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THE USE AND MISUSE OF DISCLOSURE AS A REGULATORY SYSTEM

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ABSTRACT

Over the past several decades, legislators and regulators have increasingly turned to disclosure schemes, rather than substantive regulation, to accomplish regulatory goals. Most of these schemes are either expressly or impliedly based on the disclosure-based regulatory system established by the securities acts, which is primarily intended to provide information to traders in an established market and thereby enhance the operation of the market. A secondary purpose of the securities acts is to alter the behavior of firms and individuals through the operation of the market. Other disclosure schemes usually have similar purposes, but they rarely operate in a market akin to the financial markets. As a result, the mechanism by which the disclosure scheme is expected to accomplish its purpose is often obscure. Where there is a specified mechanism for the operation of the disclosure system, it often fails to take account of the way individuals and firms process and react to information. This Article examines the purposes and operation of both securities disclosure and other disclosure schemes and the limitations on the usefulness of disclosure as a regulatory method. The Article then describes criteria for the use and design of disclosure systems as regulatory tools that take into consideration realistic benefits and costs of the disclosure regime.

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I. INTRODUCTION

For the past several decades, legislators and regulators have adopted disclosure schemes to accomplish regulatory goals.[1] From the Truth in Lending Act[2] to the ABA's Model Court Rule on Insurance Disclosure,[3] lawmakers have turned to information as a regulatory tool because it is politically acceptable and it interferes less with individual choice and with the operation of markets. Mandatory disclosure has become a sort of "regulation-lite" extolled even by those who would ordinarily oppose regulation.[4]

Even as disclosure requirements have become increasingly common and their regulatory goals increasingly ambitious, however, research in psychology and economics has cast doubt on the traditional account of how people process information. Current understanding of heuristic biases and bounded rationality suggests that information may affect behavior in unexpected ways and may not, in some circumstances, affect behavior at all. More troubling, we may not be able to predict how information will affect behavior. Behavioral research also suggests that more information is not necessarily a good thing. Such behavioral research has led to increased calls for changes in the way disclosure-based regulations are used and have caused some to question the very utility of disclosure-based regulation.[5]

The model for the use of disclosure as a regulatory device is the system established by the securities acts. That system is not perfect, but to the extent it is successful, its success is largely because it operates in a singular environment: a highly developed, relatively efficient market with an enormous support structure of both market and informational intermediaries, in a context in which decision-makers often seek professional advice and make great efforts to be as ra-

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1. The earliest instance of which the author is aware of a disclosure-like obligation being used as regulation occurred in 1360, when a rule prohibiting the sale of fish in secret replaced a rule setting a fixed price. *See* GWEN SEABOURNE, ROYAL REGULATION OF LOANS AND SALES IN MEDIEVAL ENGLAND 88 (2003).

2. Truth in Lending Act, Pub. L. No. 90-321, 82 Stat. 146 (1968) (codified at 15 U.S.C. §§ 1601-93 (2000)).

3. MODEL COURT RULE ON INSURANCE DISCLOSURE (2004), *available at* http://www.abanet.org/cpr/clientpro/Model_Rule_InsuranceDisclosure.pdf.

4. *See* Kimberly A. Strassel, *The Weekend Interview with Christopher Cox: Full Disclosure*, WALL ST. J., May 20, 2006, at A8. Ms. Strassel, a member of the Wall Street Journal's editorial board, expresses great delight at the apparently novel (to her) idea that securities markets should be regulated by disclosure. *See id.*

5. *See, e.g.*, Susanna Kim Ripken, *The Dangers and Drawbacks of the Disclosure Antidote: Toward a More Substantive Approach to Securities Regulation*, 58 BAYLOR L. REV. 139, 148-49 (2006) (discussing the shortcomings of disclosure-based regulation).

tional as possible. This environment provides a mechanism by which disclosed information can reach its audience, affect behavior, and cause a desired result through its operation on a single variable, the price of a security. It is at least doubtful whether disclosure could accomplish similar goals in different circumstances, and there is no reason at all to assume that disclosure could accomplish different goals in different circumstances.

A regulation is supposed to have a goal, and there ought to be a reason to think that the regulation, through the operation of some mechanism, will accomplish that goal.[6] Disclosure-based schemes tend to be based on statements of purpose such as "improving transparency" or "providing information to consumers," but they often fail to explain why that additional information will be of value or why its existence will cause some desired change in behavior. The mechanism by which information affects behavior is complex. The information must be directed at the appropriate decision-maker and the appropriate decision. Furthermore, it must be provided in a form accessible to and usable by the appropriate decision-maker, and the decision-maker must be able respond to the information. Moreover, disclosure can have significant costs beyond the costs of creating and disseminating the information.

This Article seeks to examine regulatory disclosure systems generally, using the securities laws as a paradigm, in an effort to determine when and how disclosure systems work and to provide guidelines for the use of disclosure by regulators. Part II discusses the practical and philosophical reasons for the popularity of disclosure-based regulations. Part III contains a discussion of securities disclosure, including its purposes, the mechanism by which it operates, and its limitations. Part IV provides a similar examination of disclosure systems generally, using a variety of disclosure schemes as examples. Part V sets out a number of recommendations about prerequisites that regulators must meet before using disclosure systems as regulation.

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6. *See* Administrative Procedures Act, 5 U.S.C. § 553(c) (2000) (requiring that rules include "a concise general statement of their basis and purpose"). In the words of one treatise,

> an agency must set forth the basis and purpose of the rule in a detailed statement, often several hundred pages long, in which the agency refers to the evidentiary basis for all factual predicates, explains its method of reasoning from factual predicates to the expected effects of the rule, [and] relates the factual predicates and expected effects of the rule to each of the statutory goals or purposes the agency is required to further or to consider.

I RICHARD J. PIERCE, JR., ADMINISTRATIVE LAW TREATISE §7.4, at 442 (4th ed. 2002).

II. THE POPULARITY OF DISCLOSURE-BASED REGULATION

There are dozens, possibly hundreds, of regulatory schemes that use disclosure in whole or in part to accomplish their purposes.[7] Regulatory disclosure schemes blossomed in the 1980s under the Reagan administration as part of a trend to inform and educate rather than regulate.[8] Disclosure-based regulation has both pragmatic and political justifications. First, it comports with the view that command-and-control regulation does not work.[9] Moreover, it is easier to require disclosure than to regulate substantively,[10] which requires identifying desirable and undesirable behaviors, showing them to be beneficial or harmful, showing that the proposed regulation will have the desired effect on the behavior, and showing that the costs of compliance with the regulation and the unintended consequences of the regulation will not outweigh its benefits.[11] Disclosure can be used to regulate even when we are unsure what to regulate, because the decision about behavior is left to a third party, the target of the disclosure. Also, disclosure moves decision-making away from the government and down to the individual or firm, which often

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7. Mary Graham identifies the following examples of disclosure-based regulation: drinking water, nutritional content, toxic releases, the presence of lead paint in residential housing, SUV rollover rates, organically grown and genetically modified foods, workplace hazards, sweatshop conditions, airline safety incidents, and lending "red-lining" practices. MARY GRAHAM, INFORMATION AS RISK REGULATION: LESSONS FROM EXPERIENCE 1-4 (Innovations in American Government Program, Ash Institute for Democratic Governance and Innovation, Paper 10-01, 2001), *available at* http://www.ashinstitute.harvard.edu/Ash/m_graham.pdf; *see also* William M. Sage, *Regulating Through Information: Disclosure Laws and American Health Care*, 99 COLUM. L. REV. 1701, 1707-10 (1999) (describing deluge of disclosure-based regulations in health care).

8. *See* Robert S. Adler & R. David Pittle, *Cajolery or Command: Are Education Campaigns an Adequate Substitute for Regulation?*, 1 YALE J. ON REG. 159, 159-60 (1984)*; see also* Cass R. Sunstein, *Informational Regulation and Informational Standing:* Akins *and Beyond*, 147 U. PA. L. REV. 613, 613 (1999) (noting that regulation by disclosure "has become one of the most striking developments in the last generation of American law").

9. *See* Adler & Pittle, *supra* note 8, at 160-61; *see also* GRAHAM, *supra* note 7, at 1 (noting that "[a]t a time when distrust and downsizing of government are dominant themes, [mandatory information disclosure] is gaining prominence"); Sage, *supra* note 7, at 1714; Sunstein, *supra* note 8, at 625.

10. *See* STEPHEN BREYER, REGULATION AND ITS REFORM 163 (1982); Douglas A. Kysar, *Preferences for Processes: The Process/Product Distinction and the Regulation of Consumer Choice*, 118 HARV. L. REV. 526, 527 (2004). Disclosure schemes can also be used when direct regulation is impossible. For example, the proposed V-chip system combines a rating system with parental control technology in a situation where the First Amendment prohibits direct regulation. *See* Sunstein, *supra* note 8, at 621.

11. *See, e.g.*, BREYER, *supra* note 10, at 101-09 (describing the standard-setting process); PIERCE, *supra* note 6, §7.1, at 413 (discussing court interpretations of the "arbitrary and capricious" standard requiring agencies to explain the reasoning behind a rule and to respond to all major comments and alternatives); Bradley C. Karkkainen, *Information as Environmental Regulation*: *TRI and Performance Benchmarking, Precursor to a New Paradigm?*, 89 GEO. L.J. 257, 272-76 (2001) (describing the difficulties of environmental regulation).

permits more efficient decision-making.[12]

Second, disclosure schemes comport with the prevailing political philosophy in that disclosure preserves individual choice while avoiding direct governmental interference.[13] Disclosure is a "soft" form of intervention that does not directly mandate change in the underlying behavior.[14] In other words, it is a form of civil regulation—regulation by society, not the government.[15] Moreover, disclosure-based regulation appeals to those with a promarket political orientation because it addresses market failure without disturbing other beneficial features of the market.[16]

In addition, disclosure-based regulation may reflect a changing political dynamic.[17] The insights of public choice theory apply to statutes requiring disclosure as well as to any other kind of statute, and it may be that the increase in regulation by disclosure reflects an improved ability by regulated groups to use the legislative process to avoid direct regulation.[18] Similarly, the adoption of less intrusive disclosure schemes by regulators may reflect increased influence by regulated parties on agency rulemaking.[19]

III. DISCLOSURE UNDER THE SECURITIES ACTS

The archetype of the use of disclosure as a regulatory scheme is the system established by the securities acts. The Securities Act of 1933 requires disclosure of a wide range of specified information about the issuer of a security before the security can be sold to the public,[20] and the Securities Exchange Act of 1934 requires that publicly traded companies periodically provide specified information to

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12. *See* Karkkainen, *supra* note 11, at 293.

13. *See id.*; GRAHAM *supra* note 7, at 11; Sage, *supra* note 7, at 1707.

14. John Parkinson, *Disclosure and Corporate Social and Environmental Performance: Competitiveness and Enterprise in a Broader Social Frame*, 3 J. CORP. L. STUD. 3, 4 (2003).

15. *See id.*

16. *See* Sage, *supra* note 7, at 1706-07, 1796-97 (relating an anecdote illustrating the importance of couching disclosure as a mechanism for supporting a market).

17. *See* WESLEY A. MAGAT & W. KIP VISCUSI, INFORMATIONAL APPROACHES TO REGULATION 1 (1992) (noting rise of right-to-know movement and increased skepticism about command-and-control regulation in the 1970s); Sage, *supra* note 7, at 1772 (noting relative ease of enacting disclosure requirements); *id.* at 1828 (noting temptation to use disclosure as a "placeholder solution" to difficult political problems).

18. *See* Sunstein, *supra* note 8, at 614 n.7.

19. *See* MARY GRAHAM, DEMOCRACY BY DISCLOSURE 140 (2002) (describing industry support for disclosure requirements); *cf.* Kimberly D. Krawiec, *Organizational Misconduct: Beyond the Principal-Agent Model*, 32 FLA. ST. U. L. REV. 571, 610-13 (2005) (making a similar point about the growth in the number of regimes limiting organizational criminal liability where the organization has adopted compliance policies).

20. *See* Securities Act of 1933 §5(a), 15 U.S.C. § 77e (2000) (requiring registration statement); Form S-1 Registration Statement, 2 Fed. Sec. L. Rep. (CCH) ¶7121, at 6237-2 (describing contents).

shareholders and the marketplace.[21] Although almost everyone agrees that the fundamental philosophy of the securities acts is disclosure,[22] the operation of that regulatory mechanism, and even its purpose, is less clear.

A. Purposes

1. Reducing Informational Asymmetries

The purpose of securities disclosure is often stated to be providing more information to investors.[23] Alternatively, the policy can be described as remedying information asymmetries that existed between investors, on the one hand, and issuers and promoters of securities, on the other, before 1933.[24] Because information asymmetries cause market participants to demand compensatory premia, a disclosure policy that reduces those asymmetries will improve the price-setting function of the market.[25] According to a congressional report, the securities acts are based on the proposition that the independent judgments of buyers and sellers in a securities market will best determine accurate prices for securities if those buyers and sellers have adequate information.[26] Thus, disclosure is essential to the functioning of the capital markets because "the most efficient allocation of resources will occur when the information is sufficient for the purposes of those making decisions, when it is reliable, and when it is disseminated in a timely manner."[27] Pricing risk is one of the essential functions of the securities markets, and disclosure of information improves market participants' ability to assess and price risk.

Also, by making information available to all, rather than allowing it to be distributed unevenly to selected market participants in a manner that would be perceived to be unfair,[28] disclosure require-

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21. *See* Securities Exchange Act of 1934 §§13, 14, 15 U.S.C. § 78m, 78n (2000).

22. This fact is more newsworthy than one might think. *See* Strassel, *supra* note 4.

23. *See generally* SEC. & EXCH. COMM'N, DISCLOSURE TO INVESTORS: A REAPPRAISAL OF FEDERAL ADMINISTRATIVE POLICIES UNDER THE '33 AND '34 ACTS (THE WHEAT REPORT) 10, 46, 49 (1969) [hereinafter THE WHEAT REPORT] (noting that national securities policy emphasizes disclosure because one main purpose of securities regulation is providing investors and speculators access to information).

24. *See* Joel Seligman, *The Obsolescence of Wall Street: A Contextual Approach to the Evolving Structure of Federal Securities Regulation*, 93 MICH. L. REV. 649, 649-50 (1995). Broker-dealer regulation is also directed at informational asymmetries between investors and market professionals. *See id.*

25. *See* Merritt B. Fox et al., *Law, Share Price Accuracy, and Economic Performance: The New Evidence*, 102 MICH. L. REV. 331, 346-48, 368 (2003). *See generally* Robert E. Verrecchia, *Essays on Disclosure*, 32 J. ACCT. & ECON. 97, 101-40 (2001) (describing in detail various economic models of investor behavior that help describe the effect of disclosure on prices).

26. H.R. REP. NO. 98-910, vol. 1, at 563, 574-75 (1977) [hereinafter SEC 1977 ADVISORY COMMITTEE REPORT].

27. *Id.*

28. *See id.* at 632.

ments can increase public confidence in the market. Mandatory disclosure[29] requirements also ensure that disclosed information is standardized and, therefore, more easily comparable.[30] Finally, disclosure requirements assure investors that additional information will be available on a regular and timely basis.

These goals all involve enhancing the function of the securities markets. The SEC, however, also considers its mission to be the protection of investors.[31] Those goals are not the same and may not even be purely complementary. Market efficiency may be enhanced, for example, when investors' mistakes are punished by losses and investors have the opportunity to learn to invest more rationally or to stay out of the market and leave the decision-making to experts.[32] Modern portfolio theory suggests that any rational investor will hold a well-diversified mix of common stocks and other investments.[33] Should securities regulations be designed with those investors in mind or should the SEC be concerned with protecting the nondiversified investor, who may be at greater risk?[34] Also, regulation of different kinds of investments may be directed at different kinds of investors. Hedge fund investors, for example, tend to be wealthy and sophisticated, while mutual fund investors tend to be middle class and unsophisticated.[35] And, as discussed below, the relevant audience for most securities disclosure is not investors at all, but informational and

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29. There has long been a debate about whether securities disclosure should be mandatory. *See generally* LOUIS LOSS & JOEL SELIGMAN, SECURITIES REGULATION 180-88 (3d ed. 1989) (discussing the debate).

30. *See* Sharon Hannes, *Comparisons Among Firms: (When) Do They Justify Mandatory Disclosure?*, 29 J. CORP. L. 699, 703-04 (2004).

31. According to its website, "[t]he mission of the [SEC] is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation." U.S. Sec. & Exch. Comm'n, The Investor's Advocate: How the SEC Protects Investors, Maintains Market Integrity, and Facilitates Capital Formation, http://www.sec.gov/about/whatwedo.shtml (last visited Nov. 12, 2007).

32. *See* Jill E. Fisch, *Regulatory Responses to Investor Irrationality: The Case of the Research Analyst*, 10 LEWIS & CLARK L. REV. 57, 74 (2006).

33. *See* LOSS & SELIGMAN, *supra* note 29, at 185 n.42.

34. This debate was illustrated by an exchange between participants at the Annual Meeting of the Association of American Law Schools. *See* Podcast: Do the Benefits of Securities Regulation in the United States Warrant the Costs?, held by the Section on Securities Regulation, Association of American Law Schools (Jan. 4, 2006), *available at* http://www.aals.org/am2006/program/wednesday.html). Erik Sirri, Director of the SEC's Division of Market Regulation and former SEC Chief Economist, who was at the time a Professor of Finance at Babson College, remarked, "[I]f . . . from a regulatory perspective—for . . . disclosure and other things—you were to work with the assumption that investors are diversified, I think you'd have a very different framework for how you approach securities regulation. A lot of things are built around a different assumption . . . ." *Id.* Richard Booth, Professor of Law, University of Maryland, interjected, "[A]nd, I would say, incorrectly." *Id.* Professor Sirri responded, " '[I]nvestor protection' isn't cast as 'investor protection for diversified investors.' It's 'investor protection.' " *Id.*

35. *See* Henry T.C. Hu, *The New Portfolio Society, SEC Mutual Fund Disclosure, and the Public Corporation Model*, 60 BUS. LAW. 1303, 1307, 1357-58 (2005).

market intermediaries. In sum, the goal of providing information to investors is less straightforward than one might think.

2. *Regulating Lawful Conduct*

Further complicating the picture of the purpose of securities regulation are those who argue that the disclosure requirements of the securities acts are also intended to deter undesirable conduct.[36] Commentators describing the origins of the disclosure requirements of the securities acts frequently quote Louis Brandeis, that "[s]unlight is . . . the best of disinfectants."[37] For example, the securities acts sought to address the problem of excessive insider and underwriter compensation, including conflict-of-interest transactions, by "emphasiz[ing] publicity of insiders' compensation."[38] According to Brandeis, if brokers' fees and commissions are unreasonable, investors will refuse to invest with them and the brokers will change their policies.[39]

Recent initiatives by the SEC and Congress, while continuing to use disclosure as the primary means of regulating financial markets and the participants therein, increasingly appear to be intended to affect firms' behavior. The Sarbanes-Oxley Act of 2002 (SOX),[40] which was enacted in response to financial scandals at a number of companies in the early 2000s, provides an example of this. SOX requires, among other things, that a publicly traded firm disclose whether it has a financial expert on its audit committee and whether it has an ethics code for senior executives.[41] Neither SOX nor the

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36. According to an SEC Report, a "less direct" consideration underlying securities disclosure is that "publicity tends to deter questionable practices." THE WHEAT REPORT, *supra* note 23, at 10; *see also id.* at 50-51 (noting that disclosure helps eliminate "conflicts of interest and questionable business practices"); Cynthia A. Williams, *The Securities and Exchange Commission and Corporate Social Transparency*, 112 HARV. L. REV. 1197, 1294-96 (1999). Williams argues at length about the legitimacy of requiring corporations to disclose "social" information (such as environmental effects). *See id.* at 1273-1311. However, she limits the discussion of the utility of that information to two pages—mentioning that disclosure will enable shareholders to understand the tradeoffs made between economic benefits and social or environmental harms, will encourage managers to improve because "managers 'manage what they measure,' " and will encourage good behavior because people want to look good in the press. *See id.* at 1294-96.

37. LOUIS D. BRANDEIS, OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT 92 (reprint 1971) (2d ed. 1932).

38. Joel Seligman, *The Historical Need for a Mandatory Corporate Disclosure System*, 9 J. CORP. L. 1, 45-46 (1983).

39. *See* BRANDEIS, *supra* note 37, at 101-04.

40. Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (codified as amended in scattered sections of 11, 15, 28, and 29 U.S.C.).

41. 15 U.S.C. §§ 7264-65 (Supp. 2004). According to the SEC, the purpose of the rules was to create "greater transparency," "to improve the quality of information available to investors," and to "assist the market to properly value securities, which in turn should lead to more efficient allocation of capital resources." Disclosure Required by Sections 404, 406 and 407 of the Sarbanes-Oxley Act of 2002, Securities Act Release No. 8177, Exchange Act

rules promulgated thereunder require firms to have such an expert or an ethics code; however, a firm that does not must disclose why it does not.[42] If the purpose of required disclosure is to provide investors with the information they need to make informed investment decisions, this new requirement makes sense only if the presence of an audit committee expert or an ethics code is relevant to the investment decision.[43] Given the amount of information already being disclosed, it is more likely that the unspoken purpose of the requirement is to force companies to appoint audit committee experts and adopt ethics codes.

Recent efforts to improve disclosure of executive compensation[44] are also aimed at changing conduct.[45] The use of disclosure to rein in executive compensation dates back to the original enactment of the securities laws, which envisioned that disclosure of insider compensation not only would "alert potential investors that specific firms

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Release No. 47235, [2002-2003 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶86,818, at 86,901 (Jan. 23, 2003).

42. 15 U.S.C. §§ 7264-65.

43. Theoretically, a wide variety of nonfinancial information might affect the riskiness of an investment and therefore its price. Information about corporate governance, executive compensation, and conflicts of interest might all fall into this category. However, evidence and theory also suggest that decision-makers base their decisions on a limited number of factors and that the quality of decisions declines as information on more factors becomes available. *See infra* notes 161-64 and accompanying text. Furthermore, the link between corporate governance and financial performance has not been conclusively established. *See* Bernard S. Black et al., *Does Corporate Governance Predict Firms' Market Value?: Evidence from Korea*, 22 J.L. ECON. & ORG. 366, 367 (2006); Phyllis Plitch, *Moving the Market: S&P Quits Rating Corporate Governance in U.S.*, WALL ST. J., Sept. 13, 2005, at C3; Stephen M. Bainbridge, *A Critique of the NYSE's Director Independence Listing Standards* 17-19 (Univ. Cal. L. Sch., L.A., Research Paper No. 02-15, 2002), *available at* http://www.ssrn.com/abstract_id=317121 (surveying empirical literature regarding independent directors and shareholder value).

44. *See generally* Executive Compensation and Related Party Disclosure, 71 Fed. Reg. 6542, 6542 (proposed Feb. 8, 2006) (to be codified at 17 C.F.R. 228-40, 245, 249, 274), *available at* http://www.iasplus.com/usa/0601seccompensation.pdf (amendments "intended to provide . . . a clearer and more complete picture of [executive] compensation").

45. The SEC has this to say about the possible effects on executive compensation practices of the new disclosure requirements:

> We believe that the extent to which increased transparency and completeness in executive and director compensation disclosure would result in broader benefits depends at least in part on the extent to which current executive and director compensation practices are aligned with the interests of investors as reflected in their investment and voting decisions. Any changes to a company that might occur, including changes in corporate governance, changes in control, changes in the employment of particular executives or other changes could depend to some extent on the degree to which improved transparency in executive and director compensation would affect investors' decision-making with respect to that company.
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> . . . We emphasize that we are not seeking to foster any given directional or other impacts. Our objective is to increase transparency to enable decision-makers to make more informed decisions, which could result in different policies or practices or increase investor confidence in existing policies or practices.

Id. at 6591.

have relatively high levels of direct or indirect executive compensation, but also provide existing investors with evidence that could be employed in state unfairness or waste actions."[46] SEC Chairman Christopher Cox, commenting on the rules proposed in 2006, noted that disclosure of executive compensation is " 'at the heart of [the SEC's] disclosure mission,' "[47] that " '[t]he market is capable of disciplining excessive compensation, provided that the market has adequate information,' "[48] and that it is " 'important that investors and consumers have all the information they need in order to obtain the best possible services from executives and managers at the lowest possible price.' "[49]

3. Other Purposes

Whatever else may be debatable about the purpose of securities disclosure, it is quite clear that the acts were not intended to regulate securities based on their merits or financial soundness.[50] The desire to avoid merit regulation is a reflection of a belief that investors, not the government, should decide where capital should be invested.[51] According to this view, investors invest in worthless securities not because they are irrational, but because they lack information or are defrauded.[52] Once adequate information is available, there will be no need to regulate the *quality* of investments.

Commentators also attribute other purposes to the disclosure requirements of the securities acts, such as preventing fraud and facilitating its detection and prosecution.[53] Much of the impetus for the passage of the securities acts was the prevalence of misrepresentation in the stock market, either by direct falsehood or by omission,[54] particularly by investment banks and underwriters.[55] It is not clear, however, how disclosure requirements serve to prevent fraud. Presumably, someone who is willing to commit fraud in a nondisclosure

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46. *See* Seligman, *supra* note 38, at 51.

47. *SEC's New Leader Shares His Views on Range of Issues*, WALL ST. J., Sept. 19, 2005, at A13 (published excerpts from interview with Christopher Cox, SEC Chairman).

48. Kara Scannell, *SEC to Propose Overhaul of Rules on Executive Pay*, WALL ST. J., Jan. 10, 2006, at A1.

49. *SEC's New Leader Shares His Views on Range of Issues*, *supra* note 47.

50. *See generally* JOEL SELIGMAN, THE TRANSFORMATION OF WALL STREET 50-56, 229-30, 565-67 (rev. ed. 1995) (describing prevailing disclosure philosophy of securities laws, as opposed to regulation that would have given government the power to prohibit the sale of unsound investments).

51. "The purpose of the [Act] . . . is to protect the public with the least possible interference to honest business." President's Message, Mar. 29, 1933, S. REP. NO. 47, 73rd Cong., 1st Sess. 6-7 (1933), *quoted in* SEC 1977 ADVISORY COMMITTEE REPORT, *supra* note 26, at 556-57.

52. SEC 1977 ADVISORY COMMITTEE REPORT, *supra* note 26, at 562.

53. Seligman, *supra* note 38, at 18.

54. *See id.* at 18-33.

55. *See id.* at 24.

world will be willing to create false information once disclosure is required. However, disclosure requirements can increase the effort required to commit fraud. In order to satisfy the market's demands where there are extensive disclosure requirements, defrauders must construct fundamental aspects of business and "present a veneer of plausibility."[56] The disclosure system presumably also provides earlier warning that things are going wrong.[57] In addition, as the amount of information available in the marketplace increases, the likelihood that individual pieces of false information will be able to mislead anyone decreases.[58] For example, the irregularities at Enron were first uncovered by analysts and journalists relying on publicly disclosed information.[59] This fact does not, however, go to prove that disclosure requirements can *prevent* fraud.

There are other incidental purposes to securities disclosure in addition to preventing fraud. Disclosure requirements can improve corporate governance. As one commentator has noted,

> It provides directors more information by which they can evaluate the strength of the company and the performance of the officers; it strengthens the role of auditors in their own watchdog role; it enhances the effectiveness of shareholder voting and shareholder litigation as constraints on corporate governance; and it permits the governmental oversight agencies to perform more effectively.[60]

Information can also alleviate agency problems between promoters and managers, on the one hand, and investors, on the other.[61]

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56. *See* Larry E. Ribstein, Commentary, *Bubble Laws*, 40 HOUS. L. REV. 77, 80 (2003).

57. *See* Seligman, *supra* note 38, at 56.

58. *See* Andy Kessler, *Show Me the Books*, WALL ST. J., July 19, 2002, at A10.

59. Bala G. Dharan & William R. Bufkins, *Red Flags in Enron's Reporting of Revenues and Key Financial Measures*, *in* ENRON: CORPORATE FIASCOS AND THEIR IMPLICATIONS 97, 105-06 (Nancy B. Rapoport & Bala G. Dharan eds., 2004); *see also* John R. Emshwiller, *Opening the Books: Corporate Disclosure Has Come a Long Way over the Decades, but It Still Has a Ways to Go*, WALL ST. J., Oct. 17, 2005, at R6 (noting that "some of the questionable activities that helped sink Enron . . . had been publicly disclosed by the company").

60. Robert B. Thompson, *Corporate Governance After Enron*, 40 HOUS. L. REV. 99, 111 (2003). The 1977 Advisory Committee on disclosure adopted the view (albeit by a narrow margin) that the proxy rules should provide information about governance matters, because the board is the monitor of management and shareholders must be able to assess the board's performance in order to make voting decisions. *See* SEC 1977 ADVISORY COMMITTEE REPORT, *supra* note 26, at D-22.

61. *See* Paul G. Mahoney, *Mandatory Disclosure as a Solution to Agency Problems*, 62 U. CHI. L. REV. 1047, 1048-50 (1995). Mahoney argues that disclosure requirements addressed to agency problems are much more likely to be effective than general information aimed at investor decision-making because the former facilitates bilateral bargaining while the latter must act in a complex web of transactions among many parties, a situation in which governmental intervention is not generally effective. *See id.* at 1089-90.

B. Mechanism of Operation

Assuming that the goal of securities regulation is to improve the functioning of financial markets while protecting investors in the process, the mechanism by which securities disclosure accomplishes that goal is relatively clear precisely because the targets of the disclosure are participants in a well-organized market. Registration under the 1933 Act makes extensive information available to investors prior to their decision to purchase a security being offered to the public by the issuer.[62] After an issuer files a preliminary registration statement and prospectus with the SEC, there is a waiting period during which public communications about the offered security are restricted.[63] This waiting period prevents issuers and underwriters from engaging in aggressive, abbreviated, and misleading selling efforts while the market (or, more specifically, analysts and other professionals) digests the information in the preliminary prospectus.[64] The waiting period also gives individuals time to consider before investing.[65]

Disclosure requirements in the secondary market are governed by the 1934 Act.[66] The 1934 Act has a different focus because it was thought that the investor in the secondary market did not have to be protected from the aggressive sales tactics used by underwriters in the primary market.[67] As long as the information was available to a sufficient number of market participants to set accurate prices, it had accomplished its purpose.[68] Thus, full periodic reports, including

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62. This process is rather imperfect: the registration statement, which is filed with the SEC, provides extensive information only to those who seek it out. The prospectus, which must be delivered to a purchaser prior to the sale, contains less extensive information although it is still voluminous. Certain issuers can avoid the burdensome disclosure requirements of the 1933 Act through private placements and shelf registrations, which adversely affects the efficacy of the disclosure system to some degree. In addition, the SEC has recently adopted a new regulatory system for "well-known seasoned issuers" that is intended to reduce the burdens of registration without reducing the information available to the public. *See* Securities Offering Reform, Securities Act Release No. 8591, Exchange Act Release No. 52056, Investment Company Act Release No. 26993, [2005-2006 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶87,421, at 82,373 (Jul. 19, 2005) [hereinafter Securities Offering Reform].

63. The waiting period is twenty days by statute, but that time is subject to extension or acceleration. *See* Securities Act of 1933 § 8, 15 U.S.C. § 77h (2000).

64. *See* SEC 1977 ADVISORY COMMITTEE REPORT, *supra* note 26, at 568-69, 570.

65. *See* THE WHEAT REPORT, *supra* note 23, at 129-30. Thus, the complexity of the investment is supposed to be a factor in considering a request to accelerate the effective time of the registration statement. *Id*. at 78-79.

66. *See* LOUIS LOSS & JOEL SELIGMAN, SECURITIES REGULATION 226 (3d ed. 1998).

67. *See* SEC 1977 ADVISORY COMMITTEE REPORT, *supra* note 26, at 575; *see also* THE WHEAT REPORT, *supra* note 23, at 57-61 (discussing how primary market differs from secondary market); *cf.* THE WHEAT REPORT, *supra* note 23, at 50 (discussing the importance of information in the secondary markets).

68. *See* SEC 1977 ADVISORY COMMITTEE REPORT, *supra* note 26, at 574-75.

the annual "10-K," are filed with the SEC.[69] Only abbreviated material, such as the "glossy" annual report, is sent to shareholders.[70] The periodic reporting system provides a minimum of available information and "encourage[s] willingness on the part of issuers to keep the market place informed."[71]

The content of required securities disclosure is determined by the SEC through the usual rulemaking process, which includes opportunity for public comment. The SEC has made efforts to reduce the burden of disclosure on some issuers[72] and to streamline disclosure requirements—for example, by adopting in 1982 the integrated disclosure system for the 1933 and 1934 Acts.[73] As a general rule, however, the amount of information required to be disclosed has increased over the years.[74] Although fraud liability under the acts is limited to material misrepresentations or omissions, there is no requirement that information subject to mandatory disclosure be material.[75]

How is all this information expected to improve the market and protect investors? Ideally, investors would receive it, carefully analyze it, and make investment decisions based on their analysis. Their market activity would then move security prices to more accurate levels. However, few investors have the time or expertise to make appropriate use of the available information. Therefore, an essential part of the mechanism by which securities disclosure operates to improve the function of the market and protect investors is the activity of intermediaries. There are two kinds of intermediaries in the securities markets, financial intermediaries and informational intermediaries.

Market-makers and other professional investors determine the prices at which securities trade, and therefore it is the information

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69. *See* Form 10-K Annual Report Pursuant to §13 or 15(d) of the Securities Exchange Act of 1934 (Instruction D), 5 Fed. Sec. L. Rep. (CCH) ¶31,101, at 22,062 (describing filing requirement).

70. *See* Rule 14c-3 under the Securities Exchange Act, 3 Fed. Sec. L. Rep. (CCH) ¶24,203 (describing information to be included in Annual Report); Form 10-K (Instruction G(2)), Fed Sec. L. Rep. (CCH) ¶31,101, at 22,063 (allowing incorporation by reference to annual report to security holders).

71. THE WHEAT REPORT, *supra* note 23, at 332.

72. *See, e.g.*, Small Business Initiatives, 57 Fed. Reg. 36,442 (Aug. 13, 1992) (simplifying requirements for small businesses).

73. *See* Adoption of Integrated Disclosure System, Securities Act Release No. 6383, Exchange Act Release No. 18524, Public Utility Holding Company Act Release No. 22407, Trust Indenture Act Release No. 700, Investment Company Act Release No. 12264, [Accounting Series Releases 1937-1982 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 72,328, at 62,990 (Mar. 3, 1982).

74. The recent overhaul of registration requirements does not reduce the amount of information disclosed; rather, it streamlines the process for "well-known seasoned issuers" on the assumption that adequate information is already available to the market. *See* Securities Offering Reform, *supra* note 62, at 82,373.

75. Information is "material" under the securities acts when "there is a substantial likelihood that a reasonable shareholder would consider it important" in making a decision. *See* TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976).

available to them that determines the accuracy of those prices.[76] If those prices are accurate, even investors who completely ignore the disclosed information will nevertheless be protected if they trade on the basis of price.[77] The market itself is therefore a financial intermediary.[78] Moreover, mutual funds and other managed investments allow unsophisticated investors to channel their investment activity through professional financial intermediaries.

Like financial intermediaries, informational intermediaries are essential to the functioning of the securities disclosure system. These actors select, analyze, and disseminate a more manageable version of disclosed information.[79] Securities analysts, portfolio managers, the financial press, rating agencies (who tend to provide useful selection and formatting functions), and "registered representatives" such as brokers and financial advisors all provide digested information to the general public or unsophisticated investor.[80] In 1973, 46.8% of investors reported using stockbrokers for information they used in investment decisions, another 15.6% used advisory services, and 9.7% got their information from friends and relatives.[81] Although the use of professional advice has declined, intermediaries are still important. In 2002, 51% of investors owning individual stocks (other than through employer-sponsored retirement plans) said they relied on advice from a professional financial advisor when making investment decisions.[82] Therefore, the integrity and competence of the disseminators is essential.[83] Not surprisingly, both issuers and the SEC consider

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76. *See generally* Paul G. Mahoney, *Market Microstructure and Market Efficiency*, 28 J. CORP. L. 541 (2003) (discussing the complex mechanism occurring within the market by market-makers and others); Roberta Romano, *Empowering Investors: A Market Approach to Securities Regulation*, 107 YALE L.J. 2359, 2378 (1998) (noting that institutional investors are better able to process market information than the SEC and have more financial incentives to do so).

77. In the vocabulary of the mechanisms of market efficiency, intermediaries create "professionally informed trading" and "derivatively informed trading," that is, trading by those who observe price shifts caused by professionally informed traders. *See* Ronald J. Gilson & Reinier Kraakman, *The Mechanisms of Market Efficiency Twenty Years Later: The Hindsight Bias*, 28 J. CORP. L. 715, 721 (2003).

78. *See* Hu, *supra* note 35, at 1355.

79. *See* SEC 1977 ADVISORY COMMITTEE REPORT, *supra* note 26, at xi; Stephen J. Choi, *A Framework for the Regulation of Securities Market Intermediaries*, 1 BERKELEY BUS. L.J. 45, 46-47 (2004).

80. *See* SEC 1977 ADVISORY COMMITTEE REPORT, *supra* note 26, at D-9, 312-14, 564 n.11; THE WHEAT REPORT, *supra* note 23, at 10, 52-54.

81. *See* SEC 1977 ADVISORY COMMITTEE REPORT, *supra* note 26, at 243-44.

82. *See* INV. CO. INST. & SEC. INDUS. ASS'N, EQUITY OWNERSHIP IN AMERICA 77 (2002). The percentages were higher for investors who owned stock through employer-sponsored retirement plans or who owned mutual funds. *Id.* at 87, 95.

83. *See* Donald C. Langevoort, *Taming the Animal Spirits of the Stock Markets: A Behavioral Approach to Securities Regulation*, 97 NW. U. L. REV. 135, 166-70 (2002) (describing analysts' biases); *see also* THE WHEAT REPORT, *supra* note 23, at 319-23 (discussing obligations of broker-dealers to investigate and consult information before making recommendations). Before the promulgation of Regulation Financial Disclosure (FD), which re-

the needs of analysts and other professionals in designing disclosure requirements and preparing disclosure documents.[84]

If the goal of securities disclosure is not to improve market operation and investor decision-making, but rather to deter lawful conduct, the mechanism by which disclosure will accomplish that goal is somewhat different. Disclosure still operates by affecting the market, but in this case an important additional feature of the market is competition. For example, investors may pay more for shares of companies with audit committee experts, which would encourage all companies to appoint such experts.[85] Regulation Analyst Certification (AC), which requires analysts to disclose their compensation and to certify that they actually believe the views they express, is intended to improve the quality of analysts' research by creating competition between analysts based on the absence of compensation-related conflicts of interest.[86] Similarly, the SEC's proposed rules on enhanced disclosure to investors in mutual funds are intended to promote better-informed investment decision-making in light of the perceived lack of adequate information available to investors about distribution-related costs and arrangements that create conflicts of interest between investors and brokers.[87] The availability of such information will presumably allow investors to select funds based on

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quires that any material nonpublic information disclosed to securities market professionals or securityholders also be disclosed to the public, corporate executives could use information as a commodity to influence particular analysts or investors. *See* Selective Disclosure and Insider Trading, Securities Act Release No. 7881, Exchange Act Release No. 43154, Investment Company Act Release No. 24599, [2000 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 86,319, at 83,677 (Aug. 15, 2000); *cf.* Deborah Solomon & Robert Frank, *'You Don't Like Our Stock? You Are Off the List'—SEC Sets New Front on Conflicts by Taking Aim at Companies that Retaliate Against Analysts*, WALL ST. J., June 19, 2003, at C1 (describing practice by some firms of punishing analysts who make negative reports about their stock).

84. *See* SEC 1977 ADVISORY COMMITTEE REPORT, *supra* note 26, at 5, 11.

85. This seems an implausible scenario. More likely, the SEC is relying on some reputational mechanism for this particular goal. *Cf.* Joann S. Lublin & Kara Scannell, *They Say Jump: SEC Plans Tougher Pay Rules*, WALL ST. J., Jan. 11, 2006, at C1 (quoting former SEC Chief Accountant Lynn Turner that disclosure of executive compensation will not reduce compensation unless shareholders act on the information).

86. *See* Regulation Analyst Certification, Securities Act Release No. 8193, Exchange Act Release No. 47384, [2002-2003 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶86,833, at 87,247 (Feb. 20, 2003) [hereinafter Regulation Analyst Certification]. The disclosure is also intended to allow investors to better determine the quality of an analyst's research. *See id.*; *see also* SELIGMAN, *supra* note 50, at 372-73 (describing effort in 1960s to use disclosure to improve competition in mutual funds).

87. Proposed Rule: Confirmation Requirements and Point of Sale Disclosure Requirements for Transactions in Certain Mutual Funds and Other Securities, and Other Confirmation Requirement Amendments, and Amendments to the Registration Form for Mutual Funds, Securities Act Release No. 8358, Exchange Act Release No. 49148, Investment Act Release No. 26341, [2003-2004 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 87,135, at 89,008 (Jan. 29, 2004) [hereinafter Proposed Rule: Mutual Fund Disclosure].

those criteria and thereby pressure funds to change their policies.[88]

C. Limitations on Effectiveness

Despite the fact that securities disclosure is almost universally esteemed as a model for regulation by disclosure, there are important limits to its effectiveness. First, disclosure will only be useful if its recipients can process and understand the disclosed information.[89] This is a particular problem for equity markets, which have extensive participation by ordinary citizens in transactions involving increasingly complex financial arrangements.[90] The SEC and others involved in financial disclosure are therefore seeking to improve the usefulness of disclosure by more carefully designing the format of information.[91] In 1998, the SEC adopted rules requiring disclosure documents to be written in "plain English."[92] The proposed changes to the executive compensation disclosure requirements are specifically intended to make the information easily understandable.[93] In proposing mutual fund fee and commission disclosure, the SEC specifically addressed and solicited comments on the format of the information[94] and the timing and form of the disclosure. These concerns would be lessened, of course, if disclosure were targeted directly to intermediaries. The SEC's focus on investor protection, however, requires that investors still be considered the audience for disclosed information.

The ability of financial intermediaries to serve their role in setting accurate prices depends on the market being efficient—that is, on prices reflecting available information. But the market may not be ef-

88. For a sharp criticism of the SEC's mutual fund disclosure regime, see Hu, *supra* note 35.

89. *See* THE WHEAT REPORT, *supra* note 23, at 78-80; William O. Douglas, *Protecting the Investor*, 23 YALE REV. 521, 523-24 (1934).

90. *See* Douglas, *supra* note 89, at 527 (noting that equity investments are by their nature risky and complicated and arguing that it will be almost impossible to write an understandable prospectus about them); Steven L. Schwarcz, *Rethinking the Disclosure Paradigm in a World of Complexity*, 2004 U. ILL. L. REV. 1, 12-19 (arguing that some transactions may be too complex for a disclosure system to regulate); *see also* Jesse Eisinger, *Ahead of the Tape: Misunderstood*, WALL ST. J., Aug. 12, 2003, at C1 (noting that "[i]t's not a coincidence that some of the biggest blowups, like Enron and Tyco International, have been hard [for analysts] to cover").

91. *See* Hu, *supra* note 35, at 1345 (describing effort to design useful format for information).

92. *See generally* Plain English Disclosures, Securities Act Release No. 7497, Exchange Act Release No. 39593, Investment Company Act Release No. 23011, [1998 Transfer Binder], Fed. Sec. L. Rep. (CCH) ¶86,003, at 80,127 (Jan. 28, 1998) (requiring prospectuses to be written in plain English).

93. Executive Compensation and Related Party Disclosure, 71 Fed. Reg. 6542, 6542 (proposed Feb. 8, 2006) (to be codified at 17 C.F.R. 228-40, 245, 249, 274), *available at* http://www.iasplus.com/usa/0601seccompensation.pdf (amendments "intended to provide . . . a clearer and more complete picture of [executive] compensation").

94. *See* Proposed Rule: Mutual Fund Disclosure, *supra* note 87, at 89,008.

ficient, and there may be limits to the ability of market professionals to perform the price-setting role assigned to them.[95] In addition, heuristic biases[96] can create bounded rationality in professionals as well as in ordinary investors.[97] Because the number of shares of a security outstanding and available to be traded (that is, the size of the "float") determines the efficiency of the market for that security, prices of small issues will be less accurate even with active intermediaries.[98] Arbitrage opportunities, which are essential for efficient markets, may be limited.[99] Moreover, an increasing proportion of investment dollars is being placed in portfolios, such as index funds, that are restricted to a specific bundle of stocks for diversification purposes; those holders, which may own a very large number of shares, cannot influence the market by their trading behavior.[100]

There are also, as we have seen in the past several years, problems with basic informational institutions: managers have incentives to distort information; reputational intermediaries, such as accountants and lawyers, fail to serve the oversight function expected of them; and analysts have conflicts of interest.[101] Moreover, securities analysts do not always do extensive research and sometimes do not understand the companies they are reviewing.[102] Financial information is increasingly available from a variety of sources of questionable reliability at an astonishing speed. Improved access to information, however, may simply give people the chance to be foolish faster.[103]

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95. *See, e.g.*, Gilson & Kraakman, *supra* note 77, at 723-35 (describing challenges to the mechanisms of market efficiency posed by investor irrationality and limited arbitrage opportunities).

96. *See infra* notes 151-59 and accompanying text.

97. *See* ANDREI SHLEIFER, INEFFICIENT MARKETS: AN INTRODUCTION TO BEHAVIORAL FINANCE 12-13 (2000); Schwarcz, *supra* note 90, at 17-19. For an exploration of the limits on rational behavior by investors generally, see Robert Prentice, *Whither Securities Regulation? Some Behavioral Observations Regarding Proposals for Its Future*, 51 DUKE L.J. 1397, 1454-89 (2002); *see also* Langevoort, *supra* note 83, at 154-55 (providing examples).

98. *See* Gilson & Kraakman, *supra* note 77, at 735-36.

99. *See id.*; *see also* SHLEIFER, *supra* note 97, at 13-16, 51-52, 89-90.

100. *See* Disclosure of Proxy Voting Policies and Proxy Voting Records by Registered Management Investment Companies, Securities Act Release No. 8188, Exchange Act Release No. 47304, Investment Company Act Release No. 25922, [2002-2003 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 86,826, at 87,144-45 (Jan. 31, 2003) [hereinafter Proxy Voting Policies].

101. *See* Gilson & Kraakman, *supra* note 77, at 736-37; *see also supra* note 83 (describing corporate influence on analysts).

102. *See* Harvey L. Pitt, *How to Prevent Future Enrons*, WALL ST. J., Dec. 11, 2001, at A18; *see also* Langevoort, *supra* note 83, at 149-52 (discussing limits on financial analyst performance, including agency costs and heuristic biases such as overconfidence, and questioning whether analysts have any effect on the market at all).

103. *See* EDWARD CHANCELLOR, DEVIL TAKE THE HINDMOST: A HISTORY OF FINANCIAL SPECULATION 237-40 (1999); Donald C. Langevoort, *Technological Evolution and the Devolution of Corporate Financial Reporting*, 46 WM. & MARY L. REV. 1, 7-10 (2004). Furthermore, Regulation FD is specifically intended to bring directly to the public information that was previously filtered through intermediaries. *See supra* note 83.

Also, recent advances in technology may lead investors to rely less on professional advice and to rely instead on raw or untested data from the Internet[104] or to follow investment trends blindly (otherwise known as engaging in "herd behavior") because they are incapable of making reasoned decisions in an increasingly complex environment.[105] It is now much easier, and cheaper, for small investors to purchase securities without the assistance of a professional. Publicity about analysts' conflicts of interest and the unreliability of their recommendations may also contribute to a decline in the use of professional advice.[106] The result of these trends may be, perversely, to decrease the effectiveness of securities disclosure by eliminating its primary mechanism, the filtering and processing of complex information by sophisticated financial professionals. In addition, a decline in the use of intermediaries by individual investors may also adversely affect the price-setting function of market professionals, because it may increase "noise trading" as investors react to information in unsophisticated ways.[107]

Finally, the availability and comprehensibility of disclosed information is insufficient to make information useful if it does not relate to an issue considered salient by its intended audience, whether the audience is individual investors or intermediaries. One commentator has suggested that stock option expense was ignored by financial analysts not because the information was unavailable or because it was too speculative but because it was not interesting: analysts cared only about earnings.[108] It remains to be seen whether increased disclosure about corporate governance practices will prove salient to investors and intermediaries.[109] Information that is not salient to analysts and other financial intermediaries will not provide the benefits envisioned by the disclosure system, no matter how clearly it is disclosed.

D. Substitution for Direct Regulation

As indicated above, a supplemental purpose of securities regulation is the regulation of lawful behavior. To the extent disclosure is aimed at this purpose, it is attempting to substitute for direct regulation. The SEC's director-nomination proposals provide a clear exam-

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104. Langevoort, *supra* note 83, at 154.

105. *See* Schwarcz, *supra* note 90, at 15.

106. As of 2002, reliance on professional investment advice had declined markedly from levels reported in 1973. *See supra* notes 82-83 and accompanying text.

107. *See* Langevoort, *supra* note 103, at 9; Langevoort, *supra* note 83, at 172-75.

108. *Comments of Susan Lee, Wall Street Journal Editorial Board* (CNBC television broadcast Aug. 9, 2002).

109. *See* Ken Brown & Robin Sidel, *Scoring Boards on Governance Has Its Risks*, WALL ST. J., Oct. 2, 2002, at C1; Plitch, *supra* note 43; *see also* Bainbridge, *supra* note 43, at 16-17.

ple of this phenomenon. In response to a perceived unwillingness by corporations to respond to shareholders' concerns, the SEC proposed to create a new substantive right allowing shareholders to nominate directors under certain circumstances.[110] The proposal received widespread criticism and was shelved. In its place the SEC adopted a disclosure-based regulation, with the stated goals of increasing investor "understanding" of the director nomination process and permitting investors to evaluate the nominating committee of the board.[111] The SEC also described a goal of "increasing security holder understanding of . . . board accountability, board responsiveness, and . . . corporate governance policies,"[112] policies that would appear to be outside the usual market-enhancing purpose of securities disclosure.

Similarly, the SEC has required that mutual funds disclose their proxy voting policies and actual voting practices, purportedly to enhance "transparency" but also to encourage mutual funds to exert more pressure on management of the companies whose stock they own and thereby to improve corporate governance.[113] Most recently, the proposed changes to disclosure requirements for executive compensation are expressly intended not only to increase "transparency" but also to enable the "market" to "discipline" excessive compensation.[114] In other words, where the SEC does not have the authority or the political will to regulate directly, it can use a disclosure system to accomplish the underlying regulatory goal through the actions of intermediaries and investors in the financial markets.

In sum, securities disclosure has three goals: protecting investors

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110. Security Holder Director Nominations, Exchange Act Release No. 48626, Investment Company Act Release No. 26206, [2003-2004 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 87,101, at 88,401 (Oct. 14, 2003).

111. Disclosure Regarding Nominating Committee Functions and Communications Between Security Holders and Boards of Directors, Securities Act Release No. 8340, Exchange Act Release No. 48825, Investment Company Act Release No. 26262, [2003-2004 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 87,116, at 88,719, 88,722 (Nov. 24, 2004).

112. *See id.* at 88,722. The reaction of commenters about whether actual improvement was likely to occur was mixed. *See id.*

113. The SEC has stated that requiring funds to disclose their proxy voting policies will "enable fund shareholders to monitor their funds' involvement in the governance activities of portfolio companies, which may have a dramatic impact on shareholder value." Proxy Voting Policies, *supra* note 100, at 87,144. Similarly, the SEC has opined that institutions holding shares as fiduciaries would violate their fiduciary duty under the Investment Advisers Act by having a policy of always voting with management. *See* Proxy Voting by Investment Advisers, Investment Advisers Act Release No. 2106, [2003 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶86,825, at 87,132 (Jan. 31, 2003). The SEC has sent a clear message that it wants not simply to make shareholder activism possible, but to "encourage funds to become more engaged in corporate governance of issuers held in their portfolios, which may benefit all investors and not just fund shareholders." Proxy Voting Policies, *supra* note 100, at 87,146; *see also* Ken Brown, *Vanguard Gives Corporate Chiefs a Report Card*, WALL ST. J., Nov. 10, 2003, at C1 (describing Vanguard's recent willingness to vote against cooperate management).

114. *See supra* note 48 and accompanying text.

by improving their decision-making; improving the price-setting function of the market; and, sometimes, altering firms' behavior. It is able to accomplish at least the first two of those goals because it operates in an ideal environment: the capital markets and related financial institutions. A wide variety of intermediaries and a (relatively) efficient market combine to process the disclosed information and turn it into a single signal, the price of a security, which can then be used by investors in making investment decisions. The nature of investing is such that investors are likely to be as rational as anyone ever is, even if that rationality is significantly imperfect. In addition, investors often seek expert advice. Thus, the context in which securities disclosure serves as regulation is quite unusual. For example, none of these features are available for a consumer deciding to purchase a refrigerator or a salad dressing.[115]

IV. DISCLOSURE AS REGULATION

There are many, extremely varied examples of uses of disclosure as regulation in contexts other than securities law. Their purposes also vary, although most are intended either to reduce information asymmetries in an existing market or to change someone's behavior. The mechanisms by which they operate or are intended to operate are rarely explicit, and an examination of those mechanisms reveals some of the disadvantages and limitations of disclosure systems.

A. Purposes

1. Providing Information in an Existing Market

Many disclosure schemes are intended simply to provide information to decision-makers who are presumed to have a preexisting need for the information, usually because they are about to engage in an economic transaction in some market.[116] The disclosure system seeks to improve the ability of that market to aggregate preferences and efficiently set prices.[117] Information asymmetries impede market efficiency and result in a great deal of economic activity directed at

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115. *But see* Strassel, *supra* note 4 (quoting SEC Chair Christopher Cox that his goal for the disclosure system is "for consumers to be able to make the same sort of comparison they can do when they are buying a car or other products" and marveling at the prospect of "[a]n America that isn't scared to invest, but views a visit to the SEC web site as akin to browsing Consumer Reports").

116. *See* Joseph E. Stiglitz, *Information and the Change in the Paradigm in Economics*, 92 AM. ECON. REV. 460, 470 (2002) (describing situations in which actors react to information asymmetries).

117. The ability of an actor to make rational decisions depends on the actor's knowing the possible outcomes and their probabilities. *See* Lewis A. Kornhauser, *The Domain of Preference*, 151 U. PA. L. REV. 717, 719-20 (2003) (describing decision-making under certainty, risk, and uncertainty).

searching for information.[118] Disclosure requirements can improve the efficiency of a market by increasing the information available to market participants and reducing search costs.[119] Moreover, disclosure provides market participants with the information they need to make rational decisions, as opposed to following the herd.[120] In markets with imperfect information, market actions themselves convey information. In an effort to exploit this fact, market participants alter their behavior and affect the function of the market.[121] Information can reduce this effect. Thus, requiring[122] the disclosure of information can reduce search costs in economic transactions, improve the efficiency of markets, and provide other social benefits as a consequence of these economic benefits.[123]

Real estate disclosure requirements are an example of market-facilitating disclosure. These laws, which require sellers of residential properties to disclose certain information to buyers, reduce informational asymmetries between the usually knowledgeable seller and the usually uninformed buyer.[124] Nutrition labeling is also in part aimed at redressing information asymmetries, albeit on a much smaller scale. Although they do not operate in an economic market, campaign finance disclosure laws address informational asymme-

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118. *See* George J. Stigler, *The Economics of Information*, 69 J. POL. ECON. 213, 213, 224 (1961). Institutions and mechanisms can be developed to facilitate search but ignorance can never be completely eliminated. *Id.* at 224. Stigler also noted that reputation has value because it decreases search costs. *Id.*

119. *See* Colin F. Camerer & George Loewenstein, *Information, Fairness, and Efficiency in Bargaining*, *in* PSYCHOLOGICAL PERSPECTIVES ON JUSTICE 155, 155 (Barbara A. Mellers & Jonathan Baron eds., 1993); Gilson & Kraakman, *supra* note 77, at 721 (indicating that markets respond more efficiently to public information). Lack of information may result in market failure to the extent it prevents participants from pricing risk. *See* MAGAT & VISCUSI, *supra* note 17, at 4. However, there are limits to the ability of information to make markets efficient. *See* Gilson & Kraakman, *supra* note 77, at 736-37.

120. *See* Stephen M. Bainbridge, *Mandatory Disclosure: A Behavioral Analysis*, 68 U. CINN. L. REV. 1023, 1041 (2000).

121. *See* Stiglitz, *supra* note 116, at 469-70, 473; *see also* Camerer & Loewenstein, *supra* note 119, at 157-59 (describing negotiating practices such as strategic delay and strategic representation of one's own position).

122. Mandatory, rather than voluntary, disclosure is necessary to facilitate market transactions because it is difficult for the creator of information to appropriate the benefits of that information to herself, and therefore some desirable information either will not be generated or will not be disseminated. *See* Stiglitz, *supra* note 116, at 463. Also, just as there are those who will want to create and publish information, there are those who will want to prevent creation and publication. *See id.* at 463, 473. Mandatory disclosure can also help to ensure that information is credible and therefore more useful, *see* Paul Pecorino & Mark Van Boening, *An Empirical Analysis of Bargaining with Voluntary Transmission of Private Information*, 33 J. LEGAL STUD. 131, 153 (2004), and that information that might otherwise be generated on an individual basis is standardized and therefore more useful for comparisons. *See* Sage, *supra* note 7, at 1741-42.

123. According to Stiglitz, for example, governmental "[r]ight-to-know" laws have been "an important if imperfect check on government abuses." *See* Stiglitz, *supra* note 116, at 488.

124. *See* Florrie Young Roberts, *Disclosure Duties in Real Estate Sales and Attempts to Reallocate the Risk*, 34 CONN. L. REV. 1, 19 (2001).

tries; they are intended to provide information to voters to make them more "competent"—that is, more informed and therefore better able to ensure that their votes match their preferences.[125] This use of disclosure is not aimed at altering the outcome of decisions, only at improving the decision-making process, and it can be used in a wide variety of nonmarket and market contexts, including labor markets, capital markets, and product markets.

2. *Regulating Lawful Conduct*

The other common goal of disclosure-based regulation is altering lawful behavior, such as the production of pollutants,[126] the use of labor practices,[127] the use of agricultural techniques,[128] the production of household goods and services,[129] and even food consumption.[130] A similar goal is to improve the quality or reduce the price of an existing product or service. Health care disclosure systems such as hospital "report cards" are intended to improve quality,[131] as are restaurant hygiene disclosure requirements.[132] Recent proposals to post the prices charged by health care providers are intended to lower the costs of health care.[133] These requirements are also aimed at informational asymmetries but with the expectation that remedying those asymmetries will result not only in better decision-making but in better decisions and better behavior.

3. *Providing Information for Government Operations*

Some disclosure requirements are intended to be used by and im-

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125. *See* Elizabeth Garrett & Daniel A. Smith, *Veiled Political Actors and Campaign Disclosure Laws in Direct Democracy*, 4 ELECTION L.J. 295, 296 (2005).

126. For example, the Toxic Releases Inventory (TRI), 42 U.S.C. § 11023 (2000), requires firms to disclose releases of specified toxic substances. *See* Karkkainen, *supra* note 11, at 286. The information is standardized and publicly available. *See id.* The TRI is considered a resounding success; toxic releases have fallen nearly in half since creation of the TRI. *See id.* at 287-88.

127. *See* David J. Doorey, *Who Made That?: Influencing Foreign Labour Practices Through Reflexive Domestic Disclosure Regulation*, 43 OSGOODE HALL L.J. 353, 355-57 (2005).

128. *See* Margaret Gilhooley, *Reexamining the Labeling for Biotechnology in Foods: The Species Connection*, 82 NEB. L. REV. 1088, 1101-02 (2004).

129. *See* Safe Drinking Water and Toxic Enforcement Act, CAL. HEALTH & SAFETY CODE § 25249.6 (West 1999) (requiring products to carry labels if they contain substances "known to the state [of California] to cause cancer").

130. The Nutrition Education and Labeling Act of 1990, 21 U.S.C. § 343 (2000), requires food processors to label their products with information about specified nutrients. The format for the information is standardized, and the Food and Drug Administration oversees the details of nutrition labeling. *See* 21 C.F.R. pt 101 (2006).

131. *See* Sage, *supra* note 7, at 1707-10, 1715-20.

132. *See generally* Ginger Zhe Jin & Phillip Leslie, *The Effect of Information on Product Quality: Evidence from Restaurant Hygiene Grade Cards*, 118 Q.J. ECON. 409, 410 (2003) (describing requirement that restaurants post hygiene report cards and its effect).

133. *See* Vanessa Fuhrmans, *Insurer Reveals What Doctors Really Charge*, WALL ST. J., Aug. 18, 2005, at D1.

prove the operation of the government itself. Regulators need information to design and enforce direct regulation systems.[134] This information may not be broadly published,[135] although such information is increasingly available electronically to anyone who looks for it.[136] Disclosure intended to inform citizens or consumers about their legal rights[137] is also in a sense aimed at improving the function of an existing legal regime by reducing information asymmetries between the government and the people.

4. *Improving Management or Firm Performance*

Other disclosure regimes are intended to improve the performance of managers, either by providing information that can be used to monitor agents,[138] by creating information that managers would otherwise not have available to them,[139] or by forcing firms to confront the facts by forcing them to gather data. Management theory suggests that managers "manage what [they] measure";[140] that is, managers will pay attention to things they are forced to keep track of.[141] Confidential internal reporting of hospital medical mistakes can provide "a knowledge base for hospital managers to use in carrying out safety improvements."[142] Information can also lead to improved cooperation between firms.[143] The disclosure obligations that accompany the patent process fall into this category; they make information publicly available that other parties can use to advance their own research and thereby facilitate a kind of involuntary interfirm coopera-

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134. *See* Karkkainen, *supra* note 11, at 283-86.

135. An example of this is the Animal Welfare Act § 10, 7 U.S.C. §§ 2140 (2000), which requires laboratories to retain records for government inspection. *See* Sunstein, *supra* note 8, at 622.

136. *See e.g.*, Sage, *supra* note 7, at 1799.

137. *See id.* at 1765-66.

138. *See* Eric Talley, *Disclosure Norms*, 149 U. PA. L. REV. 1955, 1956 (2001).

139. *See* Karkkainen, *supra* note 11, at 297-300 (describing how information might improve management); *see also* Charlotte Villiers, *Disclosure Obligations in Company Law: Bringing Communication Theory into the Fold*, 1 J. CORP. L. STUD. 181, 199-200 (2001) (describing need for information within organizations). Theoretically, information that is valuable to management will be produced, since there can be no market failure within the firm, but agency problems might result in underproduction of internal information. Moreover, a disclosure requirement that provides information about other firms can improve management by providing benchmarks for improvement. *See* Karkkainen, *supra* note 11, at 261.

140. Karkkainen, *supra* note 11, at 295, 297-300; Louis Loewenstein, *Financial Transparency and Corporate Governance: You Manage What You Measure*, 96 COLUM. L. REV. 1335, 1342-45 (1996); Sage, *supra* note 7, at 1778 n.285; Williams, *supra* note 36, at 1294-96; Troy Paredes, *Blinded by the Light: Information Overload and Its Consequences for Securities Regulation*, 81 WASH. U. L.Q. 417, 465 (2003).

141. The SEC may have had this phenomenon in mind when it suggested that requiring analysts to certify their recommendations will cause them to use more care in making those recommendations. *See* Regulation Analyst Certification, *supra* note 86, at ¶87,247.

142. GRAHAM, *supra* note 7, at 1.

143. *See* Sage, *supra* note 7, at 1771-78.

tion.[144] A rather odd example of a disclosure obligation intended to improve management is the recent change in SEC rules requiring disclosure of correspondence between a company and a director who resigned as the result of a dispute.[145] According to then-Chairman Harvey Pitt, knowing that disclosure will be required will give directors "more leverage to raise their issues and concerns, and to be more effective in doing so,"[146] presumably leading to more effective board decision-making.

5. Increasing Public Awareness

In all these cases, the regulator generally assumes that there is a need for, or at least an interest in, the information to be disclosed. In some cases, however, the disclosure requirement may be an attempt to generate interest in the information itself.[147] The SEC's continuing attempts to improve the disclosure of executive compensation[148] may reflect its hope that eventually investors will start paying attention to the matter. The "Made in the USA" garment label and the earlier "ILGWU"[149] label probably were intended, at least in part, to raise consumers' awareness of the conditions under which products are produced.

6. Unidentified Purposes

A few disclosure schemes, such as drinking water quality reports, are enacted with no obvious goal.[150] Such schemes are usually said to

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144. *See also* Sharon Begley, *In Switch, Scientists Share Data to Develop Useful Drug Therapies*, WALL ST. J., Jan. 20, 2006, at A9 (describing disclosure requirement imposed by foundations supporting medical research, which is intended to result in earlier cooperation between researchers and clinicians).

145. *See* Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date, Securities Act Release No. 8400, Exchange Act Release No. 49424, [2003-2004 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 87,158, at 89,508 (Mar. 16, 2004).

146. Phyllis Plitch, *Full Disclosure: New SEC Rules Reveal the Corporate Underbelly*, WALL ST. J., Oct. 12, 2005, at B4B.

147. This effect can be unintended. The disclosure of phenylketonurics (the presence of NutraSweet) on food labels has generated both curiosity and concern. A Google search for "phenylketonurics" turned up a number of panicked postings to bulletin boards asking why the government would require that it be disclosed if it wasn't dangerous. According to one response, phenylketonurics disclosure is directed at those with a disorder making consumption of phenylalanine dangerous. *See* Ask the Doc, http://www.wwu.edu/chw/ask_the_doc/post/1-1000/0537.html (last visited Nov. 12, 2007); *see also* Kevin Helliker, *To Warn or Not to Warn*, WALL ST. J., Oct. 10, 2005, at R7 (describing consumers' reaction (avoiding string beans) to a warning against consumption of fava beans by children, which causes illness in rare cases).

148. *See supra* notes 44-49 and accompanying text.

149. International Ladies' Garment Workers Union. Mature readers may remember "look for the union label" television advertisements.

150. *See*, *e.g.*, MODEL COURT RULE ON INSURANCE DISCLOSURE, *supra* note 3. The purpose of the Model Rule, which requires that attorneys disclose their malpractice coverage, is "to provide a potential client with access to relevant information related to a lawyer's re-

provide important information, but the utility of the information may not be clear. The sex offender registration acts[151] are an interesting example. Their stated purpose is to protect the public by informing citizens about the presence of sex offenders.[152] The citizens are then expected to take whatever precautions they deem appropriate, presumably including keeping their children indoors but presumably not including killing the sex offender.[153] Perhaps the purpose of the laws is actually to cause so much harassment that the sex offender leaves town.[154] Or registration may result in the offender's choosing to settle in another state after release from prison.[155] There is some evidence that this was in fact the intended purpose of the statutes and that they in fact operate as intended to some degree.[156]

B. Impediments to Information-Based Regulation

Even where the purposes of a disclosure requirement are relatively clear, however, the mechanism by which the disclosure is expected to accomplish its goal is rarely explained. Moreover, an examination of the mechanism by which a disclosure scheme operates often reveals ambiguities in the purpose of the scheme as well. However, before we can consider how the disclosure of information can accomplish a regulatory goal, it is helpful to understand three fun-

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presentation in order to make an informed decision about whether to hire a particular lawyer." *Id.* However, three states have required that attorneys report their coverage to the bar but have not made that information available to the public. *See* AM. BAR ASS'N, STATE IMPLEMENTATION OF ABA MODEL COURT RULE ON INSURANCE DISCLOSURE (2006), *available at* http://www.abanet.org/cpr/clientpro/malprac_disc_chart.pdf.

151. Every state currently has some version of a sex offender registration act, which generally requires a person convicted of specified sex offenses to register with law enforcement officials where the offender lives following release from incarceration. Smith v. Doe, 538 U.S. 84, 89-90 (2003). There is also a Federal counterpart, 42 U.S.C. § 14071 (2000). Some of the relevant information is made available to the public. *Smith,* 538 U.S. at 91.

152. *Smith*, 538 U.S. at 99, 101.

153. *Id.* at 101, 105 (noting that the sex offender registration web site included a warning that using the information contained therein to commit a crime against any person was subject to criminal prosecution); *see also* Editorial, *Knowledge Protects: Online Sex Offender Registries Are Vital*, DALLAS MORNING NEWS, April 28, 2006, at 22A (noting that it is not clear how the registries have protected anyone but arguing that publication of offender information is "vital").

154. *Cf. Smith,* 538 U.S. at 100-01 (describing alleged harassment of a registered sex offender).

155. This, however, merely transfers the risk to other people, especially if the sex offender, having learned a lesson, fails to re-register after a move. *Cf.* Scott v. Shepard, (1773) 96 Eng. Rep. 525, 525-26 (K.B.) (describing the throwing of a "lighted squib" into a marketplace and the subsequent repeated throwing of the squib to avoid injury to self). Eventually, however, every state will have similar registration requirements and the statutes will no longer be able to accomplish this goal.

156. *See* Doron Teichman, *The Market for Criminal Justice: Federalism, Crime Control, and Jurisdictional Competition*, 103 MICH. L. REV. 1831, 1854-57 (2005). If this is true, then the laws may be said to act in a kind of interstate market for desirable residents.

damental limitations on any information-based system. The first is the ability of individuals to process information, the second is the way information affects individuals' behavior, and the third is the way information affects firms' behavior.

In the past few decades, scholars in several disciplines have developed a more nuanced understanding of the way individuals react to information. They have identified a number of predictable cognitive biases created by our limited ability to process information.[157] While a complete discussion of this literature is beyond the scope of this Article, some heuristic biases are particularly relevant to the operation of disclosure systems. The availability bias, for example, leads people to respond to information based on the "ease with which instances or associations could be brought to mind."[158] Thus, people will overestimate the risk of an accident after seeing or hearing about such an accident.[159] While disclosure requirements can present novel and therefore theoretically more "available" information, that information may not in fact be used unless it is also brought to the direct attention of the decision-maker.

The "anchoring" bias results in a failure to adjust fully to new information.[160] Anchoring can be made worse by self-serving biases, which prevent people from accepting or adjusting to information that adversely affects their personal interests or contradicts their preexisting beliefs.[161] Moreover, people tend to be more easily persuaded by oral communications or communications that engage the emotions than by written or abstract information.[162] These biases are reflected in the fact that people often accept information from unreliable sources[163] and that anecdotes are often far more influential than sta-

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157. *See generally* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES (Daniel Kahneman et al. eds., 1982).

158. Amos Tversky & Daniel Kahneman, *Availability: A Heuristic for Judging Frequency and Probability*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 157, at 163, 163-64; *see also* Prentice, *supra* note 97, at 1469-70 (noting that "while making decisions, people tend to concentrate on facts that are 'available' in their memories"); Cass R. Sunstein, *Introduction* to BEHAVIORAL LAW AND ECONOMICS 1, 3-5 (Cass R. Sunstein ed., 2000) (describing various kinds of biases, including the availability bias).

159. *See* Tversky & Kahneman, *supra* note 158, at 178.

160. *See* Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 157, at 3, 14-18; *see also* Bainbridge, *supra* note 120, at 1043-49 (discussing status quo bias and endowment effect); Prentice, *supra* note 97, at 1483 (stating that people often do not sufficiently adjust to new information).

161. *See* Michael Ross & Fiore Sicoly, *Egocentric Biases in Availability and Attribution*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 157, at 179, 179-82; Camerer & Loewenstein, *supra* note 119, at 164-67 (noting the significant role-dependent differences in assessment of "fair" settlement of tort case).

162. *See* Prentice, *supra* note 97, at 1467-69.

163. *See* Langevoort, *supra* note 83, at 156-63 (discussing trading behavior in response to Internet chatter).

tistics in decision-making.[164] Finally, decision-makers often engage in "herd behavior," which occurs when they behave in accordance with what they perceive to be the behavior of others rather than engaging in independent decision-making.[165]

Another well-studied limit on the ability of information to affect behavior is the "information overload" phenomenon.[166] This phenomenon occurs when an excess of information causes a decision-maker to reject or ignore useful information and instead make an ill-informed decision.[167] An increase in the usefulness of information leads to better decisions, but more information *in general* leads to higher costs of processing the information by the decision-maker. So, increasing the amount of useful information available can actually result in an individual's making worse decisions as the costs of processing new information become too great.[168] Moreover, as information quality improves, people tend to use more of the information available. Research indicates that as decision-makers increase the amount of information they use, their decisions at first improve but then tend to get worse.[169] Thus, an increase in the quality but not the quantity of information available can also lead to information overload, as decision-makers are enticed, by its quality, to try to use more of the available information.[170]

Studies have also shown that decision-makers who have useless or irrelevant information may make worse decisions than those with no information at all,[171] and when there is much information available, people appear to make better decisions when they use some but not all the available information about the relevant attributes of the subject of the decision.[172] Because the format of information can cause or

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164. *See* Richard E. Nisbett et al., *Popular Induction: Information Is Not Necessarily Informative*, *in* COGNITION AND SOCIAL BEHAVIOR 113, 128-31 (John S. Carroll & John W. Payne eds., 1976).

165. *See* Bainbridge, *supra* note 120, at 1038; Langevoort, *supra* note 83, at 156-63.

166. *See* MAGAT & VISCUSI, *supra* note 17, at 90-91; Kevin Lane Keller & Richard Staelin, *Effects of Quality and Quantity of Information on Decision Effectiveness*, 14 J. CONSUMER RES. 200, 200-01 (1987) (including a review of the literature).

167. *See* Paredes, *supra* note 140, at 440-43.

168. *See id.* at 202; *see also* Camerer & Loewenstein, *supra* note 119, at 156 (arguing that people with more information are more concerned with fairness, which will impact operation of the market). *But see* Lublin & Scannell, *supra* note 85 (quoting SEC Chairman Cox: "It's an odd approach to suggest we'll make better decisions with poorer information . . . . I know of no market that works that way.")

169. *See* Keller & Staelin, *supra* note 166, at 210-11.

170. *See id.*; *see also* MAGAT & VISCUSI, *supra* note 17, at 102-04 (describing study showing that increasing less-important information [how to use a product] resulted in individuals' remembering less detail about some things [what precautions to take] and instead remembering only more general information [what harm the product can cause]).

171. Tversky & Kahneman, *supra* note 160, at 5; Colin Camerer et al., *The Curse of Knowledge in Economic Settings: An Experimental Analysis*, 97 J. POL. ECON. 1232, 1244-46 (1989).

172. *See* Keller & Staelin, *supra* note 166, at 210-11.

eliminate information overload,[173] it is an important consideration in the design of a disclosure system. The problem of information overload can also be addressed by the operation of intermediaries, who are trained to process and sift relevant information, provided that those intermediaries do not suffer from their own biases and cognitive limitations.[174] Information that is not standardized and information that is not designed for easy comparisons will be less useful to a decision-maker.[175] In addition, the ability to interpret information may depend on the sophistication of the decision-maker.[176]

Once the targets of a disclosure system have processed the new information, they must decide whether and how to change their behavior based on that information. The amount and nature of information that is likely to influence consumer behavior has been the subject of considerable study.[177] For example, researchers have found that the *amount* of information a consumer will seek in purchasing big-ticket durables is significantly influenced by the *nature* of the earliest information the consumer receives.[178] Consumers who initially used information from friends and family or the store where they purchased the product were less likely to seek other information than consumers who used books and shopping guides.[179] Perhaps surprisingly, consumers with advanced degrees sought less information than others,[180] and the price of an item purchased did not affect the amount of

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173. *See* W. KIP VISCUSI & WESLEY A. MAGAT, LEARNING ABOUT RISK: CONSUMER AND WORKER RESPONSES TO HAZARD INFORMATION 18-26 (1987).

174. *See* Paredes, *supra* note 140, at 452-59; Daniel Kahneman & Amos Tversky, *Intuitive Prediction: Biases and Corrective Procedures*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 157, at 414, 414-16.

175. *See* GRAHAM, *supra* note 7, at 13-18 (criticizing disclosure systems that fail to provide up-to-date, standardized, comparative, or otherwise easy-to-use information).

176. Where verifiable information is known to be available to one party in a transaction but not disclosed to the other party, the second party should view that as a signal that the information is unfavorable to the first party. *See* Paul Milgrom & John Roberts, *Relying on the Information of Interested Parties*, 17 RAND J. ECON. 18, 30-31 (1986). Not all individuals will make this inference, however. In a study of the market for salad dressings prior to required nutrition labeling, the market share of the nondisclosing (and presumably higher-fat) brands varied with the percentage of college-educated shoppers in the population. Alan D. Mathios, *The Impact of Mandatory Disclosure Laws on Product Choices: An Analysis of the Salad Dressing Market*, 43 J.L. & ECON. 651, 665 (2000).

177. *See, e.g.*, ROBERT LEVINE, THE POWER OF PERSUASION (2003).

178. *See* Richard Staelin & John W. Payne, *Studies of the Information-Seeking Behavior of Consumers*, *in* COGNITION AND SOCIAL BEHAVIOR, *supra* note 164, at 185, 199-200.

179. *Id.* at 195-96; *see also* Ginger Zhe Jin, Consumer Information About Health Plan Quality: Evidence Prior to the National Medicare Education Program 13-15 (Dec. 18, 2002) (unpublished manuscript), *available at* http://www.glue.umd.edu/~ginger/research/Medicare-Dec02.pdf. Professor Jin notes that although consumers say they want information on health care providers, it is not clear that they use it. *See id.* at 3. Rather, they generally use "self experiences, experience of trusted friends and family members, and doctor recommendations" more frequently than formally available information. *Id.*

180. *See* Staelin & Payne, *supra* note 178, at 201.

information sought prior to purchase.[181] Other studies show that consumers respond more readily to a specific warning about a single hazard than to a general warning.[182] Furthermore, only new information, not repeated exhortations about old information (such as warnings about tobacco and seat belts), will affect behavior.[183]

It is also harder to get people to change behavior than it is to influence a single decision that they are going to make anyway.[184] Similarly, influencing consumers to make a one-time change in behavior, such as the purchase of a smoke detector, is easier than causing them to change patterns of behavior over time.[185] Even if individuals' attitudes change, they may not change their behavior.[186] Some studies have concluded that information does not change behavior at all, that consumers are not interested in safety information, and that providing more information can be counterproductive by leading people to become more set in their ways.[187]

Another consideration involved in whether someone will change her behavior in response to information is whether the information is salient.[188] "[C]oncrete, emotionally interesting information" is more likely to influence behavior than abstract information because such information is more likely to call up " 'scripts' . . . or schemas involving similar information."[189] Announcing that a product causes cancer is much more likely to change consumer behavior than publishing the fact that it exceeds the federal recommended daily allowance of fat, although the latter probably poses a much larger health risk.[190]

Finally, a disclosure scheme that involves the action of firms, as most do, will depend on the complex and poorly understood mecha-

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181. *See id*. at 200-01.

182. *See* W. Kip Viscusi et al., *Informational Regulation of Consumer Health Risks: An Empirical Evaluation of Hazard Warnings,* 17 RAND J. ECON. 351, 361-62 (1986).

183. *See* VISCUSI & MAGAT, *supra* note 173, at 124. This may explain the phenomenon noted by fitness guru Richard Simmons: " 'There'll always be some weird thing about eating four grapes before you go to bed, or drinking a special tea, or buying this little bean from El Salvador . . . . If you watch your portions and you have a good attitude and you work out every day you'll live longer, feel better and look terrific." *Awaiting the Next Hot Diet Fad*, WALL ST. J., Aug. 3, 2005, at D4.

184. *See* Adler & Pittle, *supra* note 8, at 163.

185. *Id.* at 191.

186. *Id.* at 168-69.

187. *See id.* at 166-68. Alternatively, people may overreact. *See* MAGAT & VISCUSI, *supra* note 17, at 163.

188. *See* VISCUSI & MAGAT, *supra* note 173, at 17 (noting that people "ignore information that they feel has little benefit").

189. Nisbett et al., *supra* note 164, at 128. This phenomenon illustrates the operation of the availability bias.

190. *See generally* MAGAT & VISCUSI, *supra* note 17, at 174-75 (discussing inappropriate public fears); Kevin Helliker, *supra* note 147. For examples of the public's inaccurate assessment of risks, see Cass Sunstein, Commentary, *Fear Factor: Truth Is, Sunbathing Is Probably More Dangerous than Terrorism*, L.A. TIMES, Mar. 10, 2003, at B11; *see also* MAGAT & VISCUSI, *supra* note 17, at 12, 64.

nism by which firms act.[191] As economists often note, firms are particularly susceptible to agency problems as a result of the differing incentives of different actors.[192] Various theories attempt to provide an account of the way in which a firm will react to external stimuli such as regulation or new information.[193] The structure of the firm will in large part determine the behavior of managers,[194] and that structure may lead an individual to engage in behavior that does not advance the goals of the firm as a whole, but only the goals of her unit.[195] In addition, information may be lost between levels of the hierarchy.[196] Systems theory suggests that firms function at an equilibrium which they try to maintain in response to external forces.[197] According to this theory, a firm will "act" independently of the motivations of its employees.[198] The view of the firm as a culture posits that each firm has a set of behaviors and attitudes that are its own, independent of the individuals in the firm.[199] The individuals within the firm will behave in accordance with the culture, and their behavior will in turn determine the actions taken by the firm.[200]

Regulatory mechanisms, including disclosure, must take into account the fact that the structure of a firm and the behavior of individuals within a firm ultimately determine the behavior of the firm itself. Individuals in the firm will be subject to all the biases and cognitive quirks described above, but the structure of the firm itself influences decision-making. Senior managers may have an incentive to enhance the profitability of the firm[201] because they have invested considerable personal capital in the firm and because their compensation may be tied to the firm's financial performance. Therefore, theoretically they have an incentive to respond to economic stimuli such as consumer preferences. In a large and complex organization, however, detailed information about consumer preferences may not be available to senior managers. Employees with access to consumer information may not have the same incentives or employment goals as employees responsible for designing the firm's products or deter-

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191. *See* Edward L. Rubin, *Images of Organizations and Consequences of Regulation*, 6 THEORETICAL INQUIRIES IN LAW 347, 348 (2005).

192. *See, e.g.*, *id.* at 351 (discussing the agency problems "rampant" in firms); Michael J. Meurer, *Law, Economics and the Theory of the Firm*, 52 BUFF. L. REV. 727, 733-36 (2004) (discussing agency costs and the theory of the firm generally).

193. *See generally* Meurer, *supra* note 192 (describing various models of economic organization); Rubin, *supra* note 191 (same).

194. *See* Rubin, *supra* note 191, at 353.

195. *See id.* at 356.

196. *Id.*

197. *See id.* at 358.

198. *See id.* at 360.

199. *See id.* at 362-63.

200. *See id.* at 364; *see also* Krawiec, *supra* note 19, at 599-601.

201. Alternatively, they may have an incentive only to enhance their own wealth.

mining its labor or hazardous waste disposal policies.[202]

Disclosure policies that depend on firms' responses to market activity must consider whether the internal structure of firms makes it likely that such responses will occur. For example, information that affects the capital markets and the reputation of the firm may be more likely to result in changes in firm behavior than information that affects a product market because those effects are more likely to come to the attention of senior management.[203]

C. *Mechanisms of Operation*

Given what we know about how people process information and how information can affect behavior, how can a disclosure system accomplish a regulatory goal? Most disclosure systems operate through markets, in the broadest sense of the word.[204] Providing information to decision-makers is expected to cause them to choose the better product. If enough people make that choice, bad products will be forced out of the market altogether or producers will raise the quality of their own products. So, for example, restaurant hygiene improved in Los Angeles after enactment of an ordinance that required hygiene scores to be posted,[205] and the output of toxic waste declined after the institution of the Toxic Release Inventory (TRI), which required firms to disclose the amount of certain named pollutants they produced.[206] There are other mechanisms also, however, such as reputational effects and simple persuasion by which disclosure can operate. A disclosure system's purpose, as well as its context, will determine the mechanisms by which it can operate.

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202. *Cf.* Joseph P. White & Stephen Power, *VW Chief Confronts Corporate Culture*, WALL ST. J., Sept. 19, 2005, at B2 (quoting Volkswagen AG's chief executive's complaints that "managers and engineers . . . paid too much attention to technology and features" and not enough to customers and that "[m]anagers considered their operations successful because they booked profits on sales to other VW business units").

203. *See* RONALD J. ALSOP, THE 18 IMMUTABLE LAWS OF CORPORATE REPUTATION: CREATING, PROTECTING, AND REPAIRING YOUR MOST VALUABLE ASSET 36-51 (2004) (stating that a corporation's reputation depends on how well it balances the demands of its various stakeholder groups).

204. *See, e.g.*, Parkinson, *supra* note 14, at 11-19 (describing operation of product, labor, and financial markets); *cf.* Sage, *supra* note 7, at 1781 (citing operation of "competitive forces, grassroots activism, and reputational concerns" in disclosure schemes). A few information schemes—such as the food pyramid, tobacco warning labels, and advertising to discourage drunk driving and encourage seatbelt use—operate solely by persuasion. Programs which are intended to persuade people to abandon risky behaviors can be distinguished from those that seek only to inform people of risks and allow them to make their own judgments—such as nutrition and pesticide labeling and warnings about drug side effects. *See* GRAHAM, *supra* note 7, at 7.

205. *See* Jin & Leslie, *supra* note 132, at 410-11, 449-50.

206. *See infra* note 244.

1. The Role of a Market

To the extent that a disclosure system is intended only to enhance an existing market by correcting an informational asymmetry, it achieves its purpose if the necessary information reaches the appropriate audience in a usable form. What the buyers do with the information is irrelevant. However, the disclosure will be useless unless the disclosed information is actually interesting and useful to the decision-makers in the market. As noted above, for example, one can criticize securities disclosure rules for requiring the disclosure of information that would not be material to most investors. Also, as discussed in Part IV.C.3, below, the information must be provided in a format that enables it to be understood by the relevant decision-maker or, alternatively, be provided to intermediaries who will digest the information. Although these are not simple requirements, the use of a disclosure requirement to correct an information asymmetry in an existing market involves a relatively straightforward mechanism.

More commonly, however, regulatory disclosure schemes are intended to produce a particular *result* in a market.[207] Food labeling requirements about trans fatty acids presumably are intended not merely to inform consumers but also to encourage them to purchase healthier foods. If those consumers do so, manufacturers will adjust their formulations and produce healthier foods, or at least healthier alternatives. If for some reason consumers used the new information to *increase* their fat intake,[208] the system would have improved the function of the market but not achieved its public health goal. If consumers ignore the information completely, the system will have achieved nothing. Thus, the success of the nutrition labeling requirements depends upon the way in which the new information affects the market, which in turn depends on whether and how the information is used by consumers.

This market effect depends upon the existence of a number of conditions. First, the consumers must care about the information enough for it to change their decisions. A consumer's choice of a health care provider, for example, may not be sensitive to price.[209] Second, they must have a decision to make. Information cannot alter consumers' behavior if the purchasing decision is out of their hands (as may be the case in the choice of health care plans or providers)[210]

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207. As part of its effort to improve the treatment of animals, the European Union is proposing to approve a label on food indicating that it was produced using "humane" methods. This will, it is hoped, encourage consumers to purchase such foods. Mary Jacoby, *EU Arm Backs 'Humane' Farming Label*, WALL ST. J., Jan. 24, 2006, at A19.

208. The temporary popularity of the high-fat Atkins diet makes this hypothetical not as absurd as it may seem.

209. *See* Sage, *supra* note 7, at 1725.

210. *See id.* at 1720-21.

or if there are no sufficiently similar competing products (which may be the case with hospitals or airlines).[211] Third, the producer must be able to adjust its behavior in response to market pressures.[212] Existing technology might not make it possible, for example, for a manufacturer to avoid using a toxic substance.[213] Finally, all the actors in the regulatory drama—consumers, producers, and intermediaries—must be acting at least somewhat rationally.

Consider OSHA's Hazard Communication Standard (HCS),[214] which requires chemical producers and employers to provide information about the risks of toxic substances to the users of the chemicals, including workers who are exposed to the chemicals in downstream workplaces.[215] The premise of HCS is that participants in the labor market cannot demand the appropriate risk premium for exposure to toxic substances unless they have information about toxicity in general and specific workplace exposure.[216] Once workers are fully informed, wages and benefits will fully address the toxicity risk, manufacturers and employers will take "efficient care," and toxic exposure will be reduced.[217] If the labor market is not efficient for reasons other than information asymmetries[218] or if other factors besides safety dominate decisions by workers, HCS cannot achieve its goal of improving workplace safety.

2. Nonmarket Mechanisms

Where the market conditions described above do not exist, there

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211. *Cf.* June Kronholz, *A New Wealth of Details for Comparing Colleges*, WALL ST. J., June 30, 2004, at D1 (noting difficulty of making comparisons between colleges and universities despite the vast amount of available information).

212. *See* Lucian Bebchuk, *The SEC: Beyond Disclosure*, FORBES, Jan. 19, 2006, *available at* http://www.forbes.com/columnists/2006/01/18/sec-executive-comp-comment-cx_lb_0119bebchuk.html (arguing that executive compensation disclosure will not reduce excessive compensation if the market for executives is not functioning).

213. Economists tell us that market pressures will eventually lead to the necessary technological developments, but there may be a substantial delay before that can be accomplished.

214. 29 C.F.R. § 1910.1200 (2006).

215. *See* Richard H. Pildes & Cass R. Sunstein, *Reinventing the Regulatory State,* 62 U. CHI. L. REV. 1, 106 (1995).

216. *See* Leslie I. Boden & Carol Adaire Jones, *Occupational Disease Remedies: The Asbestos Experience*, *in* PUBLIC REGULATION: NEW PERSPECTIVES ON INSTITUTIONS AND POLICIES 321, 325-26 (Elizabeth E. Bailey ed., 1987)*; see also* Thomas A. Lambert, *Avoiding Regulatory Mismatch in the Workplace: An Informational Approach to Workplace Safety Regulation*, 82 NEB. L. REV. 1006, 1015-32 (2004) (identifying the problem of workplace safety as an informational asymmetry).

217. *See* Boden & Jones, *supra* note 216, at 327-28; Lambert, *supra* note 216, at 1021 n.69, 1038 n.118. *But see* MAGAT & VISCUSI, *supra* note 17, at 5-8, 168 (discussing inappropriate reactions to information about risk).

218. For a discussion of some of the limitations on bargaining in labor markets, see Cass R. Sunstein, *Human Behavior and the Law of Work*, 87 VA. L. REV. 205, 229-31, 240-45 (2001).

are other mechanisms by which information may affect behavior. The most powerful of these is through its effect on reputation. As one commentator has written, "[h]ad commentator Armstrong Williams been forced to disclose that the Education Department was going to pay him $240,000 to promote the No Child Left Behind Act, he might not have taken the money."[219] Programs such as "Johns TV," which post the names and faces of those arrested or convicted of solicitation of prostitution on local-access television or the Internet, have been remarkably successful.[220] It has been proposed that colleges be required to disclose racial and economic data for "legacy" and early-decision admissions, in the hope that schools will voluntarily limit such preferences once their effects are known.[221] Reputational effects can be especially important to firms, which must rely on goodwill among customers, employees, and the government.[222] Anyone using information to affect a firm's reputation must take into account the fact that customers, investors, employees, juries, and regulators will often make decisions about firms based on prior, background understandings rather than rational analysis.[223] In order for information to have a reputational effect, however, the target must be concerned about its reputation and the public must care about the information disclosed.[224]

Alternatively, a disclosure scheme can cause the desired result when concerned groups use the information in the political sphere.[225] Information may be politically exploited in a number of ways, including lobbying for direct legislation or regulation and conducting boycotts and other collective action.[226] An example of this type of disclosure scheme was created by NEPA,[227] which requires governmental

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219. David Wessel, *Conflict-of-Interest Disclosures May Not Protect the Unsophisticated*, WALL ST. J., Jan. 13, 2005, at A2; *see also* Sage, *supra* note 7, at 1769-70 (arguing that disclosure of unprofessional behavior would discourage that behavior among professionals).

220. *See* Eva-Marie Ayala, *Dallas Police Web Site Posts Photos of Arrested Johns*, FORT WORTH STAR-TELEGRAM, June 8, 2004, at B5.

221. *See* Daniel Golden, *Bill Would Make Colleges Report Legacies, Early Admissions*, WALL ST. J., Oct. 29, 2003, at B1.

222. *See* Ronald J. Alsop, *Word of Mouth Is Cheap, but Valuable, Survey Finds*, WALL ST. J., Dec. 6, 2005 (discussing importance of reputation generally); Alsop, *supra* note 203, at 36-51 (same); Karkkainen *supra* note 11, at 327-28 (same); Graham, *supra* note 7, at 8 (discussing importance of reputation to employees); Parkinson, *supra* note 14, at 14 (discussing importance of reputation in dealing with governments).

223. *See supra* notes 158-65 and accompanying text (discussing examples of cognitive biases).

224. It is interesting to contemplate whether "Sewer Bill Scofflaw TV" would be likely to decrease delinquency rates. *See* Russ Pulley, *Tattletale Television*, KANSAS CITY STAR, July 10, 2005, at B1 (describing suggestion that city post on local-access television the names of residents who were delinquent on their sewer bills).

225. *See* Karkkainen, *supra* note 11, at 310, 315; Sage, *supra* note 7, at 1784; Sunstein, *supra* note 8, at 619 (citing "eco-labels" as an example).

226. *See* Karkkainen, *supra* note 11, at 316-20 (discussing the regulation context).

227. National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4347 (2000).

agencies to produce an environmental impact study for any project having a major effect on the environment. The goal of the act is simply to compile and disclose the data; the agency does not have to consider it or give it weight.[228] However, members of the public receive the information and can take political action on the matter if they care.[229] Similarly, proposed disclosure requirements under the securities laws relating to corporations' social activities often have as their goal making information available to political activists, rather than investors.[230] Community Reinvestment Act[231] disclosure, which was effective in causing actual changes in lending practices, was used by the Federal Reserve and the Comptroller of the Currency in the merger approval process, by advocacy groups, and by the media.[232] In order for disclosure to operate through a political mechanism or collective action, of course, the disclosed information must be of interest to a sufficiently large and committed group.

A number of recent information-based regulations operate by creating a cascade of fears resulting from the disclosure of highly salient risk information to consumers. The interaction of consumers' information-processing mechanisms and the content and design of the disclosed information, together with the fact of disclosure itself, may result in the consumers overreacting to disclosed risks. This mechanism was used by California's Proposition 65, which requires that relevant products contain a warning stating that the product contains a substance "known to the state [of California] to cause cancer."[233] The alleged purpose of the warning is to inform consumers about risks, but the warning provides no information about the actual risk,[234] which may be poorly understood even by experts.[235] How-

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228. Sunstein, *supra* note 8, at 621.

229. *See id.* at 622.

230. *See* Villiers, *supra* note 139, at 194-95, 202-03, 209-08*; see also* Donald C. Langevoort, *Commentary: Stakeholder Values, Disclosure, and Materiality*, 48 CATH. U. L. REV. 93, 95-96 (1998) ("If we are coming to see investors as simply one kind of corporate stakeholder, why not provide disclosure for the benefit of other stakeholders (including public interests)?").

231. 12 U.S.C.A. §§2901-2907 (2006) (establishing regulatory scrutiny of lending practices). Disclosure is made pursuant to the Home Mortgage Disclosure Act, 12 U.S.C.A. §2801 et seq. (2006).

232. *See* Archon Fung et al., *The Political Economy of Transparency: What Makes Disclosure Policies Sustainable?* 20-22 (John F. Kennedy Sch. of Gov., Harvard Univ., Faculty Research Working Paper No. RWP03-039, Oct. 2003), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=384922.

233. Safe Drinking Water and Toxic Enforcement Act, CAL. HEALTH & SAFETY CODE § 25249.6 (West 1999); *see also* MAGAT & VISCUSI, *supra* note 17, at 165. Congress is currently considering a bill that would preempt state food-labeling laws that are inconsistent with FDA regulations. *See* National Uniformity for Food Act of 2005, H.R. 4167, 109th Cong. (2005).

234. *See* MAGAT & VISCUSI, *supra* note 17, at 166; *see also* Kevin Helliker, *supra* note 147 (reporting doctor's position against warning about all dangers because some risks are very small and warnings may cause misunderstandings).

ever, the requirement reportedly resulted in manufacturers reformulating their products to avoid the labeling requirement,[236] thus, perhaps, achieving the regulatory goal.[237]

Similarly, the new requirement that food labels disclose the presence of common allergens in any amount, including trace amounts caused by cross-contamination,[238] has resulted in several manufacturers reformulating their products.[239] The FDA has not required, or even issued guidance about, disclosing the amount of the allergen present or its likelihood of producing a reaction, in part because people react differently to allergens.[240] The labeling requirement may therefore cause those with mild allergies to avoid foods that are perfectly safe because they do not have the information needed to assess their risk. More likely, manufacturers will reformulate their products to remove trace amounts of allergens that would have made the food hazardous to a relatively small number of people.

3. The Usefulness of Information

Whether the information is directed at a market, at reputations, or at community groups, it must be disclosed in a usable way.[241] The format of information is extremely important in determining its use-

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235. *See* Peter Waldman, *Toxic Traces: New Questions About Old Chemicals,* WALL ST. J., July 25, 2005, at A1 (describing new research casting doubt on much that is currently believed about chemical toxicity).

236. *See* Randolph B. Smith, *California Spurs Reformulated Products*, WALL ST. J., Nov. 1, 1990, at B1, *cited in* Karkkainen, *supra* note 11, at 345 n.364.

237. Banning the products would have required a cost-benefit analysis of a product ban. *See* BREYER, *supra* note 10, at 163, 184-85, 193 (describing issues and analysis surrounding proposed ban on saccharin and the disutility of using warnings instead); *supra* note 11 and accompanying text. The disclosure system accomplished the same result using essentially uninformed decision-making by consumers untrained in either toxicology or risk assessment. *Cf.* BREYER, *supra* note 10, at 162 (describing eight-year process of developing a tire rating system by the National Highway Transportation Safety Administration).

238. *See* Food Allergen Labeling and Consumer Protection Act of 2004, Pub. L. 108-282, Part II, codified at 21 U.S.C. §§ 321, 343 (2000).

239. *See* Jane Zhang, *How Much Soy Lecithin Is in That Cookie?*, WALL ST. J., Oct. 13, 2005, at D1; CTR. FOR FOOD SAFETY & APPLIED NUTRITION, U.S. FOOD & DRUG ADMIN., APPROACHES TO ESTABLISH THRESHOLDS FOR MAJOR FOOD ALLERGENS AND GLUTEN IN FOOD 45-48 (Mar. 2006), *available at* http://www.cfsan.fda.gov/~acrobat/alrgn2.pdf (describing factors to consider in setting thresholds); *id.* at 47-48 (describing problem of serious reactions to very low doses of allergens).

240. *See* Zhang, *supra* note 239, at D1.

241. *See* BREYER, *supra* note 10, at 163-64*; cf.* Schwarcz, *supra* note 90, at 8-9 (discussing SEC initiatives to make disclosure more understandable); Note, *The Elephant in the Room: Evolution, Behavioralism, and Counteradvertising in the Coming War Against Obesity*, 116 HARV. L. REV. 1161, 1182 (2003) (discussing FDA's failed efforts to ensure a useful format for nutrition labels); Laura Landro, *The Informed Patient: Doctor's Orders Are Useless if They're Befuddling*, WALL ST. J., July 3, 2003, at D2 (discussing ways to improve patients' understanding).

fulness.[242] For comparisons, for example, the information must be in the same format for both items and placed where the decision-maker will see it at the time of decision.[243] Information about single facts is more useful than a wide range of information,[244] and in some circumstances rating systems are more useful than raw data.[245] Even presentation, typeface, and design can make a significant difference in the usefulness of information.[246]

In addition, intermediaries can serve to increase the usefulness of information in other areas as they do in securities markets. For one thing, if there are a sufficient number of informed buyers, the market itself can act as an intermediary for the uninformed and unsophisticated,[247] just as the securities market does. Alternatively, intermediaries, such as the media and special interest groups, can act to interpret disclosed information or digest it into a small number of usable signals in the same way that financial information is theoretically built into the price of a security by the action of the market. Intermediaries, especially the media, can also serve to increase the salience of disclosed information. There is a danger, of course, that the interpretation of information by intermediaries may be biased. Therefore, a disclosure system that relies on intermediaries should consider how those intermediaries themselves will operate, and the information disclosed should be designed for use by the intermediaries.[248] In some contexts, such as the "Energy Star" ratings on home appliances, intermediaries are not necessary. On the other hand, disclosure of more complex information into a market where there are no intermediaries is unlikely to produce the desired effect.

Format, design, and the presence of intermediaries are particularly important considerations when the disclosed information is complex or where additional knowledge is required to understand the information. OSHA's Hazard Communication Standard can be effective only to the extent workers are capable of understanding the

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242. *See* MAGAT & VISCUSI, *supra* note 17, at 133-56, 159-60; Viscusi et al., *supra* note 182, at 356-61 (discussing results of tests of varying warning labels on bleach and drain cleaners). Recent FDA drug labeling rules focus solely on format. *See* Anna Wilde Mathews, *FDA Issues New Rules for Drug Labels*, WALL ST. J., Jan. 19, 2006, at D1.

243. For example, comparative information should be placed separately at the point of sale, not on the package. *See* VISCUSI & MAGAT, *supra* note 173, at 18-19, 26, 29, 33-38; *see also* Lambert, *supra* note 216, at 1042-44 (arguing that consumers need informational intermediaries when data is not presented in a comparative format).

244. *See* J. Edward Russo et al., *Nutrition Information in the Supermarket*, 13 J. CONSUMER RES. 48, 62, 64-65 (1986).

245. *See id.* at 59, 67; Jin, *supra* note 179, at 13, 15.

246. *See* Viscusi et al., *supra* note 182, at 356-61.

247. *See* Michael J. Fishman & Kathleen M. Hagerty, *Mandatory Versus Voluntary Disclosure in Markets with Informed and Uninformed Customers*, 19 J.L. ECON. & ORG. 45, 50 (2003); Lambert, *supra* note 216, at 1024 n.77, 1038 n.117, 1061-62.

248. *See, e.g.*, Mathews, *supra* note 242 (describing FDA drug-labeling rules aimed at physicians).

risks of the substances described and of pricing those risks.[249] The fact that disclosure systems are often used where substantive regulation is difficult may increase the likelihood that they will require the disclosure of information whose relevance is poorly understood.[250]

4. Examples

The complicated mechanisms by which disclosure systems operate is illustrated by the TRI, which was successful in reducing toxic releases.[251] Because the information was so widely used by political groups, by the media, and by investors, it is difficult to say what caused firms to adjust their behavior. Among the possibilities are the fear of substantive regulation,[252] the desire to preserve corporate goodwill with consumers and workers,[253] the desire to preserve the personal reputation of managers, the sudden realization by managers that they were polluting,[254] concern for the firm's stock price in view of investor reaction either to the pollution itself or to the potential regulatory response to the fact of pollution,[255] or, most likely, a combination of these factors.[256]

Campaign finance disclosure, which requires reporting of the sources and amounts of contributions and expenditures,[257] tends to operate through intermediaries such as interest groups, political parties, and the media, who have an interest in compiling that information and drawing it to the attention of voters.[258] Moreover, the information itself operates as a signal about additional, undisclosed information. The identity of a candidate's or proposition's supporters can help voters decide how to vote, especially if the supporters have

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249. *See supra* note 218; *see also* Karkkainen, *supra* note 11, at 325 (noting that information disclosed under the Hazard Communication Standard is not standardized or presented in useful form).

250. *See* GRAHAM, *supra* note 7, at 18-19 (arguing that nutrition and other risk information is—and should be—of limited utility because no one really understands the targeted risks); *cf.* Karkkainen, *supra* note 11, at 291 (noting, as a benefit of the TRI, that it does not require the EPA to determine the risk of a substance).

251. *See* Karkkainen, *supra* note 11, at 287-88. For an excellent discussion of the relevant mechanisms by which the TRI operated, see *id.* at 294-331.

252. *See id.* at 311.

253. *See id.* at 323-28.

254. *See id.* at 261, 295-300 (arguing that the standardized and easily analyzed TRI data enabled managers to address toxic releases and provided benchmarks by which they could measure their progress).

255. *See id.* at 323-24.

256. *See id.* at 328-29.

257. *See* 2 U.S.C. § 434(f)(1)-(2) (Supp. 2002).

258. *See* Garrett & Smith, *supra* note 125, at 297-98 (noting the role of political parties and interest groups in simplifying voter choice). *But see* Elizabeth Garrett, *The William J. Brennan Lecture in Constitutional Law: The Future of Campaign Finance Reform Laws in the Courts and in Congress*, 27 OKLA. CITY U. L. REV. 665, 690-91 (2002) (noting that intermediaries tend to provide incomplete and one-sided information).

well-known ideological or political positions.[259] Similarly, if the goal of campaign finance disclosure is discouraging corruption, rather than or in addition to informing voters,[260] then the information is likely to be used by opposing parties and the media to draw attention to patterns of donations and behavior. That attention in turn operates through a reputational effect.

The disclosure of labor practices can provide ammunition for various groups in the political process. It is also expected to lead to consumers' and investors' refusing to deal with companies with unacceptable labor practices.[261] This expectation is based on a number of perhaps unfounded assumptions: first, that consumers and investors care enough about labor practices to act on that interest *when making purchasing decisions*;[262] second, that consumers and investors understand the implications of the information they receive;[263] and third, that firms will respond to the behavior of consumers and investors by improving labor practices.[264] The design of the disclosure system can take these variables into consideration once the mechanism of the system's operation is understood.[265]

D. Disadvantages to the Use of Disclosure as Regulation

Even if a regulator has an identifiable goal that is likely to be met by the disclosure of information, there are additional considerations it must take into account. Disclosure has costs, including costs to create, compile, and publish the relevant information,[266] and the costs of any particular disclosure scheme may outweigh its benefits.[267] Disclosure schemes, like all regulation, can also have unin-

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259. *See* Garrett, *supra* note 258, at 678-80.

260. *See* Elizabeth Garrett, *McConnell v. FEC and Disclosure*, 3 ELECTION L.J. 237, 238-42 (2004). Professor Garrett describes the Justices' evaluation of the purposes of campaign finance disclosure and its method of operation, including the importance of intermediaries and the use of heuristics, *id.* at 239-40, as well as its possible negative effects, *id.* at 241-43. She also notes the Court's emphasis on disclosure of the true identities of contributors not only to deter corruption but also to ensure informed voting. *Id.* at 240-41.

261. *See* Doorey, *supra* note 127, at 357, 378, 390, 393, 394.

262. It is one thing to care about labor practices and another to refuse to purchase an otherwise desirable product because of them. *See* Pat Auger & Timothy M. Devinney, *Do What Consumers Say Matter? The Misalignment of Preferences with Unconstrained Ethical Intentions* (Apr. 2006), *available at* http://ssrn.com/abstract=901861.

263. *See* Doorey, *supra* note 127, at 380-84 (noting that wages that seem outrageous to American consumers may in fact be quite high and attractive for workers in foreign locations).

264. *See id.* at 386-88 (describing unintended consequences such as firms simply stopping production and thereby significantly worsening conditions for local workers).

265. *See id.* at 395-404 (evaluating several proposed disclosure schemes based on these criteria).

266. *See* Sage, *supra* note 7, at 1721-22.

267. *See* Sunstein, *supra* note 8, at 626.

tended consequences.[268] If disclosure of more information is tied to the disclosure of some, the scheme may discourage the disclosure of any information at all.[269] The costs of complying with disclosure obligations may result in some actors withdrawing from the market.[270] In addition, required disclosure can lead disclosers to "game" the statistics.[271] Report cards on bypass surgery reportedly caused some hospitals to reject sicker patients.[272] Law professors may be familiar with the practice of some law schools to alter the statistics used in the vilified *U.S. News and World Report* survey.[273]

Intended consequences also have costs. California may have intended Proposition 65 to force producers to reformulate their products to exclude "cancer-causing" substances. That reformulation had costs. Because the regulation used disclosure, however, the cost-benefit analysis, if any, was unlikely to focus on those costs. Instead, most regulators consider only the direct costs of producing the information.[274] In fact, no one considered whether the costs of reformulating a product outweighed the risk from the substances involved: the consumer did not have the necessary information, and, because consumers generally avoided products bearing the warning label, the producers had to weigh the costs of reformulation against the benefit of continuing to sell their products at all.

In sum, although there are a variety of ways in which disclosure systems can accomplish their goals, their effectiveness will be limited by a number of factors that must be taken into account in the design of the system. Moreover, only when one understands the mechanism by which the disclosure system will operate can one assess the likelihood that it will in fact achieve its goal and what the true costs of the disclosure requirement are.[275] Because disclosure systems are politi-

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268. *See* David Wessel, *Grading Surgeons May Be Healthy Practice,* WALL ST. J., July 6, 2006, at A2 (noting that poorly rated surgeons may have moved to states that did not have report cards); Elizabeth Garrett & Adrian Vermeule, *Transparency in the Budget Process* 11 (Univ. of S. Cal. L. Sch., Legal Studies Working Paper Series No. 6, Jan. 23, 2006) (noting that transparency early in the budget process can allow special interest groups to intervene in the legislative process).

269. Sunstein, *supra* note 8, at 628.

270. *See* Sage, *supra* note 7, at 1721-22.

271. *See* Hu, *supra* note 35, at 1317.

272. David Wessel, *Eatery Report Cards: A Model for Schools?*, WALL ST. J., May 29, 2003, at A2.

273. *See* Jeffrey E. Stake, *The Interplay Between Law School Rankings, Reputations, and Resource Allocation: Ways Rankings Mislead*, 81 IND. L.J. 229, 232-42 (2006); Alex Wellen, *The $8.78 Million Maneuver*, N.Y. TIMES, July 31, 2005, § 4A, at 18.

274. *See* Executive Compensation and Related Party Disclosure, 71 Fed. Reg. 6542 (proposed Feb. 8, 2006) (to be codified at 17 C.F.R. 228-40, 245, 249, 274), *available at* http://www.iasplus.com/usa/0601seccompensation.pdf (discussing variety of costs of collection, preparation, and publication of information but not considering the costs of any consequences).

275. *Cf.* MAGAT & VISCUSI, *supra* note 17, at 1-2 (noting the need for cost-benefit analysis in adopting disclosure systems).

cally palatable and relatively cheap, however, they are often adopted without that understanding and assessment.

V. CONCLUSIONS AND RECOMMENDATIONS

Commentators have suggested a number of factors determining whether a disclosure system is likely to succeed.[276] For example, a disclosure scheme is more likely to adapt and survive over time if disclosers have a stake in its success; if the disclosers receive some benefit from disclosure; and if the disclosure is aimed at organized, committed user groups.[277] Disclosure systems are less likely to work where disclosers are required to report negative information about themselves and where the information must be newly created.[278] Disclosure obligations must also be enforced.[279] The enforcement scheme, like the disclosure system itself, must be designed in accordance with the goals of the system and its method of operation.

A more complete analysis of a variety of disclosure schemes suggests additional criteria for success and considerations for adoption. First, a regulator must identify a specific regulatory goal, preferably a non-pretextual one, for the disclosure system.[280] Increasing the amount of information available to the public is not an acceptable regulatory goal in itself.[281] Rather, if the goal of a disclosure system is to provide more information to consumers, investors, or the public, the regulatory purpose must address why that information will be useful to an underlying regulatory goal and why it is not currently available. The fact that a disclosure scheme may appear less intrusive than traditional regulation should not excuse regulators from stating their goal, not least because the goal of a disclosure system will determine the mechanism by which it is likely to operate.[282]

Second, the regulator must identify one or more mechanisms through which the disclosure system will operate and should show that the operation of that mechanism is likely to achieve the regula-

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276. *See* GRAHAM, *supra* note 7, at 29-30.

277. *See* Fung et al., *supra* note 232, at 38-40.

278. *See id.* at 34 (noting the potential budget impact and the negative effects on reputation).

279. *See, e.g.*, Sage, *supra* note 7, at 1821-23.

280. *See* BREYER, *supra* note 10, at 34-35. Traditionally, regulation was justified by the inability of the market to deal with "structural" problems. *Id.* at 15. The first step of such regulation is to identify the problem with the market. *See id.* at 15-34 (describing possible problems requiring regulatory intervention).

281. One can imagine a Monty-Pythonesque department of information, charged by Congress with ensuring that all sorts of useful and useless information are disseminated. At present, however, there is no such agency (other than, some might argue, the SEC).

282. *Cf.* Lambert, *supra* note 216, at 1013-14, 1032-33 (arguing that the process of adopting workplace safety regulations should be first, to identify the problem; second, to identify the market failure responsible for the problem; and third, to identify the appropriate way to fix that market failure).

tory goal.[283] If the regulator cannot identify such a mechanism, disclosure is not an appropriate method of regulation.[284] In addition, the disclosure system must be designed with the operative mechanism in mind. If the system is intended to operate through its effect on a decision-maker's reputation, the information must be designed to reach an audience the decision-maker cares about and it must contain information the audience is likely to find interesting. If disclosure is expected to operate through the political process, it must be directed at an issue likely to attract the attention of an organized interest group.

If the disclosure system is intended to operate through a market of some kind, that market must be further examined. The regulator must show that additional information will be sufficiently salient and in sufficiently usable form to reach and have an effect on the behavior of market participants, either directly or through the operation of intermediaries. Whether market participants are likely to respond rationally to the proposed information and whether they have the power to change others' behavior by their own market behavior must also be considered. The content and format of the disclosed information should be designed to account for the target audience's likely heuristic biases and decision-making processes. The biases of any intermediaries must also be taken into consideration. The regulator must also conclude that the market is sufficiently competitive that decision-makers have meaningful choices and producers have an incentive to react to changes in demand. To the extent the behavior of firms is part of the picture, the regulator must consider whether firms are likely to respond to the market signal as hoped.

If the disclosure system is not expected to operate through any of these mechanisms, the regulator must identify an alternative. Perhaps the disclosure requirement is intended to force firms to gather information they would otherwise ignore and thereby improve managers' performance. Perhaps the disclosure is intended to allow cooperation among firms by making information about innovations available both for further development and for challenge and testing. Such disclosure schemes must be carefully designed to provide information in a form useful for those purposes.

Once the regulator has identified the mechanism by which a disclosure system is expected to operate, she must consider the costs of the scheme. These will include not only the costs of creating, gathering, and disseminating the information but also the costs resulting

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283. *See* BREYER, *supra* note 10, at 191-94 (describing appropriate steps to creating disclosure requirements); *see also* Lambert, *supra* note 216, at 1067-69 (proposing structure for adoption of workplace safety disclosure requirements).

284. *See* BREYER, *supra* note 10, at 193.

from disclosers or targets changing their behavior in response to the scheme.[285] The costs of unintended consequences, which are likely to be identified during a notice-and-comment process, must also be considered. As with all regulation, all those costs must be weighed against the anticipated benefits before the scheme is adopted. In short, adoption of a disclosure system should not be easy.

In sum, every disclosure scheme must have an articulated purpose, an identified mechanism through which it can accomplish that purpose, a design that takes into account the operation of that mechanism, and a careful analysis showing that the benefits of the system outweigh its costs. Traditionally, securities disclosures have met these criteria, although some specific disclosure requirements may be of questionable utility. Moreover, securities disclosure operates in a very unusual context. Securities regulation can serve as a model for other disclosure systems only if they are similarly crafted, carefully considered, and designed to operate by identifiable and plausible mechanisms.

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285. *See* Rubin, *supra* note 191, at 390 (noting that firms can usually find a way to avoid regulation if they want to badly enough).