, at 33-36 (setting out circumstantial evidence that the mandatory disclosure regime was designed in ways that gave leading investment banking houses a competitive advantage).

At the same time, however, a certain degree of caution appears warranted. The analysis herein suggests three (complementary, rather than competing) potential answers to behavioral economics-based market failure claims. First, there will be a strong temptation to use behavioral economics too glibly. Advocates of government intervention will be tempted to jump from positing the status quo bias, citing the coffee mug experiments, to an assertion that the government needs to shake up the status quo, without demonstrating that the bias is truly valid in the specific setting at hand.[173] Second, a certain degree of skepticism about the power of law to effect social change seems warranted. Indeed, behavioral economics itself offers additional reasons to doubt the capacity of law as agent for social change. Finally, one cannot justify government intervention without asking whether the case for it survives endogenizing the state.

As applied to the problem at hand, we have seen that behavioral economics could justify a mandatory disclosure system in emerging capital markets. Before using behavioral economics to justify proposals such as that of the OECD Principles, however, two conditions need to be met. First, it must be demonstrated that decisionmakers in the relevant market in fact exhibit one or more of the systematic biases identified in Part II and, moreover, that such biases are sufficiently sticky to persist over time in the face of market forces. Second, it must be demonstrated that the regulators in question can draft a regulatory regime that is more likely to lead to optimal levels of disclosure than will a policy of laissez faire. Given the rather heroic nature of the latter assumption, nonintervention deserves to be the null hypothesis.

As applied to U.S. capital markets, behavioral economics appears to offer little or no support for the mandatory regime.[174] Indeed, behavioral economics appears to argue for (perhaps gradual) deregulation. U.S. markets arguably have had mandatory disclosure long enough to embed it in the customs, habits, and norms of the relevant players. If so, there is no longer any (behavioral) economic

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[173] See, e.g., Welle, supra note 57, at 580-81 (using generic behavioral economics claims to justify a prohibition of investor waivers of their rights under the securities laws, without showing that the various cognitive errors cited actually affect investor behavior in the context at hand).

[174] To be clear, the argument is not that a behavioral analysis proves that the mandatory disclosure ought to be repealed. It merely demonstrates that there is no behavioral-based market failure justifying that regime. Concededly, there may be non-market failure-based arguments in favor of a mandatory disclosure regime. See supra note 34 (positing such reasons).

justification for preserving a statutory mandate. Instead, network externalities and path dependence remain that regime's strongest economic justifications. But while both are pedagogically powerful metaphors, there is considerable doubt as to whether they have much explanatory power in real world product markets.[175] Ironically, the survival of the U.S. mandatory disclosure system thus may ultimately depend on the status quo bias, not on the part of corporate managers or investors, but on that of regulators and legislators.

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[175] See Stan J. Liebowitz & Stephen E. Margolis, Winners, Losers & Microsoft: Competition and Antitrust in High Technology (1999) (critique of network externalities and path dependence).