This Article analyzes the importance of trust in securities investing and how guilt about breaching such trust has implications for securities regulation. Both U.S. federal securities laws and the regulations of the National Association of Securities Dealers impose high standards of professional conduct upon securities professionals. But exactly what are and should be the legal responsibilities of securities professionals remain the subject of much debate. In particular, courts disagree over when broker-dealers are fiduciaries of their clients. A legal consequence of a fiduciary relationship is a duty of fair dealing. This Article is the first to analyze the emotional, moral, and psychological consequences of broker-dealers’ being fiduciaries. This Article explains how finding that securities professionals are fiduciaries can alter both expectations about securities professionals’ behavior and that behavior itself, as well as cause those professionals to feel guilt from breaching their clients’ trust or pride from honoring such trust. This insight has implications for the costs and benefits of finding a fiduciary duty. In particular, there is an emotional or psychological deterrence effect, in addition to the deterrence effect of monetary fines or legal sanctions, from finding a fiduciary duty. This Article demonstrates how fiduciary law can affect behavior even without extensive enforcement or severe legal penalties.

INTRODUCTION

Most individuals do not have the inclination, knowledge, or time to rely directly upon the companies in which they have interests for...
the requisite knowledge to make informed investment decisions.¹ Instead, individuals often hire securities professionals for assistance and advice. Individuals who make their own investment decisions do worse on average net of trading commissions than do stock market indices.² Even those who invest directly in securities markets usually do so via such financial intermediaries as brokers and dealers. There are well-known incentive problems with such principal-agent relationships.³ A recent Business Week cover story focused on such problems.⁴ Most securities professionals are employed by large organizations, such as financial conglomerates, investment banks, or boiler rooms, in which broker-dealers push certain securities to strangers by making cold calls (high-pressure telephone calls).

Securities professionals face not only behavioral norms and organizational rules of conduct but also industry self-regulation and legal responsibilities. Federal securities laws in the United States impose high standards of professional conduct upon how broker-dealers can

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and should interact with their clients. But the exact scope of broker-dealers’ legal obligations toward investors remains the subject of much debate. There has been pressure for increased federal regulation to govern the conduct of broker-dealers because it is unclear whether an effective regulatory system can rest on the application of such broad-based and well-established securities regulations as Rule 10b-5, promulgated under the Securities Exchange Act. In particular, courts and commentators disagree over when the relationship between broker-dealers and investors is fiduciary in nature under federal or state law and thus when broker-dealers have well-defined duties toward investors.

This Article is the first to analyze the emotional, psychological, and moral consequences of the answers to the questions of when and to what extent broker-dealers are and should be treated as fiduciaries of their clients. Recently, a law and economics scholar normatively evaluated the regulation of securities professionals. His analysis was premised on an economic theory of asymmetric information that does not involve any emotions. In particular, the article did not analyze whether imposing a fiduciary duty of loyalty triggers guilt on the part of securities professionals.

This Article analyzes the interaction between expectations about the behavior of securities professionals and securities professionals’

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7 See James D. Cox et al., Securities Regulation 1125-26 (3d ed. 2001) (noting this disagreement and providing supporting references); Donald C. Langevoort, Fraud and Deception by Securities Professionals, 61 Tex. L. Rev. 1247, 1279-83 (1983) (considering the extent to which Rule 10b-5 should apply to “the full range of activities of securities professionals,” and reviewing court opinions which have or have not held brokers to a fiduciary standard depending upon the underlying conduct); Donald C. Langevoort, Selling Hope, Selling Risk: Some Lessons for Law from Behavioral Economics About Stockbrokers and Sophisticated Customers, 84 Cal. L. Rev. 627, 675-80 (1996) (introducing the questions that inform this debate and suggesting in which situations a fiduciary relationship may or may not be appropriate between brokers and clients).
emotions. It considers whether guilt can motivate securities professionals’ decisions and the legal implications of guilt for the regulation of securities professionals. The basic notion is that guilt provides an internal mechanism for legal compliance. In other words, guilt provides a multiplier deterrence effect beyond the external mechanisms for legal compliance provided by private litigation, public enforcement, and sanctions. This Article applies the analytical tool of psychological game theory to analyze the interaction between the legal responsibilities of securities professionals toward their clients and the behavioral norms of securities professionals. It concludes that securities law can foster particular behavioral norms and that choosing rules designed to increase the guilt of broker-dealers can foster trust and trustworthy behavior.

This Article focuses on broker-dealers, but its analysis applies more generally to such other financial actors as securities analysts, boards of directors, corporate officers, and managers. The analysis in this Article is based on formal models of trust and so applies to any relationship involving trust. The recent wave of highly publicized corporate and accounting scandals reinforces the importance of investors’ trust for well-functioning capital and securities markets.

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11 Cf. Amitai Etzioni, When It Comes to Ethics, B-Schools Get an F, Wash. Post, Aug. 4, 2002, at B4 (arguing for more ethics instruction at business schools to reduce the likelihood of business scandals); Robert Prentice, An Ethics Lesson for Business Schools, N.Y. Times, Aug. 20, 2002, at A19 (arguing that business schools should teach their students that disobeying laws has personal and social consequences).

12 See Margaret M. Blair & Lynn A. Stout, Trust, Trustworthiness, and the Behavioral Foundations of Corporate Law, 149 U. Pa. L. Rev. 1735, 1789-99 (2001) (making a similar argument that fiduciary duty principles can alter directors’ preferences and behavior where external sanctions are not available).

13 See Jeanne Cummings, Bush to Seek Tougher Penalties in Assault on Corporate Fraud, Wall St. J., July 9, 2002, at A1 (quoting President Bush’s statement that “the free-enterprise system . . . requires trust. We’ve had some destroy the trust of the American people, and we need to do something about it”); Jeanne Cummings et al., Securities Threat: Bush Crackdown on Business Fraud Signals New Era, Wall St. J., July 10, 2002, at A1 (quoting Representative Patrick Toomey’s assertion that recent accounting scandals have eroded “the trust and the confidence that is absolutely vital to the functioning of our capital markets”); Getting Investors to Trust Again, Bus. Wk., Mar. 4, 2002, at 120, 120 (opining that “if Corporate America fails to reform itself quickly, investors could go on an all-out strike against stocks” and that “[t]o restore investor trust, corporate executives, regulators, and legislators should act fast”); Stephen Labaton, S.E.C. Choice Says He’s No Harvey Pitt, N.Y. Times, Feb. 6, 2003, at C1 (reporting on the pledge of President Bush’s nominee to chair the SEC, William H. Donaldson, to restore investors’ confidence in Wall Street); The Tyco Market, Wall St. J., June 4, 2002, at A20 (edi-
even though “trust plays a key role in the formation and function of financial markets,” it “is an important consideration not often recognized by those considering the role of law in financial markets.”

An economic definition of $F$'s being a fiduciary of $P$ is that $P$'s consumption, utility, or wealth must enter into $F$'s utility function at least on a par with $F$'s own consumption, utility, or wealth. $F$ breaches $F$'s fiduciary duty if $P$'s consumption, utility, or wealth does not enter into $F$'s utility function or does so, but only below $F$'s own consumption, utility, or wealth. Finding a fiduciary relationship between investors and broker-dealers implies that broker-dealers owe investors a duty of fair dealing. The existing discourse on the question of when broker-dealers are fiduciaries focuses on the legal consequences of the answer to that question. But in the oft-quoted words of Justice Felix Frankfurter, “to say that a man is a fiduciary only begins [the] analysis.”

Once a court determines that particular corporate actors are fiduciaries, the legal, cognitive psychological, moral, and emotional sanctions of such a finding are strengthened by clarifying the precise nature of the duty of loyalty that is involved. For example, some lawyers and commentators have argued that securities analysts at investment banks who make “buy” recommendations for securities to the public owe a fiduciary duty to disclose the role their employers play in the Initial Public Offering (IPO) of those securities. Motivated in part by
such concerns, the Securities and Exchange Commission (SEC) issued a publication warning investors about the potential conflicts of interest that securities analysts face in making stock recommendations. On February 6, 2003, the SEC voted unanimously “to require Wall Street stock and bond analysts to vouch that the views expressed in their research reports are genuinely their own.”

On June 14, 2001, the U.S. House of Representatives Subcommittee on Capital Markets, Insurance and Government-Sponsored Enterprises held hearings entitled Analyzing the Analysts. In the opening statement of part two of those hearings, on July 31, 2001, Chairman Michael G. Oxley of the Committee on Financial Services stated it should be standard practice for “the news media to require sources to disclose whether they hold any interest in stock, long or short, and whether their firms have business relationships with the company.”

The Sarbanes-Oxley Act of 2002, signed into law on July 30, 2002 in response to a wave of accounting abuses and corporate fraud, addresses conflicts of interest by securities analysts and auditors. The Act also mandates that the SEC issue rules that require a company to disclose whether or not—and if not, why not—a company has adopted a code of ethics for senior financial officers.

The SEC, on April 25, 2002, launched a formal inquiry, in conjunction with the New York Stock Exchange (NYSE), the National Association of Securities Dealers (NASD), the North American Securities Administrators Association, and New York Attorney General Eliot Spitzer, into whether analysts provided overly optimistic research reports about their investment banking clients. E-mail communications...
tions revealed that some analysts misled investors by publicly making positive stock recommendations while privately admitting the poor condition of those stocks. On May 8, 2002, the SEC approved rule changes that the NYSE and NASD had proposed to address research analyst conflicts of interest. On May 21, 2002, Merrill Lynch settled with the New York Attorney General agreeing to “change how it monitors and pays its stock analysts,” including decoupling securities analysts’ pay from investment banking deals. Some commentators and scholars, however, believe that neither the NYSE and NASD rule changes nor the settlement agreement will do enough to end the fundamental conflict of securities analysts serving two masters: corporations that pay for investment banking services and investors who receive securities recommendations. Holding securities analysts to be

26 See Noam Cohen, Swimming with Stock Analysts, or Sell Low and Buy High . . . Enthusiastically, N.Y. TIMES, May 5, 2002, § 4, at 7 (reporting on and excerpting e-mail messages of Merrill Lynch’s analyst Henry Blodget concerning Infospace, Internet Capital Group, AOL, and 24/7 (an Internet marketing company) in October 2000); Gretchen Morgenson, Analyze This: What Those Analysts Said in Private, N.Y. TIMES, Sept. 15, 2002, § 3, at 1 (reporting on a spate of such e-mail messages at Credit Suisse First Boston concerning AOL Time Warner in March 2001); Wall Street Prophets, CBSNews.com, at http://www.cbsnews.com/stories/2002/05/29/60II/main510454.shtml (May 29, 2002) (reporting that, after Spitzer subpoenaed thirty thousand pages of internal e-mails from Merrill Lynch, he “found that what the analysts were telling each other privately was profoundly different than what they were telling the public”).


29 Cf. Patrick McGeehan, $100 Million Fine for Merrill Lynch, N.Y. TIMES, May 22, 2002, at A1 (questioning the impact of the settlement on analyst abuses); Gretchen Morgenson, Good Deal for Merrill. How About Investors?, N.Y. TIMES, May 22, 2002, at C1 (noting that while the settlement is good for Merrill Lynch, “it remains to be seen whether a result will be as big a victory for investors”); Randall Smith & Aaron Lucchetti, How Spitzer Pact Will Affect Wall Street, WALL ST. J., May 22, 2002, at C1 (concluding that it is “unclear how deeply the new reforms [Spitzer] has won from Merrill Lynch & Co. will cut into the hand-in-glove working relationship between stock analysts
fiduciaries of their client investors would be another way to help resolve this conflict. In particular, holding securities analysts as owing their investing clients duties of loyalty and disclosure—much like those financial news columnists owe their audiences—would help to restore investor trust and confidence.\textsuperscript{30}

The rest of this Article is organized as follows: Part I offers a brief overview of the statutory and case law regulating broker-dealers. Part II provides a model of the duty of loyalty in a fiduciary investment relationship. The model applies psychological trust games in a principal-agent relationship to analyze the relationship between investors and their broker-dealers. Psychological games have been utilized to provide insights about social norms and organizational cultures.\textsuperscript{31} The models I employ extend traditional nonpsychological game-theoretic models of the fiduciary duty of loyalty.\textsuperscript{32} The formal model in Part II explains how imposing a fiduciary duty of loyalty on broker-dealers can mitigate or deter the misappropriation of investments, not only through financial or monetary penalties, but also by appealing to a desire to avoid feelings of remorse or guilt. Albert Hirschman has noted that making behavior illegal stigmatizes that behavior more effectively than raising the cost of that behavior, via taxes, for example.\textsuperscript{33} In other words, guilt provides the benefits of deterrence at rather low cost. The model in Part II explains how the imposition of a fiduciary duty of loyalty can alter the behavior of broker-dealers and their clients even if that duty is not vigorously enforced. Thus, psychological game-theoretic models of trust permit a formal method of modeling the emotional, moral, and psychological effects, as opposed to the legal effects, of imposing a fiduciary duty of loyalty. Part III analyzes ex-

\begin{itemize}
  \item See, e.g., Zweig v. Hearst Corp., 594 F.2d 1261, 1266-71 (9th Cir. 1979) (holding that financial journalists owe duties of disclosure to their readers).
  \item See, e.g., Robert Cooter & Bradley J. Freedman, \textit{An Economic Model of the Fiduciary’s Duty of Loyalty}, 10 TEL AVIV UNIV. STUD. L. 297, 301 fig.1 (1991) (proposing such a model of the fiduciary’s duty of loyalty).
  \item Albert O. Hirschman, \textit{Against Parsimony: Three Easy Ways of Complicating Some Categories of Economic Discourse}, 1 ECON. & PHILOS. 7, 10 (1985).
\end{itemize}
tensions of Part II, including the roles of guilt and pride in employee investing.

I. REGULATION OF BROKER-DEALERS

Many securities firms are brokers and dealers as those terms are defined in the Securities Exchange Act. Section 3(a)(4) of the Securities Exchange Act defines a broker to be “any person engaged in the business of effecting transactions in securities for the account of others.” Section 3(a)(5) defines a dealer to be “any person engaged in the business of buying and selling securities for his own account.” The SEC has the authority to hold administrative hearings to discipline broker-dealers. In addition, the national securities exchanges and registered securities associations, such as the NASD, have the power and responsibility to discipline their member firms. These self-regulatory organizations (SROs) have disciplinary authority over not only their own rules, but also federal securities laws and rules promulgated by the SEC. For example, the NASD has adopted regulations intended to promote just and equitable trade principles. Sections 19(d) and 19(e) of the Securities Exchange Act provide the SEC with the authority to review, modify, or set aside (but not increase) SRO sanctions.

Brokers and dealers must register with the SEC unless the SEC exempts them from doing so. The SEC can deny or revoke the registration of a broker or dealer if there is evidence of misconduct or false statements made to the SEC. The SEC can set standards of competence, experience, operational capacity, training, and other qualifica-

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32 Id. § 78c(a)(5)(A).
33 Id. § 78o(b)(4).
34 Id. §§ 78(d), 78(e).
35 Id. §§ 78(a)(1), 78(a)(2).
36 Id. §§ 78o(b)(1), 78o(b)(4).
tions it deems “necessary or appropriate in the public interest or for the protection of investors.” The SEC regulates margin requirements for extending credit to investors, the borrowing and hypothecation of securities, the trading of securities by broker-dealers for their own accounts, and the keeping of books, records, and reports by broker-dealers. As this list makes clear, the SEC has the power under various provisions of the Securities Exchange Act to regulate specific aspects of the broker-dealer business. It does not, however, have general authority to regulate broker-dealers’ handling of their customers’ accounts.

Because the Securities Exchange Act does not provide the SEC with general authority to regulate the conduct of broker-dealers, the SEC applies antifraud statutory provisions to regulate broker-dealer conduct. The SEC has promulgated a number of rules concerning disclosure, fraud, and manipulation under the general antifraud provision for broker-dealers, section 15(c) of the Securities Exchange Act. The SEC has derived even more authority under section 10(b) of the Securities Exchange Act. For example, Rule 10b-10 requires that broker-dealers “disclose specified information . . . to customers at or before completion of a transaction” and that they send customers a bill or confirmation of their purchase of a security. More generally, Rule 10b-3 prohibits deceptive or manipulative acts, courses of business, or practices by brokers or dealers. Most generally, Rule 10b-5 prohibits the use of deceptive or manipulative devices by any person “in connection with the purchase or sale of any security.” Rule 10b-5 provides a basis for private litigation, SEC enforcement actions, and criminal actions brought by the Department of Justice.

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42 Id. § 78o(b)(7).
43 Id. § 78g.
44 Id. § 78h.
45 Id. § 78k.
46 Id. § 78q(a).
47 17 C.F.R. §§ 240.15c1-1 to 15c2-12 (2002).
49 Id. § 78q(b).
50 17 C.F.R. § 240.10b-10 (2000).
51 Id. § 240.10b-3.
52 Id. § 240.10b-5.
53 Cf. Arnold S. Jacobs, The Impact of Securities Exchange Act Rule 10b-5 on Broker-Dealers, 57 CORNELL L. REV. 869, 876 (1972) (arguing that broker-dealers should be liable to those who it can reasonably be foreseen will rely on their advice); John M. Salmanowitz, Note, Broker Investment Recommendations and the Efficient Capital Market Hy-
Despite its broad scope, Rule 10b-5 does not address all forms of deceitful securities behavior. Rule 10b-5 applies if a broker lies to a customer in order to generate commissions from a fraudulently induced purchase or sale of a security. Unfortunately, broker-dealer misconduct often takes on more subtle forms of deceit than outright lies. More often, a broker or dealer takes informational advantage of its customers’ deference and trust. For example, in a recent Supreme Court case, a broker made personal use of the proceeds from selling the securities in the discretionary account of an elderly man and his mentally retarded daughter.\(^54\)

The scope of Rule 10b-5 in dealing with misconduct by brokers and dealers has expanded to address these concerns in two ways. The first and more traditional approach is deciding that a fiduciary relationship exists between a broker-dealer and her customers. In such a case, the broker-dealer owes her clients fiduciary duties and obligations. For example, in dicta in SEC v. Zandford, Justice Stevens stated regarding the “in connection with” requirement of Rule 10b-5 that “any distinction between omissions and misrepresentations is illusory in the context of a broker who has a fiduciary duty to her clients.”\(^55\)

There is also widespread consensus that broker-dealers owe their clients a duty of best execution for securities transactions.\(^56\) Courts disagree, however, over the circumstances under which the relationship between broker-dealers and their clients is a fiduciary one.\(^57\) Some courts presume that broker-dealers are not fiduciaries of their clients.\(^58\) Other courts presume that broker-dealers are fiduciar-

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\(^{55}\) Id. at 1905.

\(^{56}\) See, e.g., Newton v. Merrill, Lynch, Pierce, Fenner & Smith, Inc., 135 F.3d 266, 269 (3d Cir. 1998) (en banc) (acknowledging the parties’ agreement regarding the existence of the duty of best execution).

\(^{57}\) See NORMAN S. POSER, BROKER-DEALER LAW AND REGULATION: PRIVATE RIGHTS OF ACTION §§ 2.1-2.2 (1994) (outlining the “relevant circumstances that may affect . . . whether a broker-dealer is acting in a fiduciary capacity” as determined by courts in different jurisdictions); Carol R. Goforth, STOCKBROKERS’ DUTIES TO THEIR CUSTOMERS, 33 ST. LOUIS U. L.J. 407, 418-31 (1989) (cataloguing the court decisions that reveal a continuum of possibilities for determining whether a fiduciary duty exists).

ies even of sophisticated clients.\textsuperscript{59} Many courts take a middle position and engage in ad hoc detailed and unpredictable inquiries as to the nature of the relationship between broker-dealers and their clients, focusing often on the level of broker discretion over the account in question.\textsuperscript{60} Thus, the common law does not provide a uniform set of rules or even standards from which broker-dealers can infer the obligations they owe their clients or even whether a fiduciary relationship exists.

Two former SEC Commissioners, Edward Fleischman and Joseph A. Grundfest, also questioned whether broker-dealers have a broad fiduciary obligation to deal fairly with their customers. In one case in which the SEC ruled that securities firms must give priority to their customers’ limit orders before they execute trades for their own accounts as a matter of simple fiduciary obligation, Commissioners Fleischman and Grundfest dissented from the majority’s broad fiduciary analysis.\textsuperscript{61} The two Commissioners would have required further proceedings designed to determine a reasonable customer’s expectations about her broker’s role, given the multiple conflicting roles that securities firms have had—visibly and for a long time—in securities markets and the existing trade practices of securities firms.\textsuperscript{62} These Commissioners noted that broker-dealers engage in arbitrage, corporate finance, and market making in addition to executing their customers’ orders and providing advice or information.\textsuperscript{63} Thus, they ar-

\textsuperscript{59} See, e.g., Romano v. Merrill Lynch, Pierce, Fenner & Smith, Inc., 834 F.2d 523, 530 (5th Cir. 1987) (finding that although the investor was knowledgeable about investments, his broker-dealer still owed him a fiduciary duty).
\textsuperscript{60} See, e.g., Davis v. Merrill Lynch, Pierce, Fenner & Smith, Inc., 906 F.2d 1206, 1216 (8th Cir. 1990) (noting that “whether an account is discretionary or nondiscretionary is only one factor” in considering whether a fiduciary duty exists, and highlighting the greater importance of “examining the entire broker-customer relationship”); Kwiatkowski v. Bear, Stearns & Co., No. 96 Civ. 4798 (JGK), 1999 U.S. Dist. LEXIS 19966, at *29 (S.D.N.Y. Dec. 22, 1999) (stating that the scope of the fiduciary duty owed by a broker to a client may depend on “the particular relationship between the broker and the client and the scope of the matters with which the broker is entrusted”); Paine, Webber, Jackson & Curtis, Inc. v. Adams, 718 P.2d 508, 516 (Colo. 1986) (emphasizing “the degree of the stockbroker exercised over the customer’s account” as crucial in determining the existence of a fiduciary duty).
\textsuperscript{61} In re Application of E.F. Hutton & Co., [1988-1989 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 84,303, at 89,335 (July 6, 1988) (Grundfest, Comm’r, dissenting); id. at 89,336 (Fleischman, Comm’r, dissenting).
\textsuperscript{62} Id. at 89,333-36 (Grundfest, Comm’r, dissenting); id. at 89,336-40 (Fleischman, Comm’r, dissenting).
\textsuperscript{63} Id. at 89,333-36 (Grundfest, Comm’r, dissenting); id. at 89,336-40 (Fleischman, Comm’r, dissenting).
gued it would be reasonable for customers not to expect their brokers to be fiduciaries.

The second and less traditional approach to the obligations that broker-dealers have toward their clients is the so-called shingle theory. The shingle theory presumes that being a broker-dealer involves hanging out a shingle to solicit customers. The shingle, then, makes an implicit representation of fair dealing to those clients. Courts rely on both the federal securities laws and securities industry standards of fair dealing when utilizing the shingle theory to analyze broker-dealer conduct. According to the courts, breaching a duty of fair dealing is fraudulent because it involves breaching the implied representation of fair dealing. The existence of a fraud allegation in connection with the purchase or sale of a security also brings the conduct within section 10(b) and Rule 10b-5. As a result, both the SEC and private plaintiffs can pursue the broker-dealer.

An example of an actionable fraud is the practice of excessive securities trading or turnover, referred to as churning. “Churning occurs when a securities broker buys and sells securities for a customer’s account, without regard to the customer’s investment interests, for the purpose of generating commissions.” Another judicial definition of churning focuses on “when a broker, exercising control over the frequency and volume of trading in the customer’s account, initiates transactions that are excessive in view of the character of the ac-

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64 See Charles Hughes & Co. v. SEC, 139 F.2d 434 (2d Cir. 1943) (containing the judicial origin of the shingle theory).
65 See id. at 436 (describing Charles Hughes & Co. as “[a]n over-the-counter firm which actively solicits customers”).
66 See id. at 436-37 (opining that when a broker-dealer “holds itself out as competent to advise in the premises . . . it should disclose the market price if sales are to be made substantially above that level”).
67 The NASD’s Rules of Fair Practice set forth various components of the shingle theory, including suitable recommendations to customers and a five percent markup policy. NASD Rules of Fair Practice, art. III, §§ 2, 4, NASD Manual (CCH) ¶¶ 2152, 2154 & cmts. (1994).
68 See Grandon v. Merrill Lynch & Co., 147 F.3d 184, 193 (2d Cir. 1998) (finding that “a private action under the antifraud provision of § 10(b) and Rule 10b-5 exists against broker-dealers who charge undisclosed, excessive markups on municipal bonds”).
69 See Arceneaux v. Merrill Lynch, Pierce, Fenner & Smith, Inc., 767 F.2d 1498, 1501 (11th Cir. 1985) (offering a detailed description of churning and the elements needed to prove it).
70 Thompson v. Smith Barney, Harris Upham & Co., 709 F.2d 1413, 1416 (11th Cir. 1983).
count. A final judicial definition of churning is “excessive trading by a broker disproportionate to the size of the account involved, in order to generate commissions.” To define trading as excessive, some courts examine a quantitative measure known as the Annualized Turnover Ratio (ATR) of a portfolio. The ATR of a portfolio is defined as its total cost of securities purchases over a year divided by the amount invested in the portfolio. An ATR value of 2 means that a portfolio’s turnover is “proportion[al] to buying and selling twice the value of [that] portfolio during a year.” A common rule of thumb is that an ATR value of 2 is considered possible evidence of churning, an ATR value of 4 creates a presumption of churning, and an ATR value of 6 is generally conclusive of churning.

This 2-4-6 ATR heuristic ignores the nature of the portfolio in question by assuming that all portfolios are similarly situated. Another heuristic finds churning if the ATR of a portfolio exceeds the average ATR of mutual funds with similar investment objectives as that portfolio, plus twice the standard deviation in the ATRs of mutual funds with investment objectives similar to that portfolio.

73 See Costello v. Oppenheimer & Co., 711 F.2d 1361, 1369 & n.11 (7th Cir. 1983) (noting the use of a turnover rate to demonstrate that a broker’s commission relative to the size of the account is unusually large).
74 Id.
75 See id. at 1369 n.11 (“The ‘turnover rate’ of an account is the ratio of the total cost of purchases made for the account during a given period of time to the amount invested . . . .”).
76 JOHN R. BOATRIGHT, ETHICS IN FINANCE 76 (1999).
77 Id.
78 A heuristic is a rule of thumb or mental shortcut used to simplify decision making. See Hillary A. Sale, Judging Heuristics, 35 U.C. DAVIS L. REV. 903, 905-14 (2002) (explaining how and why federal district judges utilize heuristics in securities fraud cases).
79 BOATRIGHT, supra note 75, at 76; see also Marian V. Heacock et al., Churning: An Ethical Issue in Finance, 6 BUS. & PROF. ETHICS J. 3, 3-4 (1987) (providing examples of churning heuristics); Donald Arthur Winslow & Seth C. Anderson, A Model for Determining the Excessive Trading Element in Churning Claims, 68 N.C. L. REV. 327 (1990) (proposing the use of mutual fund ATRs as reference points for determining if there has been excessive trading in broker-managed investment accounts, because mutual fund managers’ compensation does not depend on trading activity). But see Robert F. Almeder & Milton Snoeyenbos, Churning: Ethical and Legal Issues, 6 BUS. & PROF. ETHICS J. 22, 24-27 (1987) (criticizing such a proposal); see also Hecht v. Harris, Upham & Co., 283 F. Supp. 417, 435-36 (N.D. Cal. 1968) (“Churning cannot be[,] and need not be, established by any one precise rule or formula.”).
In addition to the above ATR heuristics, courts also examine the volume of commissions as a percentage of the broker’s income, the branch’s revenues, or comparable accounts other brokers handle.\textsuperscript{79} Finally, certain patterns of securities trading by a broker may be deemed to be churning even if they involve a low volume of trade. These suspicious patterns include cross trading, defined as transfers of securities among similar customer accounts of a broker; in-and-out trading, defined as securities purchases followed almost immediately by securities resales; and switching, defined as replacing a security with one with similar characteristics.\textsuperscript{80}

In addition to applying the shingle theory against brokers who have recommended securities that are unsuitable for their customers, courts use the suitability doctrine to regulate broker-dealer conduct under section 10(b).\textsuperscript{81} Suitability refers to the grades of, diversification of, liquidity of, and trading techniques for securities.\textsuperscript{82} The viability of a section 10(b) unsuitability claim was recognized in a case involving a recently retired woman who wanted a yield of $1000 per month from a principal of $100,000 that she desired to invest from a divorce settlement.\textsuperscript{83} Although a broker sold her convertible debentures with the desired yield, he did so at a considerable markup and without informing her of the risk involved. She contended that had

\textsuperscript{79} See \textit{Hecht}, 283 F. Supp. at 435-36 (considering the account’s turnover rate and pattern of in-and-out trading, and comparing the dealer’s profits with the customer’s investment).

\textsuperscript{80} See \textit{Costello v. Oppenheimer & Co.}, 711 F.2d 1361, 1369 nn.9-10 (7th Cir. 1983) (defining in-and-out and cross trading); \textit{Hecht}, 283 F. Supp. at 427 (discussing switching).

\textsuperscript{81} See \textit{Brown v. E.F. Hutton Group, Inc.}, 991 F.2d 1020, 1031 (2d Cir. 1993) (applying the suitability doctrine in a section 10(b) suit by investors in an oil and gas limited partnership); Vucinich v. Paine, Webber, Jackson & Curtis, Inc., 803 F.2d 454, 461 (9th Cir. 1986) (indicating that a brokerage firm, as well as a broker, would be liable for use of manipulative and deceptive devices under section 10(b)); Kalfas v. E.F. Hutton & Co., No. 86-3414, 1987 U.S. Dist. LEXIS 16806, at *7 (E.D.N.Y. Apr. 28, 1987) (holding that even though the plaintiffs were provided with a disclosure pamphlet their unsuitability claim survived given their lack of financial sophistication in identifying material facts from the pamphlet); Leone v. Advest, Inc., 624 F. Supp. 297, 304 (S.D.N.Y. 1985) (finding unsuitability sufficient to state a cause of action under section 10(b) and Rule 10b-5); \textit{cf. Clark v. John Lamula Investors, Inc.}, 583 F.2d 594, 600-01 (2d Cir. 1978) (finding the trial court’s instruction as to the suitability doctrine sufficient to explain to the jury the point that “the mere sale of unsuitable securities is [not] a per se violation of Rule 10b-5”).

\textsuperscript{82} See Norman S. Poser, \textit{Liability of Broker-Dealers for Unsuitable Recommendations to Institutional Investors}, 2001 BYU L. REV. 1493, 1494-96, for an overview of the suitability doctrine.

\textsuperscript{83} \textit{Clark}, 583 F.2d at 597, 601.
she been told of the risk required to achieve her desired yield, she
would not have purchased the debentures. The court upheld her
claim. According to the NASD, which oversees the nation’s largest
securities arbitration forums, in 2002 there were 2644 cases in which
customers claimed their brokers recommended unsuitable invest-
ments. This figure is seventy-three percent higher than in 2001.

A final example of securities fraud under the shingle theory arises
from allegations of brokers charging their clients excessive price
markups. The case that gave birth to the shingle theory held that it
was fraudulent for a broker-dealer to charge prices sixteen to forty-
one percent above prevailing market prices. The holding rested on
the theory that when a broker-dealer charges its customers excessive
prices, it violates an implied obligation to obtain the best possible
price for its customers.

One commentator has argued that the shingle theory’s presum-
tion that broker-dealers make an implied representation that they will
deal fairly with their clients is, ultimately, a legal fiction. She ob-
erved that the development of the shingle theory falls to the SEC and
SROs through their disciplinary proceedings instead of the courts be-
cause “most cases between broker-dealers and customers now are
relegated to arbitration.” The impact on the shingle theory of the
Supreme Court’s decision in 1987 to uphold the validity of predispute
agreements to arbitrate disputes under federal securities laws remains
unclear. What is clear, though, is that the privatization of disputes
between broker-dealers and their customers means that deterrence of
broker-dealers’ misconduct may have to rely more on internal moral
and psychological sanctions than on external legal sanctions.

The above overview demonstrates that the extent, if any, of a bro-
ker-dealer obligation of fair dealing remains in dispute. Both princi-

84 Gretchen Morgenson, An Iceberg of Irate Investors, N.Y. TIMES, Feb. 9, 2003, S 3, at
1.
85 Charles Hughes & Co. v. SEC, 139 F.2d 434, 435 (2d Cir. 1943).
86 Id. at 436-37.
87 See id. at 437 (observing that the natural conclusion for customers was that they
were being charged approximately the market price).
88 Roberta S. Karmel, Is the Shingle Theory Dead?, 52 WASH. & LEE L. REV. 1271,
89 Id. at 1297.
90 See Shearson/Am. Express Inc. v. McMahon, 482 U.S. 220, 225-26, 233-34
(1987) (declaring the historic “mistrust” of securities arbitration to be anachronistic in
light of increasing SEC supervision of the arbitration process and given the federal pol-
icy favoring arbitration, embodied in the Federal Arbitration Act).
ples of fiduciary law and the more recent shingle theory provide justifications for imposing such an obligation. And, as discussed above, countervailing arguments have been made that customers today do not and should not expect broker-dealers to have such an obligation because broker-dealers engage in many lines of business, some of which are bound to conflict with their customers’ interests. The next Part of this Article investigates the expectations in broker-dealer relationships, including customers’ expectations of broker-dealers and what broker-dealers believe their customers expect of them. It reveals that those expectations can be shaped by whether the law views broker-dealers as fiduciaries of their clients.

II. HOW A DUTY OF LOYALTY CAN AFFECT EXPECTATIONS, PREFERENCES, AND BEHAVIOR

Professors Robert Cooter and Bradley Freedman employ a neo-classical model of a principal-agent relationship to differentiate a fiduciary’s duty of loyalty from a fiduciary’s duty of care in preventing misappropriation versus carelessness. Cooter and Freedman note the moral overtones of disloyalty allegations. Frequently, “an allegation of breach of fiduciary duty carries with it the stench of dishonesty—if not deceit, then of constructive fraud.” As Judge Cardozo remarked in a famous passage: “Many forms of conduct permissible in a workaday world for those acting at arm’s length, are forbidden to those bound by fiduciary ties . . . . Not honesty alone, but the punctilio of an honor the most sensitive, is then the standard of behavior.” This duty of loyalty is often viewed as the centerpiece of the fiduciary relationship, despite variations in particular legal contexts.

92 See id. at 1073-74 (observing the “ponderous language of moral censure in fiduciary cases”).
For example, ERISA augments the common law duty of loyalty by explicitly forbidding self-dealing.\footnote{Employee Retirement Income Security Program of 1974, 29 U.S.C. §§ 1104(a)(1), 1106(b) (2000).}

In contrast, corporate law does not prohibit self-dealing. Instead, it raises the level of judicial review of self-interested transactions by managers under a fairness test. Delaware corporate fiduciary duty law can be understood “as a set of parables or folktales of good and bad managers and directors, tales that collectively describe their normative role.”\footnote{Edward B. Rock, Saints and Sinners: How Does Delaware Corporate Law Work?, 44 UCLA L. REV. 1009, 1106 (1997).} This normative view of Delaware corporate fiduciary law implies thinking “of judges more as preachers than as policemen.”\footnote{Id. at 1016.} The judges’ opinions can be thought of as “judicial sermons that exhort managers to consummate performance and that criticize those who perform below expectations, even if, or perhaps especially when, no direct legal sanction is imposed.”\footnote{Edward Rock & Michael Wachter, Corporate Law as a Facilitator of Self-Governance, 34 GA. L. REV. 529, 529 (2000).} Delaware courts help develop and transmit legally unenforceable rules about corporate behavior.\footnote{See, e.g., Therese H. Maynard, Spinning in a Hot IPO—Breach of Fiduciary Duty or Business as Usual?, 43 WM. & MARY L. REV. 2023, 2065-85 (2002) (concluding that a CEO’s decision to purchase hot IPO shares for his own account constitutes a breach of a fiduciary duty because doing so usurps a corporate opportunity, and considering the effect of judicial decisions on the business community’s and investors’ expectations about whether such behavior constitutes a fair business practice).} They do so both via the imposition of legal sanctions and through “the development or internalization of appropriate modes of behavior, coupled with the withering denunciations of self-dealing that courts are capable of delivering.”\footnote{Rock & Wachter, supra note 99, at 541.} Such a theory of Delaware corporate law builds on work focusing on judicial storytelling in the law-and-narrative literature.\footnote{See, e.g., Robert M. Cover, The Folktales of Justice: Tales of Jurisdiction, 14 CAP. U. L. REV. 179, 183 (1985) (arguing “that there are sacred narratives of jurisdiction that might constitute the texts to ground judicial commitments”).} This normative approach to Delaware corporate law cases is similar to the use of the common law to understand norms of secrecy.\footnote{See Kim Lane Scheppele, Legal Secrets: Equality and Efficiency in the Common Law 86-108 (1988) (proposing a theory of interpretation that focuses on the legal construction of precedent and its judicial application to facts in order to better understand the interpretive nature of law).}
The game tree in Figure 1 is a simplification of the game tree in Figure 1 of Cooter and Freedman’s appropriation-incentive model. This game also modifies David Kreps’s game of trust. In the game tree depicted in Figure 1, an investor can decide not to hire a broker-dealer and the status quo payoffs are normalized to be $0 for both players. Alternatively, the investor can hire the broker-dealer and make an investment of $I$, which can have an expected gross return of $R$. If the broker-dealer does not misbehave, then the broker-dealer earns a fee of $F$. The investor earns an expected net return of $N$, where $N = R - I - F$. Alternatively, there is an endogenous probability of the broker-dealer’s choosing to falsely report the results of the investment, to churn the investor’s portfolio, or to misbehave in some other manner. In such a case, the investor receives only a low return of $L$. The broker-dealer, however, enjoys material gains of $A$. If $F > A$, then broker-dealers do not misbehave if hired and so investors hire broker-dealers.

Figure 1: A Securities Investing Game

\[ p = \text{the probability the broker chooses not to misbehave. The first number in each pair is the investor’s payoff and the second number in each pair is the broker’s payoff.} \]

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104 Cooter & Freedman, supra note 91, at 1050 fig.1.
Suppose that \( F < A \). Then, the unique subgame-perfect Nash equilibrium\(^\text{106}\) of this game involves the broker-dealer’s misbehaving if hired, and so the investor’s not hiring the broker-dealer. In other words, neither player has a unilateral incentive to deviate from her strategy choice. The subgame-perfect restriction essentially rules out behavior that is not consistent over time.

But in reality, investors do hire broker-dealers to make investments. The neoclassical view is that deterrence in the form of expected fines, penalties, or sanctions provides broker-dealers with the incentives to behave properly. This approach is depicted in Figure 2. The payoff to risk-neutral broker-dealers from misbehaving is \( A - E \), where \( E \) denotes the expected punishment from such misbehavior. The variable \( E \) is the result of multiplying the probability of punishment by the magnitude of punishment.

**Figure 2: Neoclassical Deterrence in a Securities Investing Game**

\[
\begin{align*}
\text{Investor} & \quad \text{Broker} \\
\text{Hire} & \quad \text{Don't Misbehave} \quad (N, F) \\
\text{Misbehave} & \quad 1 - p \\
\text{Don't Hire} & \quad (0, 0)
\end{align*}
\]

\( p = \text{the probability the broker chooses not to misbehave. The first number in each pair is the investor’s payoff and the second number in each pair is the broker’s payoff.} \)

Depending on the size of \( E \), this new game has the following possible equilibrium outcomes: If \( E < A - F \), the only equilibrium is that of the game in Figure 1 where an investor does not hire the broker-dealer who would misbehave if hired. If \( E > A - F \), the only equilib-

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\(^{106}\) A Nash equilibrium is a set of strategies, one for each player, that are best responses to each other. E.g., H. SCOTT BIERMAN & LUIS FERNANDEZ, GAME THEORY WITH ECONOMIC APPLICATIONS 16 (2d ed. 1998).
rium is a new one where the investor hires the broker-dealer who does not misbehave because $E$, the expected punishment, outweighs the monetary gain of misbehaving. If $E = A - F$, there is an infinite number of equilibrium outcomes in which the broker-dealer is indifferent between misbehaving or not.\footnote{These are computed by setting $pN = L(1 - p)$. The resulting equilibrium outcomes involve the individual investor’s hiring if the broker-dealer would choose not to misappropriate with probability $p > L/(N + L)$; the individual investor’s not hiring if the broker-dealer would choose to not misappropriate with probability $p < L/(N + L)$; and the individual investor’s being indifferent if the broker-dealer would choose not to misappropriate with probability $p = L/(N + L)$.} For example, if the gains from misbehavior are particularly large, (that is, if $A$ is large), we are back to the unique equilibrium of Figure 1. If $E$ is small because the probability of punishment or the magnitude of punishment (or both) is small, then we return to the unique equilibrium of Figure 1. Factually, there are reasons to expect $A$ to be large or $E$ to be small in many securities cases involving broker-dealers. Increasing $E$, by increasing the level of enforcement or the degree of punishment, is thus one way to increase deterrence in the neoclassical model. The models below demonstrate that another way to increase deterrence is to find a fiduciary duty. In addition, to achieve a given level of deterrence, the degree of punishment or the level of enforcement need not be increased as much as in the neoclassical model when increasing the degree of punishment or the level of enforcement has psychological or moral deterrence effects.

A second, oft-cited reason that investors hire broker-dealers is that investors believe the value of broker-dealers’ reputations motivate them to avoid misbehaving. This belief is premised on the existence of market forces that discipline, if not prevent, broker-dealers’ misbehavior. For example, in the long run, a broker-dealer depends on ongoing relationships for commissions. Game theory describes these relationships as being between repeat players. Such repeat play considerations do not exist if the broker-dealer is in the “last period” or suffers from the “endgame problem,” as she likely will if she is about to misappropriate a particularly large sum of money.

Emotional preferences can reduce misbehavior even if the broker-dealer relationship has just one period remaining. So emotional preferences differ from the above reputation story, but emotions and reputation are not mutually exclusive. In a sense, emotions complete the reputation story because reputations may relate to whether a broker-dealer is a good type who feels guilt from misbehaving or a bad
type who does not. This account of emotional preferences as private information that can be signaled provides an alternative to Eric Posner’s work on signaling discount rates.\textsuperscript{108}

A broker-dealer who feels guilt from engaging in misbehavior is captured by the game tree in Figure 3. The payoffs in Figure 3 differ from those in Figure 1 according to the broker-dealer’s level of guilt for engaging in misbehavior. Instead of receiving $A$, an emotional broker-dealer has a total payoff of $(A - G)$, where $G$ is the monetary equivalent of guilt, or $A - G$, where both $A$ and $G$ express the broker-dealer’s utility. Depending on the size of $G$, this new game has the following equilibria: If $G < A - F$, the only equilibrium is the one in the game in Figure 1, where the investor does not hire a misappropriating broker-dealer. If $G > A - F$, the only equilibrium is a new one where the investor hires the broker-dealer who does not misbehave because the resulting guilt swamps the monetary gain of misbehaving. If $G = A - F$, there is an infinite number of equilibrium outcomes in which the broker-dealer is indifferent between misbehaving or not and any probability mixture of those strategies.\textsuperscript{109} Thus, adding guilt can change the equilibrium outcome of the investing game.

**Figure 3: Guilt in a Securities Investing Game**

\[ p = \text{the probability the broker chooses not to misbehave. The first number in each pair is the investor’s payoff and the second number in each pair is the broker’s payoff.} \]

\textsuperscript{108} See ERIC A. POSNER, LAW AND SOCIAL NORMS 18-19 (2000) (discussing the signaling of “good” and “bad” types’ discount rates).

\textsuperscript{109} Compare these outcomes with those stated for Figure 2, supra note 107.
The game in Figure 4 combines the games in Figures 2 and 3 by analyzing broker-dealers who face both external sanctions and internal guilt from misbehaving. But the games in Figures 3 and 4 beg the questions of what determines how much guilt a broker-dealer feels and from what that guilt originates. People’s propensities to feel guilt vary based upon such demographic variables as their age, culture, ethnicity, gender, upbringing, norms, and other unobservable differences. It is also unclear whether broker-dealers feel guilt because of a fear of getting caught breaking the law or morally disappointing their clients. Guilt derived from a fear of getting caught breaking the law is instrumental, while guilt based on clients’ moral disappointment is intrinsic or ethical. The first sort of guilt is also closely related to the shame or public humiliation of being caught breaking the law.\textsuperscript{110} The game depicted in Figure 5 focuses on the moral disappointment aspect of guilt. It also provides a model of guilt that partly depends on expectations about the behavior of broker-dealers. A broker-dealer’s payoffs are motivated by the notion that the broker-dealer cares more about being loyal the more she expects that clients expect loyalty.

\textbf{Figure 4: Sanctions and Guilt in a Securities Investing Game}

\[ p = \text{the probability the broker chooses not to misbehave. The first number in each pair is the investor’s payoff and the second number in each pair is the broker’s payoff.} \]

Figure 5: A Psychological Emotional Investing Game

\[
\begin{array}{c}
\text{Investor} \\
\text{Hire} \quad \text{Don't Hire} \\
\end{array}
\begin{array}{c}
\text{Broker} \\
\text{Misbehave} \quad \text{Don't Misbehave} \\
\end{array}
\begin{array}{c}
\text{1 - p} \quad \text{p} \\
\end{array}
\begin{array}{c}
\text{L, A - E - G - Mr} \quad (N, F) \\
\end{array}
\]

\( p = \) the probability the broker chooses not to misbehave. \( r = \) broker’s expectation of investor’s expectation over \( p \). The first number in each pair is the investor’s payoff and the second number in each pair is the broker’s payoff.

Psychological games provide analytical models for a particular category of emotions, namely emotions that depend on expectations about strategic behavior.\(^{111}\) Psychological game theory offers a formal mathematical apparatus for studying interactive situations in which at least one individual’s utility is a function not just of strategic decisions, but also of some other individual’s expectations over (possibly another individual’s expectations over, and so forth) strategy choices.\(^{112}\) Fear and hope are two emotions that by their very nature depend on an individual’s expectations for the future. Often, such expectations are related to, or depend on, the strategic decisions of another individual. For example, second marriages are often said to involve “the triumph of hope over experience.”

Psychological game theory may be applied to a variety of phenomena. One economist has formulated psychological gametheoretic models of pricing and employment practices to explain why firms neither always charge monopoly prices when they can nor behave toward workers as neoclassical labor economics predicts.\(^{113}\) An-


other economist has constructed psychological games of gift giving involving such expectation-dependent emotions as disappointment, embarrassment, surprise, and pride.\textsuperscript{114} Such models have implications for industrial relations, giving holiday gifts, and tipping service providers.\textsuperscript{115} There are several psychological game-theoretic models of legal interactions.\textsuperscript{116}

Suppose that an investor and a broker-dealer are playing the modified securities investment game depicted in Figure 5.\textsuperscript{117} The variable $p$ denotes the endogenous probability that a particular broker-dealer will not abuse an investor’s trust. Let $q$ denote that investor’s expectation of the variable $p$. In other words, $q$ is the mean of the investor’s subjective distribution over the probability $p$. Let $r$ denote the broker-dealer’s expectation of $q$. The variable $r$ is an example of what is known as a second-order expectation, while the variable $q$ is an example of what is known as a first-order expectation.\textsuperscript{118} For simplicity, assume that psychological guilt is a multiple $M$ times $r$, the broker-dealer’s expectations over the investor’s expectations over the probability that the broker-dealer will not abuse trust if entrusted. The assumption that part of a broker-dealer’s guilt from misappropriation depends on the size of $r$ captures the idea that guilt includes a psychogames involving fairness to study the prices that monopolists actually charge and the personnel policies that firms actually employ).\textsuperscript{114}

\textsuperscript{114} See Bradley J. Ruffle, \textit{Gift Giving with Emotions}, 39 J. ECON. BEHAV. & ORG. 399, 400 (1999) (arguing that while gift giving sometimes involves strategic considerations, it always involves emotional ones).

\textsuperscript{115} Id. at 412-16.

\textsuperscript{116} See, e.g., Peter H. Huang, \textit{Dangers of Monetary Commensurability: A Psychological Game Model of Contagion}, 146 U. PA. L. REV. 1701 (1998) (analyzing the concern that commodification and monetary commensurability will become universal); Peter H. Huang & Ho-Mou Wu, \textit{Emotional Responses in Litigation}, 12 INT’L REV. L. & ECON. 51 (1992) (modeling the role of emotions in decisions to sue, settle, or go to trial); Peter H. Huang, \textit{Herd Behavior in Designer Genes}, 34 WAKE FOREST L. REV. 639 (1999) (studying the ethical, legal, and social implications of utilizing free markets in reproductive technologies and genetic engineering); Peter H. Huang, \textit{International Environmental Law and Emotional Rational Choice}, 31 J. LEGAL STUD. 237, 256-57 (2002) (proving that the fear of losing face induces compliance with international environmental law); Huang, supra note 110 (analyzing emotions in bargaining over property rights); Huang & Wu, supra note 31 (studying the role that guilt can play in sustaining the honoring of trust in principal-agent relationships).

\textsuperscript{117} This game is akin to the psychological game of trust in Figure 2 of Huang & Wu, supra note 31, at 394. The differences are the numerical payoff values and the interpretation of $p$ here being the actual probability of not misbehaving by the broker-dealer, while $p$ in the psychological game of trust is the proportion of a population of agents that choose not to abuse trust.

\textsuperscript{118} See Geanakoplos et al., supra note 111, at 70-78, for a discussion of higher-order expectations.
logical component. The assumption that psychological guilt depends linearly on the variable $r$ is for analytical tractability.

In order to fulfill the condition of rational expectations required by a psychological equilibrium, $p = q = r$ in equilibrium. There are three psychological equilibrium outcomes. The first equilibrium involves the investor’s choosing to hire the broker-dealer and $p = q = r = 0$, or the broker-dealer’s choosing, with probability one, not to misbehave, with associated payoffs $(N, F)$. A second equilibrium involves the investor’s choosing never to hire a broker-dealer and $p = q = r = 0$ or the broker-dealer’s choosing to misbehave if given that opportunity. The associated payoffs are $(0, 0)$. The third equilibrium involves the investor’s choosing to hire the broker-dealer and $p = q = r = (A - G - F)/M$, provided that $\frac{A - G > F}{M}$. These inequalities require that $A - G > F$ and $A - G - F < M$. The associated payoffs are $(pN + (1 - p)L, F)$. The third equilibrium only exists if $pN + (1 - p)L > 0$. The third and only completely mixed strategy equilibrium is found by setting the broker-dealer’s payoffs from engaging in misbehavior and from not engaging in it equal—$F = A - G - Mr$—and setting $p = r$.

In the first equilibrium, the broker-dealer relationship occurs and the broker-dealer does not misbehave because she expects that the investor expects that the broker-dealer will not misbehave. If a broker-dealer were to misbehave, she would experience guilt to such a degree that she would prefer not to misbehave. In the second equilibrium, the broker-dealer relationship does not occur, and broker-dealers would misbehave if given the opportunity due to their expectations that investors expect such misbehavior and their consequent lack of guilt upon misbehaving. Alternatively, misbehavior can lead broker-dealers to feel guilt, but only to such a small degree that misbehaving still dominates not misbehaving. In the third equilibrium, the broker-dealer relationship occurs despite the fact that the broker-dealer misbehaves some fraction of the time because that still makes investors strictly better off than if they do not hire broker-dealers.

One can think of the three different equilibrium beliefs as reflecting the strength of a duty of loyalty for the broker-dealer relationship. The first equilibrium occurs when the duty of loyalty is strongest. The second equilibrium occurs when the duty of loyalty is weakest (nonexistent). The third equilibrium occurs when the duty of loyalty is in-

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A psychological equilibrium requires not only the usual Nash equilibrium property that players’ strategies are best responses to each other, but also that players’ expectations are correct in equilibrium. See Geanakoplos et al., supra note 111, at 66, for the formal definition of a psychological equilibrium.
termediate in strength. In contrast to the unique equilibrium for the original broker-dealer game without psychological payoffs in Figure 1, the presence of psychological guilt makes possible multiple equilibrium outcomes—in particular, the first and third equilibrium outcomes. In these two equilibrium outcomes, the corresponding equilibrium expectations and psychological emotional payoffs support reduced misbehavior. This model, then, reveals that imposing a fiduciary duty on broker-dealers creates a perceived duty of loyalty and, by doing so, endogenously changes broker-dealers’ and investors’ expectations about broker-dealer behavior as well as broker-dealers’ behavior itself. Those expectations, in turn, can form a self-enforcing equilibrium of behavior and expectations about behavior, should broker-dealers have the sort of preferences described above.

If broker-dealers are viewed as being legally subject to a fiduciary duty of loyalty, their preferences and hence their behavior can depend on their expectations about investors’ expectations about broker-dealers’ behavior. Broker-dealer preferences are endogenous because they depend on expectations, and those expectations are determined endogenously in equilibrium. When preferences are endogenous, law can influence broker-dealer preferences and broker-dealer behavior by selecting particular expectations as focal points.

This role that fiduciary law can play in securities law is analogous to the preference-shaping role of criminal law. Criminal law may alter behavior not only by changing the cost of satisfying fixed preferences via fines and punishments, but also by dampening socially undesirable preferences themselves. The endogenous nature of fiduciary preferences can mitigate the problem of misbehavior. Broker-dealers can be induced by their legal status as fiduciaries to have preferences that depend on their expectations of their clients’ expectations about broker-dealers’ behavior. This is true even if that fiduciary duty is not legally enforced or, more realistically, underenforced, at least in the short run. Some level of legal enforcement over time is required; otherwise, broker-dealers will come to expect that no en-
forcement will occur. The power of fiduciary law is that it can harness emotions to comply with socially desirable norms of behavior.

The chief counsel in the SEC’s Office of Compliance Inspections and Examinations recently argued that moral aspirations played a significant role in the genesis of U.S. federal regulation of securities. In the above models, fiduciary law provides deterrence not only via legal and monetary penalties, but also via expressive and symbolic roles that involve moral and emotional incentives. These roles are clearly related to expressive accounts of law. The above models demonstrate the expressive deterrence effect of finding a fiduciary duty on the part of securities professionals. Cass Sunstein focuses on how law may change the social meaning of particular actions. Lawrence Lessig notes the variance in the social meanings of acts across time and cultures and how laws such as anti-dueling statutes in the southern United States may have provoked changes in the social meanings of dueling. Dan Kahan considers how criminal law can deter crime via its social influence and social meaning. But according to Kahan, more severe punishments can have adverse social expressive consequences. Punishments in Kahan’s analysis also express a community’s moral condemnation. In Figure 5, there is no such necessary relationship between the size or form of the punishment and guilt. In terms of the notation introduced earlier and utilized in Figure 5, $E$, $G$, and $M$ can be independent exogenous variables or $G$ and/or $M$ might depend on $E$, in particular the certainty of punishment, $C$, or the severity of punishment, $S$. In other words, if the expected punish-


126 See id. at 377-82 (explaining how severe punishments can reduce the willingness of law-abiding citizens to cooperate with police, particularly in minority communities).

127 Id. at 383.
ment—$E = CS$—$G$ and/or $M$ might be functions of $C$ or $S$. Guilt and
the severity of punishment might interact in such ways, but what is
crucial to note is that such interactions are not necessary.

The role that fiduciary law can play in the above models is more
akin to McAdams’s analysis of the focal expressive role of law. The
law in McAdams’s analysis enjoys a comparative advantage over other
forms of third-party expression for three reasons. First, if a law is suf-
"cien$7$ly well publicized, that law can become common knowledge. Common knowledge of a law helps that law coordinate expectations. Someth$8$ing is common knowledge between $A$ and $B$ if (1) $A$ knows it; (2) $B$ knows it; (3) $A$ knows that $B$ knows it; (4) $B$ knows that $A$ knows it; (5) $A$ knows that $B$ knows that $A$ knows it; (6) $B$ knows that $A$ knows that $B$ knows it; and so forth ad infinitum.

Second, if a law is unique to a given situation, more people are
likely to pay attention to it. Referred to as the emphatic nature of
law, such laws arguably have greater “moral credibility.” This second
advantage of law over some other type of third-party expression is also
related to that law’s unique legitimacy in creating internalized norms
to obey the law.

Third is the notion that judges and legislators develop reputations
for being norm entrepreneurs. As opposed to other actors who may
not develop such reputations, judges and legislators have both the
opportunity and the motivation to do so. This reputational feature of
government officials’ making pronouncements of the law has been

\begin{itemize}
  \item \textsuperscript{129} Id. at 1668-69.
  \item \textsuperscript{130} For a discussion of the subtleties of common knowledge, see Peter H. Huang, \textit{Still Preying on Strategic Reputation Models of Predation}, 3 GREEN BAG 2D 437, 439 (2000) (book review).
  \item \textsuperscript{131} See McAdams, \textit{supra} note 128, at 1669-71 (“Anything that makes law stand out against other competing messages, by that reason alone makes it qualitatively more ‘emphatic’ than conflicting messages.”).
  \item \textsuperscript{132} See Paul H. Robinson & John M. Darley, \textit{The Utility of Desert}, 91 NW. U. L. Rev. 453, 477-88 (1997) (outlining certain features of criminal law that are necessary to maintain the “moral credibility” of that law).
  \item \textsuperscript{133} See Robert Cooter, \textit{Do Good Laws Make Good Citizens? An Economic Analysis of Internalized Norms}, 86 VA. L. Rev. 1577, 1597-600 (2000) (explaining that norms are developed both by aligning law with morality and by harnessing some citizens’ inherent respect for the law).
  \item \textsuperscript{134} See McAdams, \textit{supra} note 128, at 1671-72 (claiming that judges and legislators “may develop a reputation for correctly predicting behavioral change,” due in part to the “publicity and uniqueness of law”).
\end{itemize}
noted in other contexts. The above models emphasize how fiduciary law can have important psychological and rhetorical roles in shaping perceptions and behaviors in games.

It is an empirical question whether broker-dealers actually do or can have the above sort of preferences. The language of a fiduciary duty of loyalty itself suggests that part of fiduciary law attempts to create, foster, or strengthen such preferences. Recent empirical economic research demonstrates that in a variety of contexts, “monetary incentives may backfire and reduce . . . compliance with rules.”

Tom Brown, a former Donaldson, Lufkin & Jenrette (DLJ) banking analyst, stated that he decided in August 1998 that “it was worth more for my pride” to refuse $400,000 and the usual DLJ severance deal requiring him to keep quiet concerning analysts’ practices.

There is also anecdotal evidence that professional securities traders react emotionally to financial decisions, information, and outcomes. Outside the securities context, there is evidence that monopolists do not always charge monopoly prices and that corporate personnel departments do not always behave as harshly as neoclassical labor-market models predict. There is also experimental and empirical evidence that wanting to avoid guilt and stigma motivates tax compliance.

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135 See Cooter, supra note 133, at 1598-600 (pointing to one view that instead of treating the law as an external restraint, some judges use the law to “express their own political vision”); Eric A. Posner, Law, Economics, and Inefficient Norms, 144 U. PA. L. REV. 1697, 1719 (1996) (explaining how the pronouncements of legislators and judges translate preferences into rules governing behavior).


138 Wall Street Prophets, supra note 26.

139 See MICHAEL LEWIS, LIAR’S POKER 15 (1989) (assessing the founder and head of Salomon’s legendary bond-trading Arbitrage Group, John Meriwether: “He had, I think, a profound ability to control the two emotions that commonly destroy traders—fear and greed—and it made him as noble as a man who pursues his self-interest so fiercely can be.”); ROGER LOWENSTEIN, WHEN GENIUS FAILED: THE RISE AND FALL OF LONG-TERM CAPITAL MANAGEMENT 176-77 (2000) (describing the feelings and emotional toll on some principals of the hedge fund Long-Term Capital Management during its mounting losses in September 1998).

140 See, e.g., Rabin, supra note 113, at 1284-90, 1292-96 (explaining a model of fairness and applying it to monopolistic pricing and labor economics).

141 See Huang & Wu, supra note 31, at 401-02 (summarizing the literature on the effects of emotions on tax-evasion decisions).
Recent empirical results of experimental games found a positive correlation between an individual’s decision and that individual’s expectation about another individual’s expectation of that decision. This finding supports the notion that a player does not want to disappoint another player by not meeting that other player’s expectations of the first player’s actions. Experimental dictator games found the same positive correlation.

III. EXTENSIONS AND ANOTHER APPLICATION OF THE BASIC MODEL

A. Extensions

The analyses of the games in Figures 1 through 5 remain valid if, instead of feeling expectation-dependent guilt from breaching a duty of loyalty, broker-dealers feel expectation-dependent pride from honoring such a duty of loyalty. While guilt might be a form of negative utility or a cost in measuring social welfare, it must be offset by the anger or disappointment that investors experience if broker-dealers betray them. Thus, the fact that some broker-dealers may feel guilt does not necessarily imply that guilt should reduce compensatory damages. Pride from not breaching a duty of loyalty clearly is a positive utility or a benefit in assessing social welfare. Two of the three outcomes involve no guilt being experienced in equilibrium. One of those outcomes would involve pride if, instead of experiencing guilt from breaching a fiduciary duty of loyalty, broker-dealers feel pride from complying with a fiduciary duty of loyalty. Only the mixed strategy equilibrium involves any actual experience of guilt from breaching fiduciary duties of loyalty. Replacing guilt with pride increases social welfare in the mixed strategy equilibrium. With either guilt or pride, greater- or higher-profile enforcement of and larger penalties

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142 See Martin Dufwenberg & Uri Gneezy, Measuring Beliefs in an Experimental Lost Wallet Game, 30 GAMES & ECON. BEHAV. 163, 172 tbl.VI, 173-74 fig.2 (2000) (demonstrating the connection between individuals’ expectations).

143 Id. at 173-74 fig.2, 175 tbl.VII.

for broker-dealer breaches of a fiduciary duty of loyalty can reduce misbehavior by changing broker-dealers’ expectations about investors’ expectations of broker-dealers’ behavior. In turn, investors’ altered expectations of broker-dealers change broker-dealers’ preferences and thus change their behavior. But even without increased enforcement, imposing a fiduciary duty can have psychological and behavioral effects in the short run. A natural question is: Why not impose fiduciary duties everywhere? One answer is that there exists a scarce quantity of guilt people can experience and this constrains the ability to utilize guilt.\footnote{See Kaplow & Shavell, supra note 144, at 3, 7, 29-31 (discussing constraints on the actual experience of guilt and therefore its use).} Another answer is that enforcement resources are limited as well.

People differ in how much, if at all, they care about what others think of them.\footnote{Chaim Fershtman & Yoram Weiss, Why Do We Care What Others Think About Us?, in Economics, Values, and Organization 133, 134 (Avner Ben-Ner & Louis Putterman eds., 1998).} This variance means that broker-dealers will differ in how much expectation-dependent guilt they experience from breaching a fiduciary duty of loyalty. In an extreme case, a broker-dealer might not feel any guilt, but rather even a perverse sense of pleasure from exploiting a trusting and unsuspecting investor. There is certainly anecdotal evidence that such behavior exists.\footnote{See generally Frank Partnoy, F.I.A.S.C.O.: Blood in the Water on Wall Street 14-15 (1997) (describing the blood-thirsty attitude that pervaded investment banks during the 1990s).} For such broker-dealers, a fiduciary duty may crowd out whatever intrinsic morality the broker-dealer would otherwise have exhibited. Ample econometric and experimental evidence supports the conclusion that financial rewards and external regulations may crowd out intrinsic motivation.\footnote{See, e.g., Edward L. Deci & Richard M. Ryan, Intrinsic Motivation and Self-Determination in Human Behavior 3-10 (1985) (introducing the theories behind the study of motivation); Edward L. Deci, Effects of Externally Mediated Rewards on Intrinsic Motivation, 18 J. Personality & Soc. Psychol. 105, 114 (1971) (summarizing various studies “conducted to investigate the effects of externally mediated rewards on intrinsic motivation”); Bruno S. Frey, Institutions and Morale: The Crowding-Out Effect, in Economics, Values, and Organization, supra note 146, at 437, 446-54 (providing evidence that external regulations crowd out individual intrinsic motivation); Thane S. Pittman & Jack F. Heller, Social Motivation, 38 Ann. Rev. Psychol. 461, 463 (1987) (commenting on the “large number of studies demonstrating decreased intrinsic motivation following reward”).} Thus, monetary or legal incentives can drive out emotional and moral incentives. This possibility raises the potential for unscrupulous broker-dealers to crowd out those with consciences in securi-
ties markets where the absence of guilt can be financially rewarding. But if all broker-dealers were unscrupulous, investors would not hire any broker-dealers. This outcome is the second of the three psychological equilibria.

Any guilt that broker-dealers may experience from breaching fiduciary duties of loyalty might be offset by such other motivations as not disappointing the broker-dealers’ colleagues, families, and supervisors. Whether broker-dealers feel guilt can also depend on how many of their peers engage in unfair or unscrupulous practices. In that case, herding, which occurs for other reasons among securities professionals, can reduce how much guilt broker-dealers experience from breaching a duty of loyalty and lead to a situation of “infectious greed.”

In fact, over time, some securities firms may screen for or train their broker-dealers to feel guilt from behavior that deviates from corporate norms. Those norms or explicit organizational rules may support being loyal to investors. But there may be other norms or unwritten rules that push in the opposite direction. There is anecdotal and ethnographic evidence of such norms. The moral overload from these conflicting values can lead to efforts to relieve the moral dissonance, including casuistry, compartmentalization, escape, moral reconstruction, rationalization, and redemptive acts.

Finally, replacing the assumption of rational expectations on the part of investors with the assumption of adaptive expectations by investors extends the analysis in Part II. In the models of Part II, investors rationally or correctly forecast broker-dealers’ future behavior. If we assume instead that investors adaptively forecast broker-dealers’ future behavior based on broker-dealers’ past behavior, then we can extend the analysis in Part II to explain how investors may come to trust broker-dealers more and more over time as broker-dealers be-

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150 See generally MITCHEL Y. ABOLAFIA, MAKING MARKETS: OPPORTUNISM AND RESTRAINT ON WALL STREET (1996) (offering an ethnography of the subcultures of the markets for bonds, stocks, and futures); LEWIS, supra note 139 (providing an insider’s account of the prevailing rules and norms that operate within a major Wall Street investment bank); PARTNOY, supra note 147, at 14 (reporting one investment bank’s “barbarous approach to its clients’ increasing derivatives losses”).


152 See generally Stout, supra note 15 (arguing that such a replacement of assumptions better explains investor confidence).
have well historically on average. But due to the lag in the adaptive expectations of investors, when broker-dealers misbehave, investors are caught off guard. Once broker-dealers misbehave, restoring trust by investors is difficult because of the lag in the adaptive expectations of investors. This cycle of expectations by investors and behavior by broker-dealers captures in essence the bull market of the 1990s and the more recent crisis in investor confidence.

B. An Application to Employee Investing

Guilt and pride may also cause employees to invest disproportionately in their employers’ securities. Employees may feel guilty or disloyal to a company if they do not invest heavily in their employers’ securities. Alternatively, employees may invest heavily in their employers’ securities because they feel pride in, or loyalty toward, that company. Pride also explains why some investors sell their winning stocks too quickly—namely to convert paper winnings into real ones—but do so at the expense of favorable tax treatment.153 Employers encourage their employees to invest in the employers’ stock to enhance employee productivity and corporate performance.154 If a company appears to be doing well financially or if employees like to believe in their companies’ future prospects, then employees may have additional emotional reasons to invest heavily in their employers’ stock: euphoria; exuberance; greed; and general feelings of positivity, well-being, or goodness.155

Such lack of adequate portfolio diversification can have ruinous consequences for employee-investors. Heavy investing by employees of their 401(k) plans in their employers’ securities is very risky be-

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153 See Hersh M. Shefrin & Meir Statman, How Not to Make Money in the Stock Market, PSYCHOL. TODAY, Feb. 1986, at 52, 57 (describing how pride may interfere with rational thinking about when to sell stocks).


155 Cf. Shlomo Benartzi, Excessive Extrapolation and the Allocation of 401(k) Accounts to Company Stock, 56 J. FIN. 1747, 1748 (2001) (investigating a related but alternative reason for individuals investing their retirement savings heavily in their employers’ stock—namely believing that abnormally high past performance of their employer’s stock is representative of such performance in the future).
cause of insufficient portfolio diversification. Enron’s bankruptcy and the resulting huge losses that Enron employees suffered from investing all or most of their 401(k) plans in Enron stock is one highly publicized, recent example of this danger.

Enron employees who invested heavily in Enron’s stock suffered substantial losses not only ex post, but also ex ante, because employee investors are exposed to firm-specific risk that could have been diversified away. In other words, holding company stock is inefficient for all employees, regardless of an employee’s risk tolerance, because despite being exposed to higher risk, employee-investors earn precisely the same returns as fully diversified investors. Employee-investors value their companies’ stock at less than its market value because of this imbalance.

Employees and companies would both be better off utilizing direct cash compensation instead of stock grants. A recent study found that employees sacrifice quite a lot by investing in their employers’ stock relative to a well-diversified stock portfolio with the same level of risk. Under reasonable assumptions, these costs average 58% of the employers’ stock market value. Thus, a 401(k) plan that has a market value of $1 million would be worth only $420,000 to an employee with an undiversified portfolio. Not only employees, but also their employers bear these costs of lack of diversification. Employers share in these costs because they are granting stock to employees instead of issuing it to fully diversified investors, who place a higher value on that stock.

For example, to grant an employee stock worth $42,000, a company must give that employee stock having a $100,000 market value.

156 See JONATHAN BURTON, INVESTMENT TITANS: INVESTMENT INSIGHTS FROM THE MINDS THAT MOVE WALL STREET 4-13 (2001) (explaining the intuition behind the idea of diversification); HARRY M. MARKOWITZ, PORTFOLIO SELECTION; EFFICIENT DIVERSIFICATION OF INVESTMENTS (1959) (exploring the relationship between mean-variance analysis and theories of decision making under risk and uncertainty); Harry Markowitz, Portfolio Selection, 7 J. Fin. 77 (1952) (presenting the original theoretical formulation of diversification). Markowitz shared the 1990 Nobel Prize in Economics in part for his pioneering insights about portfolio diversification.


158 Id. at 3.

159 Id.

160 Id.
value. Companies are essentially compensating employees with stock that is worth less to employees than it costs the companies.\footnote{Id.}

Recently proposed legislation addresses the problem of retirement portfolios’ being too concentrated in employers’ securities by amending Title I of ERISA.\footnote{Id.} These reforms can be seen as counter-balancing any guilt employees may experience from not investing heavily in their employers’ securities (or, equivalently, counter-balancing any pride employees may experience from investing heavily in their employers’ securities). The Pension Security Act of 2002 mandates periodic reports disclosing the plan sponsor’s financial health.\footnote{Pension Security Act of 2002, H.R. 3762, 107th Cong. (2002) (amending Employee Retirement Income Security Act of 1974, 29 U.S.C. §§ 1001-1461 (2000)).} It also imposes diversification requirements for defined contribution plans that hold employer securities.\footnote{Id. § 101.} These diversification requirements mitigate any guilt employees might experience from not investing in their employers’ securities.

The models in Part II of this Article explain how proposed legislative reforms in response to the Enron tragedy can alter norms about how much employees should be investing in their employers’ securities. Thus, guilt affects different actors in securities investing and has different effects. It is socially desirable to encourage via fiduciary law a certain type of guilt by securities professionals and legally discourage another type of guilt by employee-investors.

**CONCLUSION**

Most investors lack the inclination, knowledge, and time to make their initial and subsequent investment decisions based directly upon the information that companies provide. Instead, investors typically base their investment decisions upon information filtered by securities professionals, such as brokers and dealers. Investors who manage their own investments, such as day traders, do so perhaps too actively and in ways that involve a different set of emotions than guilt.\footnote{See JOHN R. NOFINGER, INVESTMENT MADNESS: HOW PSYCHOLOGY AFFECTS YOUR INVESTING . . . AND WHAT TO DO ABOUT IT 123-42 (2001) (describing day traders’ activities and mindset).} Else-
where, I analyze the implications of such other emotions for securities regulation.\footnote{Peter H. Huang, \textit{Regulating Irrational Exuberance and Anxiety in Securities Markets}, in \textit{The Law and Economics of Irrational Behavior} (Francesco Parisi \\& Vernon Smith eds., forthcoming 2003).}

This Article has analyzed the relationship between investors and broker-dealers. In particular, the Article provided formal models explaining how fiduciary law can alter broker-dealers’ expectations about investors’ expectations about broker-dealers’ behavior. These changed expectations can alter broker-dealers’ expectation-dependent guilt and behavior. During the great bull market of the 1990s, guilt and legal enforcement declined because investors earned very high net returns. Securities professionals could reject or ignore their feelings of guilt over cheating clients if, despite their broker-dealers’ cheating, the clients were making lots of money and were happy about it. There was little pressure for vigorous legal enforcement because the securities markets experienced historical record highs. The recent string of highly publicized corporate and accounting scandals may usher in a new era with greater legal enforcement against,\footnote{See Brooke A. Masters, \textit{U.S. to Try to Add to Waksal Sentence}, \textit{WASH. POST}, Nov. 22, 2002, at E4 (reporting that federal prosecutors signaled a tough approach to white-collar crime by seeking extra prison time for ImClone Systems Inc. founder Samuel Waksal, the first major defendant to be sentenced in the recent wave of business scandals).} and higher levels of guilt experienced from, corporate malfeasance.