

REGULATORY RESPONSES TO INVESTOR IRRATIONALITY: THE
CASE OF THE RESEARCH ANALYST

by
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An extensive body of behavioral economics literature suggests that investors do not behave with perfect rationality. Instead, investors are subject to a variety of biases that may cause them to react inappropriately to information. The policy challenge posed by this observation is to identify the appropriate response to investor irrationality. In particular, should regulators attempt to protect investors from bad investment decisions that may be the result of irrational behavior?

This Article considers the appropriate regulatory response to investor irrationality within the concrete context of the research analyst. Many commentators have argued that analyst conflicts of interest led to biased reports and recommendations that distorted analyst behavior. In the wake of the analyst scandals, regulators have responded—most recently by mandating increased independence. This response can be understood as an effort to make investor reliance reasonable.

The Article questions this mission. In particular, the Article challenges the role of regulators in identifying appropriate sources of investment information or determining when investor behavior is rational. This fallibility of regulatory oversight coupled with the costs of regulation suggest that regulators should exercise caution, particularly in light of the market's capacity to discipline investor decisions.

| | | |
|------|---|----|
| I. | INTRODUCTION..... | 58 |
| II. | THE ANALYST SCANDALS..... | 60 |
| III. | THE EMPIRICAL INFORMATION ON ANALYST RECOMMENDATIONS..... | 64 |
| | A. <i>Empirical Information</i> | 64 |
| | B. <i>Investor Irrationality</i> | 67 |
| IV. | INTERNET SECURITIES FRAUD AND INVESTOR IRRATIONALITY | 70 |
| V. | REGULATORY RESPONSES TO INVESTOR IRRATIONALITY | 74 |
| VI. | CONCLUSION | 82 |

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I. INTRODUCTION

In the late 1990s, Wall Street research analysts were powerful and influential. Top analysts earned multi-million dollar compensation packages. Leading analysts were able to “move” stock prices by announcing recommendations and price targets. The ability of an investment bank’s research department to influence investor sentiment was a key factor in the bank’s ability to attract underwriting business. Analysts were regularly quoted in the media, and television appearances by celebrity analysts, in which the analysts revealed their current “stock picks,” became commonplace.

When the technology and telecommunications bubble of the late 1990s ended, the stock price of many issuers that had been highly touted by analysts began to fall. Issuers lost, in some cases, 90, 95, or even 100% of their market capitalization. And investors lost substantial amounts of money.

Many hold research analysts responsible for the losses suffered by investors. As Senator Richard Shelby stated, “Millions of investors lost billions of dollars on investments that were influenced by the euphoric environment fostered by misleading advice.”¹ Investigations have revealed that analyst recommendations were consistently biased and overly-optimistic. Throughout the 1990s, buy and strong buy recommendations dominated the market, and the percentage of sell recommendations dipped as low as less than one percent.² Analysts publicly recommended stocks that they privately believed were overvalued and maintained positive recommendations, in some cases, until issuers were on the brink of bankruptcy.³

New York Attorney General Eliot Spitzer, Congress, and the Securities and Exchange Commission faulted analysts for their lack of independence, citing investment banking and other conflicts of interest that created incentives for analyst optimism. The problem, however, was that analyst conflicts of interest were no secret. The existence and effect of analyst conflicts had been widely disclosed to the marketplace well before the stock market crash.⁴ Many

¹ *The Impact of the Global Settlement: Hearing Before the S. Comm. On Banking, Housing, and Urban Affairs*, 108th Cong. (2005) (opening statement of Sen. Richard Shelby, Chairman, S. Comm. On Banking, Housing and Urban Affairs) available at http://banking.senate.gov/03_05hr/050703/shelby.htm.

² See Lynn E. Turner, Speech at the Third Annual SEC Disclosure & Accounting Conference: The State of Financial Reporting Today: An Unfinished Chapter III, (June 21, 2001) <http://sec.gov/news/speech/spch508.htm> (reporting that only .8% of 26,000 analyst recommendations surveyed as of March 1, 2000 were sell or strong sell).

³ See Affidavit in Support of Application for an Order Pursuant to General Business Law Section 354, at 9–10, *In re Spitzer v. Merrill Lynch & Co., Inc.*, No. 02-401522 (N.Y. Sup. Ct. Apr. 8, 2002), <http://www.oag.state.ny.us/press/2002/apr/MerrillL.pdf> (hereinafter “Merrill Affidavit”) (describing Merrill’s failure to issue sell recommendations, instead simply ceasing to cover stocks as their value “plummeted, sometimes all the way to zero”).

⁴ For example, in 1992, the Wall Street Journal published a Morgan Stanley memorandum instructing its research analysts that the firm policy was “no negative comments about our clients.” *The Rohrbach Memo: “No Negative Comments,”* WALL ST. J., July 14, 1992, at A6. In 1995, the Wall Street Journal described the ties between research coverage and investment banking. Michael Siconolfi, *A Rare Glimpse at How Street Covers*

publications, and the SEC itself, repeatedly warned investors not to rely on analyst recommendations.⁵ Seemingly, investors relied anyway.

Investor reliance on recommendations by conflicted analysts may have been rational in that the recommendations, although tainted, were the best information reasonably available to retail investors. Alternatively, investors may have behaved irrationally—discounting the warnings about analyst conflicts and persisting in the belief that analysts were releasing research to the investing public that was independent and reliable, or recognizing the potential conflicts of interest, but over-confidently believing they could assess the effects of those conflicts.

How should regulators determine if investors are not behaving rationally and what, if anything, should they do about irrational investor behavior? Standard economic analysis assumes that investors respond rationally to information, causing the market to incorporate that information into market prices.⁶ A growing behavioral economics literature questions this assumption—identifying biases, errors, and irrationalities in investor behavior and arguing that irrational investor behavior may lead the market to under- or over-react to information.⁷ The literature makes a convincing case for at least some level of investor irrationality.

The problem, however, is identifying the appropriate response to investor irrationality. Should regulators attempt to protect investors from bad investment decisions that may be the result of irrational behavior? Should they attempt to correct investor biases through warnings, educational programs, or qualification

Clients, WALL. ST. J., July 14, 1995, at C1. In 1997, a Forbes magazines series explored the effect of analyst conflicts on reported analysis and identified various examples in which investment banking business considerations affected analysts' public statements. Gretchen Morgenson, *See No Evil, Speak No Evil: The Dog Ate our Homework*, FORBES, Dec. 15, 1997 at 167. In 1998, Business Week reported that, at the major wall street houses, "every analyst has a potential conflict of interest." Jeffrey M. Laderman, *Wall Street's Spin Game*, BUS. WK., Oct. 5, 1998, at 148. At the same time, academics were evaluating the impact of investment banking relationships on analyst recommendations. See, e.g., Amitabh Dugar & Siva Nathan, *The Effect of Investment Banking Relationships on Financial Analysts' Earnings Forecasts and Investment Recommendations*, 12 CONTEMP. ACCT. RES. 131 (1995). See also Jake Ulick, *Year of the Scandal*, CNN MONEY (Dec. 17, 2002), http://money.cnn.com/2002/12/17/news/review_scandals/ (stating in 2002 that "it was long argued that analysts' stock research at big securities firm was tainted by the investment banking fees their employers sought and earned").

⁵ See also *In re Merrill Lynch & Co., Research Reports Sec. Litig.*, 272 F. Supp. 2d 243, 266–67 (S.D.N.Y. 2003) (citing extensive list of publications warning of analyst conflicts as early as 1995). The SEC's warning, which was issued on July 13, 2001, lagged significantly behind media reports of analyst conflicts. SEC, Investor Alert: Analyzing Analyst Recommendations, available at <http://www.sec.gov/investor/pubs/analysts.htm>.

⁶ See, e.g., Donald Langevoort, *Taming the Animal Spirits of the Stock Markets: A Behavioral Approach to Securities Regulation*, 97 NW. U.L. REV. 135, 136 (2002) (explaining operation of the efficient markets hypothesis).

⁷ See, e.g., *id.* (considering how cognitive biases may influence the structure of securities regulation); Stephen Bainbridge, *Mandatory Disclosure: A Behavioral Analysis*, 68 U. CIN. L. REV. 1023, 1026–27 (2000) (exploring the implications of behavioral economics for mandatory disclosure).

requirements? Does investor irrationality justify paternalism on the part of the SEC or the self-regulatory organizations (SROs)?

The analyst scandals provide a concrete context within which to consider this question. The SEC's initial response to the analyst scandal was to attempt to de-bias investors by warning them of analyst conflicts and by requiring increased disclosure by the analysts themselves. Spitzer's approach and the analyst independence rules adopted as a result of Sarbanes-Oxley have taken a different tack—attempting to reform analyst research to conform to investor expectations. Other regulatory alternatives include restricting the information that analysts may provide to retail investors or limiting trading by seemingly irrational investors.

The analyst scandals are not unique in offering an example of seemingly irrational investor behavior. Although the SEC has defined its mission as the protection of retail investors,⁸ behavioral economics offers limited insights into how a regulator should identify and address investor irrationality, particularly in the context of private market transactions.

This Article proceeds as follows. Part I provides an overview of the so-called analyst scandals. Part II examines the empirical information on the nature and effect of analyst recommendations and considers the extent to which investor reliance on such recommendations may be irrational. Part III considers an analogous example of irrationality—the seeming willingness of investors to trade on the basis of chat rooms and other Internet-based sources of recommendations. Part IV explores possible regulatory approaches to investor irrationality and evaluates the response to the analyst scandal in light of the available alternatives.

II. THE ANALYST SCANDALS

In June 2001, New York State Attorney General Eliot Spitzer initiated an investigation into the stock reports and recommendations issued by research analysts.⁹ The investigation revealed a widespread problem of corruption and conflicts of interest, first at Merrill Lynch and subsequently throughout the investment banking industry. Among other things, Spitzer found that supposedly independent analyst recommendations were frequently the product of an investment banking relationship between the analyst's firm and the issuer, or a desire to establish such a relationship.¹⁰ Spitzer found evidence that firms issued positive public recommendations of companies at the same time that internal firm documents disparaged those companies and warned that they were "falling apart."¹¹ Spitzer even found evidence that some investment banks had paid their competitors to provide positive coverage of their investment banking

⁸ See A.C. Pritchard, *The SEC at 70: Time for Retirement?*, 80 NOTRE DAME L. REV. 1073, 1083–84 (2005) (quoting former SEC Chairman Arthur Levitt as identifying investor protection as both the SEC's legal mandate and his own "top personal priority").

⁹ Merrill Affidavit, *supra* note 3, at 2.

¹⁰ *Id.* at 14–16.

¹¹ *Id.* at 10–13.

2006] REGULATORY RESPONSES TO INVESTOR IRRATIONALITY 61

clients.¹² Spitzer's investigation spurred further scrutiny into analyst conflicts of interest by the SEC, Congress, and the media.¹³

The SEC's investigation revealed additional problems, including failure by analysts and their firms to comply with SRO rules regarding disclosure and monitoring, analysts trading contrary to their published recommendations, and frequent issuance of "booster shot" research reports shortly before the expiration of IPO lock-up periods.¹⁴ Some of the most damaging revelations concerned Citigroup analyst Jack Grubman, who reportedly upgraded his rating on AT&T in exchange for assistance in getting his children into an exclusive New York preschool.¹⁵

As a result of the investigation, Spitzer, along with the SEC, the National Association of Securities Dealers (NASD), the New York Stock Exchange (NYSE), and other regulators, reached a tentative \$1.4 billion settlement with ten Wall Street firms in December 2002,¹⁶ which was finalized on April 28, 2003.¹⁷ The settlement required the firms to revise the structure of their operations in order to reduce analyst conflicts of interest. The settlement terms specified various mechanisms for insulating analysts from investment banking pressure and increasing the transparency and informativeness of analyst recommendations.¹⁸ In addition, the firms were required to spend a total of approximately \$432.5 million to provide independent research to their customers.¹⁹

Spitzer's investigation resulted in widespread regulatory reforms. The Securities and Exchange Commission adopted Regulation AC, which requires

¹² Joint Press Release, Ten of Nation's Top Investment Firms Settle Enforcement Actions Involving Conflicts of Interest Between Research and Investment Banking, April 28, 2003, <http://www.sec.gov/news/press/2003-54.htm>.

¹³ See, e.g., Thomas S. Mulligan, *Amid Criticism, Wall St. Offers Analyst Guidelines*, L.A. TIMES, June 13, 2001, at 1 (reporting announcement of congressional hearings on analyst conflicts of interest and pending SEC investigation).

¹⁴ See *Concerning Conflicts of Interest Faced by Brokerage Firms and Their Research Analysts: Before the H. Subcomm. on Capital Mkts, Ins., and Gov't Sponsored Enters., H. Comm. on Fin. Servs.* (July 31, 2001) (written testimony of Laura S. Unger, Acting SEC Chair) <http://www.sec.gov/news/testimony/073101tslu.htm> (summarizing SEC's findings).

¹⁵ See, e.g., Dan Ackman, *Weill-Grubman Dealings were Child's Play*, FORBES.COM, Nov. 14, 2002, http://www.forbes.com/2002/11/14/cx_da_1114topnews.html (reporting allegations that Grubman's decision to take a "fresh look at AT&T" was made in exchange for Citigroup Chairman Sanford Weill's help in the form of a \$1 million donation by Citigroup to the 92nd Street Y); Complaint, SEC v. Jack Benjamin Grubman, S.D.N.Y. Apr. 28, 2003, ¶¶ 850-103, <http://www.sec.gov/litigation/complaints/comp18111b.htm> (detailing allegations).

¹⁶ Press Release, Office of N.Y. State Attorney Gen. Eliot Spitzer, SEC, N.Y. Attorney Gen., NASD, NASAA, and State Regulators Announce Historic Agreement to Reform Investment Practices (Dec. 20, 2002), http://www.oag.state.ny.us/press/2002/dec/dec20b_02.html.

¹⁷ SEC, Statement Regarding Global Settlement Related to Analyst Conflicts of Interest, Apr. 28, 2003, <http://www.sec.gov/news/speech/spch042803com.htm>.

¹⁸ See SEC, SEC Fact Sheet on Global Analyst Research Settlements, <http://www.sec.gov/news/speech/factsheet.htm> (describing settlement terms).

¹⁹ *Id.*

analysts to disclose any conflicts of interest and to certify that their reports accurately reflect their personal views.²⁰ Among other things, analysts and their firms must disclose the existence of any current or prospective investment banking relationships and any compensation or other payments received in connection with the report and recommendation. Congress enacted section 501 of the Sarbanes-Oxley Act of 2002, which requires the SEC or the self-regulatory organizations to adopt rules “reasonably designed to address [analyst] conflicts of interest.”²¹ The statute specifically identifies the need for both structural safeguards such as Chinese walls and increased disclosure of analyst conflicts. In response to the requirements of Sarbanes-Oxley, the NYSE and NASD adopted a series of rule changes designed to address analyst conflicts of interest.²² The rules increase disclosure requirements, limit the ability of investment banking personal to evaluate analysts or influence their compensation, and require analyst education on ethics and other professional responsibility issues.

In conducting its investigation, Spitzer’s staff reviewed thousands of documents and e-mails and deposed numerous witnesses. Some of the most egregious false statements and conflicts of interest were revealed in the SEC’s complaints and press statements. In addition, hundreds of pages of materials from the investigation were released to the public and made available on the New York State Attorney General’s Office website.

The global settlement did not provide for restitution to investors who had relied, directly or indirectly, on the analyst reports. As a result, investors filed a number of class actions and arbitration cases, seeking to recover for the analysts’ false statements, overly optimistic recommendations, and conflicts of interest.²³ The typical investor claims were based on purchases of technology or telecommunications stocks during 1999 or 2000, at the height of the stock market bubble. The lawsuits alleged several types of fraudulent conduct. In a few cases, investors alleged that the analysts’ reports contained specific

²⁰ Regulation Analyst Certification, 17 C.F.R. § 242 (2003), *available at* <http://www.sec.gov/rules/final/33-8193.htm>.

²¹ Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, § 501, 116 Stat. 745 (2002).

²² Order Approving Proposed Rule Changes by the NASD and the NYSE and Notice of Filing and Order Granting Accelerated Approval of Amendment No. 2 to the Proposed Rule Change by the NASD and Amendment No. 1 to the Proposed Rule Change by the NYSE Relating to Research Analyst Conflicts of Interest, Exchange Act Release No. 34-45908, (May 10, 2002), <http://www.sec.gov/rules/sro/34-45908.htm>; Self-Regulatory Organizations; Order Approving Proposed Rule Changes by the NYSE Relating to Exchange Rules 344 (“Supervisory Analysts”), 345A (“Continuing Education for Registered Persons”), 351 (“Reporting Requirements”) and 472 (“Communications with the Public”) and by the NASD Relating to Research Analyst Conflicts of Interest and Notice of Filing and Order Granting Accelerated Approval of Amendment No. 3 to the Proposed Rule Change by the NYSE and Amendment No. 3 to the Proposed Rule Change by the NASD Relating to Research Analyst Conflicts of Interest, Exchange Act Release No. 34-48252 (July 29, 2003), <http://www.sec.gov/rules/sro/34-48252.htm>.

²³ *See In re Merrill Lynch & Co. Research Reports Sec. Litig.*, 273 F. Supp. 2d 351, 357 (S.D.N.Y. 2003) (identifying lawsuits in case at bar as part of a “large group” “precipitated” by the New York Attorney General’s report).

2006] REGULATORY RESPONSES TO INVESTOR IRRATIONALITY 63

misrepresentations about the issuers that were the subject of the reports. Thus, for example, the WorldCom investors' complaint against Citigroup, Salomon Smith Barney, a Citigroup subsidiary (SSB), and Jack Grubman alleged that Grubman learned of a component of WorldCom's capital expenditure fraud and modified the valuation model used in SSB's reports to conceal the fraud.²⁴

More commonly, the complaints alleged that the analysts committed fraud by knowingly issuing unwarranted positive recommendations and concealing their true (negative) opinions about covered issuers. A typical example is the complaint in *Fogarazzo v. Lehman Bros, Inc.*, which reported an e-mail exchange between an analyst and his superior indicating that the analyst both knew that the public reports were unwarranted and had attempted to downgrade the security three times, but had been prevented from doing so because of investment banking reasons.²⁵ At the time of the correspondence, the security had dropped in price from \$32/share to \$4/share, but Lehman was still maintaining a \$50/share price target.²⁶

Finally, the complaints alleged that the analysts fraudulently concealed their conflicts of interest and that those conflicts undermined the reliability and independence of their research. In particular, the complaints alleged that analysts issued public reports, recommendations, and price targets that were unduly "bullish" in an effort to obtain and maintain investment banking business.²⁷ In some cases, analysts allegedly agreed to trade favorable research coverage in exchange for investment banking business.²⁸

Courts have been largely unsympathetic to investor lawsuits against the analysts. The vast majority of cases have been dismissed on various grounds including statute of limitations,²⁹ absence of loss causation,³⁰ the finding that the analyst statements were merely opinions or puffery rather than misstatements of fact,³¹ and lack of scienter.³² In assessing the claims against

²⁴ *In re WorldCom, Inc. Sec. Litig.*, 294 F.Supp. 2d 392, 405 (S.D.N.Y. 2003).

²⁵ *Fogarazzo v. Lehman Bros., Inc.*, 341 F. Supp. 2d 274, 282 (S.D.N.Y. 2004).

²⁶ *Id.*

²⁷ *See, e.g., Lentell v. Merrill Lynch & Co.*, 396 F.3d 161, 165 (2d Cir. 2005) (describing complaint alleging fraudulent scheme "motivated by the desire to obtain and maintain investment banking business for Merrill Lynch."); *La Grasta v. First Union Secs., Inc.*, 358 F.3d 840, 843 (11th Cir. 2004) (reporting allegations that analyst recommendations were motivated by the undisclosed goal of winning investment banking business from covered issuer rather than by a desire to identify quality long term investments).

²⁸ *See Lentell*, 396 F.3d at 165 (reporting allegations of "the existence of undisclosed agreements between Merrill Lynch and 24/7 Media and Interliant to "trade" favorable, bullish Analyst Reports for investment banking business directed to Merrill Lynch").

²⁹ *See, e.g., In re Salomon Analyst Winstar Litig.*, 373 F. Supp. 2d 241 (S.D.N.Y. 2005) (finding investors were on inquiry notice when company filed for bankruptcy).

³⁰ *See, e.g., In re Merrill Lynch & Co. Research Reports Sec. Litig.*, 273 F. Supp. 2d 351, 362 (S.D.N.Y. 2003).

³¹ *See, e.g., In re Credit Suisse First Boston Corp.*, 2005 U.S. Dist. LEXIS 6345, *11-13 (D. Mass. 2005) (rejecting claim that "buy" recommendations were actionable statements of opinion).

the analysts, the courts observed that analyst conflicts of interest—and investment banking conflicts in particular—were well known to the investing community for years. Judge Milton Pollack, for example, cited dozens of newspaper and magazine articles describing investment banking conflicts and the effect that such conflicts had on analysts' recommendations and other public statements.³³ Similarly, Judge Richard Holwell dismissed a lawsuit against Morgan Stanley on statute of limitations grounds, finding that a Fortune magazine cover page article entitled *Where Mary Meeker Went Wrong* was sufficient to put the plaintiff on inquiry notice about analyst conflicts and related wrongdoing.³⁴

Given the widespread disclosure of analyst conflicts, it is difficult to understand investors' claims that they were misled into believing that analysts were independent or that their advice was objective. Such claims may simply be, as Judge Pollack suggested, an after-the-fact effort to create scapegoats for losses resulting from the collapse of the technology bubble.³⁵ Alternatively, investors may have failed to respond appropriately to the information about analyst conflicts. Whether it was irrational for investors to rely on analyst information despite the investment banking conflicts depends, in part, on the value of analyst recommendations and reports, a subject addressed in the next Part.

III. EMPIRICAL INFORMATION ON ANALYST RECOMMENDATIONS

A. *Empirical Information*

An extensive economic literature has explored the value of analyst reports and recommendations. Although there are some conflicting findings, several conclusions emerge from this literature.

First, analyst recommendations are consistently upwardly biased. Studies showed that during the period from 1989 to 1991, buy recommendations were seven times more common than sell recommendations.³⁶ The disparity grew worse with the bull market. SEC Chief Accountant Lynn Turner surveyed 26,000 analyst recommendations as of March 1, 2000 and found that only .8%

³² *In re Salomon Analyst AT&T Litig.*, 350 F. Supp. 2d 455 (S.D.N.Y. 2004) (finding failure adequately to plead falsity and scienter and that, in addition, analyst's statements were protected by the bespeaks caution doctrine).

³³ *In re Merrill Lynch & Co., Inc. Research Reports Sec. Litig.*, 272 F. Supp. 2d 243 (S.D.N.Y. 2003).

³⁴ *Shah v. Morgan Stanley*, 2004 U.S. Dist. LEXIS 20897, *14–15 (S.D.N.Y. 2004).

³⁵ *See, e.g., Merrill Lynch*, 273 F. Supp. 2d at 358 (describing investors as “[s]eeking to lay the blame for the enormous Internet Bubble solely at the feet of a single actor, Merrill Lynch”).

³⁶ Kent L. Womack, *Do Brokerage Analysts' Recommendations Have Investment Value?*, 51 J. FIN. 137, 142 (1996).

2006] REGULATORY RESPONSES TO INVESTOR IRRATIONALITY 65

were sell or strong sell.³⁷ Interestingly, despite the subsequent market decline and the resulting focus on overoptimism by analysts, as of April 2, 2001, sell and strong sell recommendations had only risen to 1.3%.³⁸ Eliot Spitzer's investigation of Merrill Lynch revealed that during the period from 1999 to 2001, Merrill's Internet research group never rated a stock less than a "3" or accumulate on Merrill's five point scale.³⁹

Second, despite this bias, investors trade in response to the release of analyst reports and recommendations, and the trading is sufficient to generate a price response to analyst information.⁴⁰ Furthermore, the effect is not limited to uninformed retail investors. Institutional smart money also responds to information released by sell-side analysts.⁴¹ A recent study by Paul Ryan and Richard Taffler found that sell-side analyst recommendations and earnings forecast revisions explain "17.4% of major market-adjusted price changes and 16.1% of high trading volumes that are triggered by reported news events."⁴²

Third, studies show that, apart from the 2000 to 2001 time period, analyst recommended stocks outperformed the market.⁴³ Nonetheless, most studies show that retail investors are unlikely to benefit from trading on the basis of

³⁷ Lynn E. Turner, Speech at the Third Annual SEC Disclosure & Accounting Conference: The State of Financial Reporting Today: An Unfinished Chapter III (June 21, 2001), <http://sec.gov/news/speech/spch508.htm>.

³⁸ *Id.*

³⁹ Merrill Affidavit, *supra* note 3, at 9.

⁴⁰ See, e.g., Womack, *supra* note 36, at 164 (finding "strong evidence that stock prices are significantly influenced by analysts' recommendation changes."); Scott E. Stickel, *The Anatomy of the Performance of Buy and Sell Recommendations*, Sept./Oct. FIN. ANALYSTS J. 25, 25 (1995) (concluding that "buy and sell recommendations influence stock prices").

⁴¹ See, e.g., T. Clifton Green, *The Value of Client Access to Analyst Recommendations* 1 (2004) (working paper, Emory Univ.), available at <http://ssrn.com/abstract=438725> ("Institutional investors pay significant amounts to obtain real-time access to brokerage firm research through providers such as First Call . . ."); Paul J. Irvine, *Analysts' Forecasts and Brokerage-Firm Trading*, 79 ACCT. REV. 125, 126, 147-48 (2004) (clients of brokerage firms, including institutional investors, increase trading in response to recommendations and forecast revisions of brokerage firm analysts).

⁴² Paul Ryan & Richard J. Taffler, *What Firm-Specific News Releases Drive Economically Significant Stock Returns and Trading Volumes?* 2 (working paper, EFMA 2002 London Meetings), available at <http://ssrn.com/abstract=314880>; see also Womack, *supra* note 36, at 164 (finding "strong evidence that stock prices are significantly influenced by analysts' recommendation changes"); Stickel, *supra* note 40, at 25 (concluding that "buy and sell recommendations influence stock prices").

⁴³ See, e.g., Brad Barber et al., *Can Investors Profit from the Prophets? Security Analyst Recommendations and Stock Returns*, 56 J. FIN. 531, 561 (2001) (finding that purchasing stocks with most favorable consensus recommendations produces higher returns absent transaction costs). Brad Barber et al., *Reassessing the Returns to Analysts' Stock Recommendations*, Mar./Apr. FIN. ANALYSTS J. 88, 89 (2003) (finding that highly recommended stocks underperformed less favored stocks during 2000-2001 time period); see also Kent L. Womack, *supra* note 36 (finding that improved performance persists and is not merely a reaction to the announcement of the recommendation). But see Narasimhan Jegadeesh et al., *Analyzing the Analysts: When do Recommendations Add Value?*, 59 J. FIN. 1083, 1085 (2004) (finding that naively following analyst recommendations will not produce superior returns and that, for a subset of analyst recommendations, analyst recommended stocks actually underperform the market).

analyst research. This finding may be the result of transaction costs that dwarf the effect of the recommendations.⁴⁴ Alternatively, it may be the case that the smart money has gotten there first—it is common for institutional investors to have access to analyst research prior to its release to retail investors.

An alternative explanation for the inability of retail investors to profit from analyst information is irrationality or naïveté. Using trade size as a proxy for investor sophistication, several studies have documented differing trading responses to analyst information by institutional and retail investors. Michael Mikhail, Beverly Walther, and Richard Willis have found, for example, that retail investors are more likely to trade in response to analyst upgrades and buy recommendations, despite the fact that such recommendations have less information value than downgrades and sell recommendations.⁴⁵ Institutional investors, in contrast, account for more of the stock price reaction to the release of negative information.⁴⁶ The study also finds that retail investors are less likely than institutions to consider analyst conflicts and incentives in responding to recommendations.⁴⁷ These findings are supported by work by Ulrike Malmendier and Devin Shanthikumar.⁴⁸ Malmendier and Shantikumar demonstrate that small investors naïvely respond to analyst recommendations and fail to distinguish between affiliated and unaffiliated analysts. Malmendier and Shantikumar argue that their results suggest that large investors respond rationally to analyst information but that small investors respond irrationally. Similarly, Sarah Bonner, Beverly Walther, and Susan Young find that sophisticated investors use information cues to evaluate the quality of analyst earnings forecasts and in making investment decisions based on those forecasts; unsophisticated investors do not.⁴⁹

As a result of these differences, even if analyst information does have trading value, it may nonetheless have the effect of inducing sub-optimal trading decisions on the part of retail investors. Whether investors are foolish, irrational, or the victims of fraud, they are seemingly placing too much credence in the buy recommendations and price targets released by analysts. The next section examines the extent to which behavioral finance offers insight into this investor behavior.

⁴⁴ See, e.g., Ike Mathur & Amjad Waheed, *Stock Price Reactions to Securities Recommended in Business Week's "Inside Wall Street,"* 30 FIN. REV. 583, 602 (1995) (finding that analyst information is only of value to low transaction cost short term traders, such as institutional investors).

⁴⁵ Michael B. Mikhail et al., *When Security Analysts Talk Who Listens?* (April 2005) <http://ssrn.com/abstract=709801>.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ Ulrike Malmendier & Devin Shanthikumar, *Are Investors Naive About Incentives?*, working paper 10812 (Sept. 2004), <http://www.nber.org/papers/w10812>.

⁴⁹ Sarah E. Bonner et al., *Sophisticated and Unsophisticated Investors' Reactions to Analysts' Forecast Revisions Conditional on Factors that are Associated with Forecast Accuracy* (working paper 2001), <http://ssrn.com/abstract=280710>.

B. *Investor Irrationality*

Is investor trading in response to analyst recommendations irrational? One can, of course, argue that most investor trading is irrational. Although purchasing stocks as a long term investment may be profitable, studies show that investors trade too frequently. Trading in the secondary market is, after all, a zero sum game, even absent transaction costs.⁵⁰ Once transaction and information costs are incorporated, investor trading results in a net social loss.⁵¹ Commentators have observed that reductions in commission rates and the ease of Internet trading have given retail investors unprecedented access to the securities markets, leading to an increased number of day traders, momentum traders, and noise traders employing trading strategies that are unlikely to be profitable on a long term basis.⁵²

Furthermore, investors' biases may influence both the frequency and the nature of their trading. Commentators have identified a variety of investor biases. As Ronald Gilson and Reinier Kraakman observe:

The list of biases has grown impressively with time, and includes *overconfidence*, the tendency of individuals to overestimate their skills; the *endowment effect*, the tendency of individuals to insist on a higher price to sell something they already own than to buy the same item if they do not already own it; *loss aversion*, the tendency for people to be risk averse for profit opportunities, but willing to gamble to avoid a loss; *anchoring*, the tendency for people to make decisions based on an initial estimate that is later adjusted, but not sufficiently to eliminate the influence of the initial estimate; *framing*, the tendency of people to make different choices based on how the decision is framed such as whether it is framed in terms of the likelihood of a good outcome or in terms of the reciprocal likelihood of a bad outcome; and *hindsight*, the tendency of people to read the present into assessments of the past.⁵³

Gilson and Kraakman, as well as other commentators, have debated whether investor irrationality undercuts the Efficient Capital Market hypothesis, a question that depends largely on the extent to which the effects of irrationality lead to systemic errors that cannot be corrected through arbitrage. Similarly,

⁵⁰ See, e.g., Lynn A. Stout, *Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation*, 81 VA. L. REV. 611, 622–23 (1995) (explaining how stock trading simply transfers the benefits of ownership from one investor to another).

⁵¹ *Id.* (identifying broker fees and research costs as among the transaction costs of trading securities).

⁵² See, e.g., Brad M. Barber & Terrance Odean, *The Internet and the Investor*, 15 J. ECON. PERSP. 41, 45 (2001) (describing how access to Internet investing changes investors' trading strategies, the frequency of their trading, and the type of information upon which they rely); Laura S. Unger, Speech at the Harvard Club: Does the Internet Empower or Just Excite Investors? (Sept. 10, 1999), available at <http://www.sec.gov/news/speech/speecharchive/1999/spch294.htm> (explaining how "low prices and easy access" have generated increased trading activity and expressing concern that this activity is "hazardous to the wealth of investors").

⁵³ Ronald J. Gilson & Reinier Kraakman, *The Mechanisms of Market Efficiency Twenty Years Later: The Hindsight Bias*, 28 J. CORP. L. 715, 724 (2003).

investor irrationality can cause prices to deviate from fundamental values even if those deviations do not create arbitrage opportunities.⁵⁴

This Article does not consider the effect of investor irrationality on overall market efficiency or pricing. Rather, the focus of this Article is the relationship between investor irrationality and the response by retail investors to analyst information. As Gilson and Kraakman acknowledge, even if arbitrage limits the effects of investor irrationality on the market, we may nonetheless “care what happens to the people whose mistakes are regressed out.”⁵⁵

Three types of investor irrationality are particularly significant in evaluating reliance on analyst information: overconfidence, anchoring, and bounded rationality. Donald Langevoort explains that “there is an increasing body of empirical evidence that directly supports investor overconfidence as an important trait.”⁵⁶ In one important study, Brad Barber and Terrance Odean evaluate trading practices by individual investors through discount brokerages.⁵⁷ Barber and Odean find extraordinary levels of portfolio turnover by individual investors, and those investors who trade most often generate the lowest returns.⁵⁸ After analyzing and rejecting various rational expectations explanations for this excessive trading, Barber and Odean conclude that “[p]eople are overconfident, and overconfidence leads to too much trading.”⁵⁹ Moreover, “[t]hose who trade the most are hurt the most.”⁶⁰ In another study, Barber and Odean find that men exhibit greater overconfidence than women, trade more frequently, and realize lower returns.⁶¹

Overconfidence is likely to increase investor reliance on analyst recommendations as well. Because overconfident investors trade more frequently, they may be most responsive to analyst recommendations. Overconfident investors also react more strongly to unreliable information, presumably based on an irrational perception of their ability to evaluate the information.⁶² Moreover, research has found that overconfidence can persist and dominate rational trading.⁶³ Internet trading, as well as the availability of

⁵⁴ As Gilson and Kraakman observe, it may not be possible to determine the extent to which multiple biases interact or cancel each other out. As a result, although investors sell too early because of loss aversion, they may value the security they own more than a potential investment because of the endowment effect. The net impact of the two biases on equity pricing is therefore indeterminate. *See id.* at 731–32.

⁵⁵ *Id.* at 733.

⁵⁶ Langevoort, *supra* note 6, at 147.

⁵⁷ Brad Barber & Terrance Odean, *Trading is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors*, 55 J. FIN. 773, 799 (2000).

⁵⁸ *Id.*

⁵⁹ *Id.* at 800.

⁶⁰ *Id.*

⁶¹ Brad Barber & Terrance Odean, *Boys Will be Boys: Gender, Overconfidence, and Common Stock Investment*, 116 Q. J. ECON. 261, 289 (2001).

⁶² *See, e.g.*, Terrance Odean, *Volume, Volatility, Price, and Profit When All Traders Are Above Average*, 53 J. FIN. 1887, 1893–94 (1998) (detailing deficiencies in weighting and evaluating quality of information).

⁶³ Albert S. Kyle & F. Albert Wang, *Speculation Duopoly with Agreement to Disagree: Can Overconfidence Survive the Market Test?*, 52 J. FIN. 2073, 2073 (1997).

equity research on the web, can exacerbate investor overconfidence by giving investors an exaggerated sense of control over, and knowledge about, their investments.⁶⁴ In particular, as Barber and Odean warn, the additional information available through the Internet can create “an *illusion of knowledge*.”⁶⁵

Anchoring is another bias that may lead retail investors to be unduly responsive to analyst recommendations.⁶⁶ Anchoring causes investors to give too much weight to an initial reference point in their evaluation and to be reluctant to adjust that reference point.⁶⁷ Anchoring is a factor in loss aversion, in which investors are unwilling to sell securities that have declined below the initial purchase price.⁶⁸ With respect to analyst recommendations, anchoring attaches a power of suggestion to analyst announcements of price targets. Merely by suggesting a price, analysts can cause investors to skew their evaluation of stock value toward the announced target because of the undue weight given by investors to the target price.⁶⁹ Moreover, investors may continue to credit such targets despite informational developments. Relatedly, both price targets and recommendations are highly salient, concrete information that is easy for investors to process. Studies show that investors are likely to respond more heavily to salient information—“information that stands out and captures attention.”⁷⁰

The concept of bounded rationality reflects the recognition that people have limited cognitive capacities. As a result, people cannot attend to all available information or evaluate their choices fully, particularly with respect to complex decisions.⁷¹ Instead, they engage in satisficing—investing a level of effort that will produce a satisfactory, if not optimal, outcome.⁷² Bounded rationality is not, strictly speaking, a bias; it is a rational explanation for investor use of heuristics and other short cuts rather than more complete

⁶⁴ See Barber & Odean, *supra* note 52, at 42 (detailing the effects of Internet on retail investors).

⁶⁵ *Id.* at 46 (emphasis in original).

⁶⁶ See Larry E. Ribstein, *Private Ordering and the Securities Laws: The Case of General Partnerships*, 42 CASE W. RES. REV. 1, 16 (1992) (describing anchoring as “[p]erhaps the most relevant bias affecting securities investors”).

⁶⁷ See, e.g., William J. Carney, *Defining a Security: The Addition of a Market-Oriented Contextual Approach to Investment Contract Analysis*, 33 EMORY L.J. 311, 344 (1984) (describing “anchoring bias”).

⁶⁸ See, e.g., Terrance Odean, *Are Investors Reluctant to Realize Their Losses?*, 53 J. FIN. 1775, 1781 (1998) (demonstrating loss aversion in investors).

⁶⁹ See, e.g., Edward E. Joyce & Gary C. Biddle, *Anchoring and Adjustment in Probabilistic Inference in Auditing*, 19 J. ACCT. RES. 120, 122–23 (1981) (reporting that suggestion of a number to subjects affected their estimates).

⁷⁰ Odean, *supra* note 62, at 1893.

⁷¹ Herbert A. Simon, *Theories of Decision-Making in Economics and Behavioral Science*, 49 AM. ECON. REV. 253, 272–273 (1959).

⁷² *Id.* at 263.

information.⁷³ Bounded rationality explains, at least in part, why retail investors with limited time for research may rely more heavily on the easy to understand analyst recommendation than on the detailed information contained in the analyst's report.

IV. INTERNET SECURITIES FRAUD AND INVESTOR IRRATIONALITY

Bounded rationality, overconfidence, and anchoring affect investor responses to information other than that provided by research analysts. Indeed, the growing availability and use of the Internet has dramatically increased its importance as a source of investor information. Investors obtain information from web sites, on-line newsletters, chat rooms, and more. The willingness of investors to utilize this information as the basis of trading decisions has led to a dramatic growth in Internet securities fraud. Although false statements, pump and dump scams, and other manipulative schemes are not a recent innovation—such actions were the basis for congressional adoption of the federal securities laws in 1933 and 1934—the Internet allows fraudsters to reach an unprecedented number of investors at an extremely low cost.⁷⁴ The SEC has prosecuted dozens of individuals for using the Internet to engage in manipulation and fraud. Indeed, as SEC Director of Enforcement Stephen Cutler explained, Internet fraud is so easy that “just about anyone—even a 17-year-old high school student—can mastermind a securities fraud over the Internet.”⁷⁵

Perhaps the most shocking example is the case of Jonathan Lebed. Lebed, a fifteen-year-old from New Jersey, purchased stock in a number of small capitalization companies. After purchasing the stock, he would post hundreds of messages to Internet message boards, typically Yahoo! Finance, touting the stock. According to the SEC, Lebed used fictitious names and his postings were “devoid of substantive content.”⁷⁶ The postings contained stock price predictions as well as statements that the stocks were undervalued and “about to ‘take off.’”⁷⁷ According to the SEC, Lebed's postings caused the price of the stocks to rise dramatically, enabling Lebed to sell his holdings at a substantial

⁷³ See Herbert A. Simon, *A Behavioral Model of Rational Choice*, 69 Q.J. ECON. 99, 101 (1955) (explaining limited knowledge and ability by decision-makers as part of a rational choice model).

⁷⁴ See, e.g., Richard H. Walker & David M. Levine, “*You’ve Got Jail*”: *Current Trends in Civil and Criminal Enforcement of Internet Securities Fraud*, 38 AM. CRIM. L. REV. 405, 407 (2001) (“in the past, pump and dump frauds were commonly accomplished in a ‘boiler room’ filled with market professionals spreading lies in hundreds of telephone cold calls.”).

⁷⁵ Press Release, SEC, SEC Identifies 17-Year-Old High School Student as Internet Fraud Artist; Recovers \$900,000 in Illegal Proceeds in Account in Costa Rican Casino (Jan. 7, 2002), <http://www.sec.gov/news/headlines/highschoolfraud.htm>.

⁷⁶ *In re Jonathan G. Lebed*, SEC Release No. 7,891, Admin. Proc. No. 3-10291 (Sept. 20, 2000), available at <http://www.sec.gov/litigation/admin/33-7891.htm> [hereinafter “SEC Cease and Desist Order”].

⁷⁷ *Id.*

2006] REGULATORY RESPONSES TO INVESTOR IRRATIONALITY 71

profit.⁷⁸ A New York Times magazine article reported that these trades netted Lebed almost \$800,000 during a six month period.⁷⁹ The SEC noted that the subject companies issued no news or press releases during the time period of Lebed's activity that might have accounted for the increases in price and volume.⁸⁰

The SEC prosecuted Lebed for manipulation in connection with eleven of these transactions.⁸¹ According to the SEC, Lebed's postings had the effect of dramatically increasing the price and trading volume of the securities he touted.⁸² In the case of Man Sang Holdings, Inc., the example cited in the SEC's litigation release, "the volume of the stock increased from 71,500 to 1,879,000 shares, and the price jumped from \$2.25 to a high of \$5.125" based on Lebed's actions.⁸³ Lebed settled with the Commission, consenting to the entry of a cease and desist order against him and disgorging \$285,000 of his trading profits.⁸⁴

The question posed by the SEC's action against Lebed is how a fifteen-year-old high school student can persuade investors to purchase stock. If it seems irrational for investors to rely on the reports and recommendations provided by research analysts, how much less rational is investor reliance on information posted anonymously on Internet web sites and chat rooms?⁸⁵ What rational investor would invest in a company touted by "cyber-scofflaws"?⁸⁶ The irrationality of retail investor behavior seems confirmed by the fact that Internet postings by an unknown person can cause stock price to double in a matter of hours. The SEC stated that Lebed manipulated stock prices and defrauded investors. Donald Langevoort explains that Lebed's influence on the market is the result of investor overconfidence.⁸⁷

Further analysis of Lebed and his stock analysis, however, demonstrates that the line between rational and irrational behavior is not so clear cut. News profiles reveal that Lebed was a long term student of the financial markets.⁸⁸ At

⁷⁸ *Id.* ("The posted messages always caused the price and volume of the touted stocks to increase dramatically.")

⁷⁹ Michael Lewis, *Jonathan Lebed's Extracurricular Activities*, N.Y. TIMES MAG., Feb. 25, 2001, at 26.

⁸⁰ SEC Cease and Desist Order, *supra* note 76.

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ Similarly difficult to understand is the ability of "fraudsters" to induce investor trading by leaving phony "wrong number" messages containing stock tips. See SEC, "Wrong Numbers" and Stock Tips on Your Answering Machine (Apr. 11, 2005), <http://www.sec.gov/investor/pubs/wrongnumberscam.htm> (warning investors of wrong number scam and advising investors that "[i]t is never a good idea to put your hard-earned money into a stock on the basis of a hot tip from somebody you don't know").

⁸⁶ Walker & Levine, *supra* note 74, at 407 (applying the term to those engaged in Internet securities fraud, including Jonathan Lebed).

⁸⁷ Langevoort, *supra* note 56, at 158-59.

⁸⁸ See, e.g., CBS News, *Pump and Dump*, (Oct. 19, 2000), <http://www.cbsnews.com/>

fourteen he and two friends finished fourth in a national stock picking contest for students run by CNBC.⁸⁹ Lebed's stock picks were followed not just by Internet investors but by his friends and teachers who knew him personally.⁹⁰ Subsequent to the settlement with the SEC, Lebed started an Internet website that he maintains to date.⁹¹ The website contains stock picks, reports of past performance, and other information.⁹² Lebed also publishes a free newsletter that he distributes by e-mail. The site's performance report indicates spectacular results by at least some of Lebed's recent stock picks. Perhaps in response to recent reforms in analyst regulation, Lebed's website states that he is not a financial advisor, that he "tries not to own stock in any companies profiled on the website" and that any such ownership is disclosed on the site.⁹³ BusinessWeek Online describes Lebed's activity as "pumping without dumping."⁹⁴ The site also contains an extensive legal disclaimer and a copy of the SEC consent order.⁹⁵

So why not rely on Lebed? From an investor's perspective, what exactly is the difference between relying on Lebed and relying on Jack Grubman or Mary Meeker? Media reports and Lebed's website suggest that Lebed researches the companies that he touts. Indeed, the type of information and disclosures provided by Lebed appears remarkably similar to the information provided by professional analysts, albeit more limited, and include descriptions of the company's business, recent developments, and reports of significant ownership interests or transactions in the company's stock.

An investor might question the extent of Lebed's research or knowledge about the firms he covers, but one might raise similar questions about professional analysts. Research analysts are under no legal requirement to do a particular level of research or investigation to support their analysis, nor are there any regulatory requirements or certifications needed to provide general analysis and information to the investing public.⁹⁶ Moreover, the fact that an

stories/2000/10/19/60minutes/main242489.shtml (explaining that Lebed had been investing in the stock market since he was thirteen and had, "for someone who has just turned 16 . . . a relatively long track record for picking stocks").

⁸⁹ *Id.*

⁹⁰ Lewis, *supra* note 79, at 30.

⁹¹ Lebed.biz can be found at <http://www.lebed.biz/index.htm> (last visited Jan. 30, 2006).

⁹² *Id.*

⁹³ *Id.* (follow "FAQs" hyperlink).

⁹⁴ Gary Weiss, *This Stock Whiz Kid Stays in the Picture*, BUS. WK. ONLINE, Apr. 7, 2003, http://www.businessweek.com/magazine/content/03_14/b3827065_mz020.htm.

⁹⁵ Lebed.biz, <http://www.lebed.biz/index.htm> (follow "Legal Disclaimer" hyperlink, or follow "SEC Consent Order" hyperlink, both located at the bottom of every page).

⁹⁶ See Jill E. Fisch & Hillary A. Sale, *The Securities Analyst as Agent: Rethinking the Regulation of Analysts*, 88 IOWA L. REV. 1035, 1056-74 (2003) (describing regulation of securities analysts). Analysts are generally exempt from the more stringent requirements of the Investment Advisers Act of 1940 because they do not provide direct personalized investment advice to specific clients. See, e.g., *Lowe v. SEC*, 472 U.S. 181, 211 (1985) (finding Investment Advisers Act did not apply to the publication of non-personalized investment advice in newsletters). See also *Certain Broker-Dealers Deemed Not To Be*

analyst is knowledgeable about a firm or an industry does not make that analyst's recommendations reliable, as was evidenced by hindsight evaluation of Jack Grubman's recommendations. Recent actions by regulators seem to suggest that independence from conflicts of interests, particularly investment banking conflicts—is among the most important factors in assuring the reliability of analyst information.⁹⁷ Like the independent analysts, who have been the beneficiaries of recent regulatory efforts and the Spitzer/SEC settlement, Lebed is certainly free from investment banking and brokerage conflicts, although, as with analysts, it is unclear that any source of investment information is free of all conflicts of interest.⁹⁸ Moreover, many firms that provide so-called independent analysis trade covered securities on a proprietary basis, as Lebed did.⁹⁹

In sum, the behavior of information sources and market participants suggests that, even if investors are not fully rational, it is difficult to characterize particular investment decisions as irrational or inappropriate. In a market in which prices can and do deviate from fundamental value, in a market where investor sentiment plays an important role, in a market that functions like the famous Keynes beauty contest, it is hard to decide what information constitutes a rational basis for trading. Investors may lose money when trading on the basis of fundamentals, or make money by following the length of women's skirts. The difficulty of identifying appropriate and inappropriate bases for trading decisions suggests a challenge for regulators in attempting to reduce irrational investor behavior. The next section considers actual and potential regulatory responses to investor irrationality.

Investment Advisers, Exchange Act Release No. 34-51523, 70 Fed. Reg. 20,424 (Apr. 19, 2005) (excepting from the Investment Advisers Act certain broker-dealers who provide investment advice incidental to brokerage services).

⁹⁷ See, e.g., *Global Research Analyst Settlement: Hearing Before the S. Comm. on Banking, Housing and Urban Affairs*, 108th Cong. (2003) (statement of William H. Donaldson, Chairman, SEC), available at <http://www.sec.gov/news/testimony/ts050703whd.htm> (describing structural reforms of the Global Research Settlement as “designed to insulate research analysts from pressures by investment banking”) (hereinafter “Donaldson Testimony”).

⁹⁸ See generally Stephen Choi & Jill E. Fisch, *How to Fix Wall Street: A Voucher Financing Proposal for Securities Intermediaries*, 113 YALE L.J. 269, 284–86 (2003) (describing various business relationships that can compromise the objectivity of so-called independent analysts).

⁹⁹ See, e.g., Ann Davis & Susanne Craig, *Analyze This: Research is Fuzzier Than Ever; 'Independent' Label Becomes a Mantra After the Crackdown, But Conflicts Have Emerged*, WALL ST. J. Apr. 26, 2004, at C1 (describing trading by analyst Thomas Brown's Hedge Fund in securities touted to investors on his web site). NASD and NYSE rules require minimal disclosure of such trading typically provided by firms through boilerplate statements. Firms that are not SRO members need not even make such disclosure. See, e.g., Argus Research Company Website Disclaimer, http://www.argusresearchgroup.com/default.asp?template=/templates/arguss_terms.html (stating “Argus officers, employees, agents and/or affiliates may have positions in stocks discussed in this report.”).

V. REGULATORY RESPONSES TO INVESTOR IRRATIONALITY

If retail investors are relying inappropriately in making investment decisions due to overconfidence, anchoring, bounded rationality, or other biases, should regulators respond, and, if so, how? A central objective of the federal securities laws was protection of the retail investor, and the SEC continues to view investor protection as its primary goal. Can the SEC identify irrational investor behavior, and, if so, what, if any, regulatory response is appropriate?

Disclosure is the response most consistent with the structure of the federal securities laws and the SEC's general practice in regulating the securities markets. Disclosure directed at irrational investor behavior can take two forms. One approach is to require disclosure specifically targeted at investor irrationalities. For example, if the SEC believes that investors suffer from the representative bias and unduly emphasize past returns,¹⁰⁰ it can require mutual funds to disclose that past returns do not guarantee future performance.¹⁰¹ Similarly, if the SEC believes that investors irrationally fail to reflect analyst incentives in their evaluation of analyst recommendations, it can mandate that analysts disclose investment banking relationships and other conflicts of interest.

A second type of disclosure would provide investors with information about rational and irrational investment decisions, common biases, and methods for overcoming or counteracting those biases. Several commentators have suggested that investor irrationality could be overcome by some form of investor education. Larry Cunningham, for example, describes a program of investor education that would "consist of identifying and describing the set of biases and introducing steps that can reduce their adverse effects."¹⁰² Jim Fanto proposes including, as part of his comprehensive investor education program, education about "major psychological factors that can adversely affect investing decision-making."¹⁰³

The primary difficulty with disclosure as a regulatory response is that there is limited evidence that disclosure is effective in overcoming investor biases. As Steve Choi and Adam Pritchard observe, "We doubt that disclosure is the

¹⁰⁰ See, e.g., Erik R. Sirri & Peter Tufano, *Costly Search and Mutual Fund Flows*, 53 J. FIN. 1589 (1998) (finding that mutual fund investors select funds that performed well in the prior period); Stephen J. Choi, *Promoting Issuer Choice in Securities Regulation*, 41 VA. J. INT'L L. 815, 844 (2001) (arguing that "investors may act with 'hindsight bias,' placing too much weight on past performance in projecting future performance").

¹⁰¹ See, e.g., Press Release, SEC, SEC Amends Mutual Fund Advertising Rules, Proposes New Rules and Amendments for Fund of Funds Investments, (Sept. 24, 2003), <http://www.sec.gov/news/press/2003-122.htm> (describing SEC adoption of new mutual fund advertising rules that "[r]equire fund advertisements that contain performance information to include disclosure that past performance does not guarantee future results").

¹⁰² Lawrence A. Cunningham, *Behavioral Finance and Investor Governance*, 59 WASH. & LEE L. REV. 767, 792 (2002).

¹⁰³ James A. Fanto, *We're All Capitalists Now: The Importance, Nature, Provision and Regulation of Investor Education*, 49 CASE W. RES. L. REV. 105, 133 (1998).

2006] REGULATORY RESPONSES TO INVESTOR IRRATIONALITY 75

optimal regulatory strategy if most investors suffer from cognitive biases.”¹⁰⁴ Disclosure is most problematic as a response to investor overconfidence. As Donald Langevoort notes, overconfident investors will simply assume that the warnings are meant for someone else, not for them.¹⁰⁵

A more paternalistic regulatory approach could limit permitted trading by unsophisticated or irrational investors. Investors might be required to demonstrate a minimum level of knowledge or rationality in order to make certain types of trading decisions or to purchase certain types of investment products. To a certain extent, the SEC already takes this approach, albeit with wealth serving as a proxy for sophistication, through rules that limit the sales of certain unregistered securities to qualified or accredited investors.¹⁰⁶ The NYSE imposes a modest, although largely unenforced, version of this approach with respect to options trading by requiring member firms to have a reasonable basis for believing that customers have sufficient understanding of options and their risks before recommending option transactions to them.¹⁰⁷ Steve Choi has argued for a broader type of certification program in which investors, before trading, would have to obtain a license from the SEC by demonstrating a specified level of investment knowledge.¹⁰⁸ Alternatively certain classes of investors could be barred from types of trading that are viewed as particularly risky, such as day trading.¹⁰⁹

¹⁰⁴ Stephen Choi & A. C. Pritchard, *Behavioral Economics and the SEC*, 56 STAN. L. REV. 1, 22 (2003).

¹⁰⁵ See Donald C. Langevoort, *Ego, Human Behavior, and Law*, 81 VA. L. REV. 853, 880 (1995).

¹⁰⁶ See, e.g., Stephen Choi, *Regulating Investors Not Issuers: A Market-Based Proposal*, 88 CAL. L. REV. 279, 310 (2000) (describing requirements of SEC Regulation D and SEC Rule 144).

¹⁰⁷ The full text of NYSE Rule 723 is as follows:
No member organization or member, allied member or employee of such member organization shall recommend to a customer an opening transaction in any option contract unless the person making the recommendation has a reasonable basis for believing, at the time of making the recommendation, that the customer has such knowledge and experience in financial matters that he may reasonably be expected to be capable of evaluating the risks of the recommended transaction, and is financially able to bear the risks of the recommended position in the option contract.

2 NYSE Guide (CCH) 2723, at 4560 (1990).

¹⁰⁸ Choi, *supra* note 106, at 311–12.

¹⁰⁹ Michael P. Kailus, Note, *Do Not Bet on Unilateral Prohibition of Internet Gambling to Eliminate Cyber-Casinos*, 1999 U. ILL. L. REV. 1045, 1074–75 (1999) (arguing that “[d]ay trading appears more closely related to traditional forms of gambling than traditional forms of investing” and questioning the absence of public discussion calling for its prohibition). The SEC has approved NASD and NYSE rules that “establish special maintenance margin requirements for customers who engage in day trading, and . . . specify minimum equity requirements and buying power limitations for customers who demonstrate a pattern of day trading.” Order Approving Proposed Rule Changes Relating to Margin Requirements for Day Trading; Notice of Filing and Order Granting Accelerated Approval of Amendments No. 1 to each Proposed Rule Change, Exchange Act Release No. 44,009, 66 Fed. Reg. 13,608 (Mar. 6, 2001).

There are two obvious problems. First, barring investors from certain types of trading may leave those investors with inferior alternatives. For example, even an investor who consistently underperforms the market when investing in equities may do better than he would by putting that money into a savings account at a bank. Second, regulatory restrictions on direct trading by retail investors may result in those investors using intermediaries. It is unclear, however, that intermediaries offer meaningful investor protection. Rather, there is continued evidence that broker-dealers, mutual fund operators, and the like are ineffective gatekeepers.¹¹⁰ Understanding the agency costs and other issues associated with investing through an intermediary may be more complex than investing directly in equities.¹¹¹ For example, studies suggest that market forces do not operate effectively to keep mutual fund fees in check; one study found that 80% of investors misguidedly believed that higher cost mutual funds typically have better returns.¹¹² Moreover, broker-recommended mutual funds—typically sold to the least sophisticated investors—were found to have higher fees and expenses and to underperform those sold directly to investors.¹¹³

A higher level of paternalism would involve regulators directly prohibiting certain actions that, in the view of regulators, demonstrate a high level of irrationality. The SEC could, for example, prohibit analysts who have certain types of relationships with their firm's investment banking business, from releasing recommendations to investors.¹¹⁴ The SEC could designate the use of certain types of information, such as "strong buy recommendations" or price targets, as potentially misleading, thereby increasing analyst liability exposure. The SEC could prohibit day trading or bar retail investors from trading via the Internet.

¹¹⁰ See, e.g., *Mutual Funds: Trading Practices and Abuses that Harm Investors: Hearing Before the S. Subcomm. on Fin. Mgmt., the Budget, and Int'l Sec., Comm. on Governmental Affairs, S. Comm. on Homeland Security and Governmental Affairs*, 108th Cong. (2003) (testimony of Paul F. Roye, Dir., Div. of Inv. Mgmt., SEC), available at <http://www.sec.gov/news/testimony/ts110303pfroral.htm> (describing abusive practices engaged in by mutual funds and regulatory efforts aimed at addressing those practices); *Oversight Hearing on Mutual Funds: Hidden Fees, Misgovernance and Other Practices that Harm Investors: Hearing Before the S. Subcomm. on Fin. Mgmt., the Budget, and Int'l Sec., S. Comm. on Homeland Security and Governmental Affairs* 108th Cong. (2004), (testimony of Eliot Spitzer, N.Y. Att'y Gen.), http://hsgac.senate.gov/_files/012704spitzer.pdf (testifying that mutual funds charge excessive advisory fees at the expense of their investors).

¹¹¹ See, e.g., Ronald Wilcox, *Bargain Hunting or Star Gazing? How Consumers Choose Mutual Funds*, 76 J. BUS. 645 (2003) (finding surprisingly frequent errors among more sophisticated investors).

¹¹² Gordon J. Alexander et al., *Mutual Fund Shareholders: Characteristics, Investor Knowledge and Sources of Information*, 7 FIN. SERV. REV. 301, 310 (1998).

¹¹³ Daniel B. Bergstresser et al., *Assessing the Costs and Benefits of Brokers in the Mutual Fund Industry* (March 15, 2005), <http://ssrn.com/abstract=616981>.

¹¹⁴ Essentially, the SEC has done so by barring certain relationships between research analysts and the investment banking operations of their firms.

Apart from the obvious fact that paternalistic regulations would dramatically reduce investor freedom,¹¹⁵ regulators may not be able to distinguish clearly between rational and irrational trading. Studies have shown that stock prices rise with headlines,¹¹⁶ but trading on the basis of skirt lengths is not consistent with the fundamental approach advocated by the SEC.¹¹⁷ The promotion of non-IB affiliated analysts at the same time that the SEC was publicly condemning the activities of Jonathan Lebed suggests that regulators may not fully understand what should motivate investor trading. Studies show that the information released by affiliated analysts is more informative, but more biased.¹¹⁸ Consequently, by reducing analyst conflicts of interest, regulators may reduce irrational trading, but at the cost of reducing the quantity or quality of information flow to retail investors who are unwilling or unable to pay for quality independent research.

Finally, regulators could increase the costs of information, the costs of trading, or both. Lynn Stout and others have suggested that irrationally excessive trading could be reduced by a government imposed tax on trading or a stock transfer tax.¹¹⁹ Investor speculation could also be reduced through higher brokerage commissions.¹²⁰ Regulators can impose extra fees on certain types of transactions that present a particular risk of abuse, such as penny stock

¹¹⁵ See Paul Mahoney, *Is There a Cure for "Excessive" Trading?*, 81 VA. L. REV. 713, 740 (1995) ("Restricting investors' freedom in order to mitigate the consequences of their irrational choices should be a policy of last resort.").

¹¹⁶ See, e.g., Donald H. Dunn & Gary Weiss, *Hemlines, Headlines, Holidays: Wall Street's Odd Indicators*, BUS. WK., Sept. 7, 1987, at 116 (describing the so-called "hemlines indicator"); BURTON G. MALKIEL, *A RANDOM WALK DOWN WALL STREET* 157-59 (2003) (acknowledging some correlation between skirt lengths and stock prices but arguing that hemlines cannot be used to predict future prices).

¹¹⁷ The economic evidence supporting the persistence of other market anomalies is stronger. See e.g., Rolf W. Banz, *The Relationship Between Return and Market Value of Common Stocks*, 9 J. FIN. ECON. 3, 3-4 (1981) (identifying small firm price effect); Richard Thaler, *Anomalies: The January Effect*, 1 J. ECON. PERSP. 197, 199 (Summer 1987) (discussing the "January effect"); Kenneth R. French, *Stock Returns and the Weekend Effect*, 8 J. FIN. ECON. 55, 56, 68 (1980) (documenting reduced returns over weekends).

¹¹⁸ See, e.g., John Jacob et al., *Do Analysts at Independent Research Firms Make Better Earnings Forecasts?*, working paper (July 2003), <http://ssrn.com/abstract=434702> (finding that, during the bull market period of 1998-2001, investment banking affiliated analysts made more accurate earnings forecasts than non-affiliated analysts).

¹¹⁹ See, e.g., Stout, *supra* note 50, at 699-702 (discussing stock transfer tax); Lawrence H. Summers & Victoria P. Summers, *When Financial Markets Work Too Well: A Cautious Case for a Securities Transactions Tax*, 3 J. FIN. SERVICES RES. 261, 268 (1989) (proposing stock transactions tax); Joseph E. Stiglitz, *Using Tax Policy to Curb Speculative Short-Term Trading*, 3 J. FIN. SERVICES RES. 101, 113 (1989) (arguing in favor of stock transfer tax). Indeed, John Keynes advocated such a tax in 1935 in an effort to curb speculative trading. See JOHN MAYNARD KEYNES, *THE GENERAL THEORY OF EMPLOYMENT, INTEREST, AND MONEY* 160 (1964) (advocating stock transfer tax).

¹²⁰ Studies show that the reduction in brokerage commissions due to the SEC's abolition of fixed commissions was correlated with an increase in trading volume. See, e.g., Gregg A. Jarrell, *Change at the Exchange: The Causes and Effects of Deregulation*, 27 J. L. & ECON. 273 (1984) (finding increases in volume ranging from 30 to 100 percent).

trading or pattern day trading. And regulators can, and in fact do, provide tax incentives designed to reduce speculation and increase long term investment.¹²¹

Increasing the transaction costs of trading obviously creates a cost by reducing liquidity in the market. Increased transaction costs can reduce market efficiency by limiting the ability of investors to capture the value of information through trading. Charles Jones and Paul Seguin found that the reduction in transaction costs caused by the elimination of fixed brokerage commissions significantly reduced stock price volatility.¹²² In addition, increased transaction costs burden all investors, not merely those who trade irrationally. A net social welfare analysis evaluating the consequences of increasing trading costs would be extremely difficult.

Regulators have taken several steps to address irrational investor trading in reliance on tainted or biased analyst recommendations. Overall, the approach has evolved from one of disclosure and investor education to an increasing degree of paternalism.

The SEC's initial response focused on investor education. In 2002, the SEC posted an investor alert on its website,¹²³ warning investors about analyst conflicts of interest and the potential effect of such conflicts on analyst recommendations.¹²⁴ The alert, which has since been modified and expanded, explains the recently expanded SRO disclosure requirements, cautions investors about analyst conflicts, and advises investors about additional ways to identify potential conflicts.¹²⁵ In 2003, the SEC adopted Regulation Analyst Certification or AC.¹²⁶ Regulation AC requires analysts to include certain certifications and disclosures, as part of their research reports.¹²⁷ The requirements include a statement that the analyst believes the report accurately reflects his or her personal views, and disclosure of any payments received by the analyst in connection with the report.

Regulators also increased the disclosure requirements applicable to research reports and recommendations, presumably in an effort to increase information flow to investors. In 2002, the SEC approved rule changes by the SROs that require disclosure of financial ties between investment banks with whom analysts are affiliated and issuers of covered securities, such as whether

¹²¹ Existing tax law, for example, provides a maximum tax rate of 15% on capital gains earned on stock held for at least a year, a substantial reduction over the 35% rate applicable to ordinary income. See I.R.C. § 1(h)(1)(C) (West 2002 & Supp. 2005) (applying general 15% maximum tax rate to individual capital gains); I.R.C. § 1(i)(2) (West 2002 & Supp. 2005) (applying maximum individual income tax rate of 35%).

¹²² Charles M. Jones & Paul J. Seguin, *Transaction Costs and Price Volatility: Evidence from Commission Deregulation*, 87 AM. ECON. REV. 728, 736 (1997).

¹²³ SEC, Analyzing Analyst Recommendations *supra* note 5.

¹²⁴ See Fisch & Sale, *supra* note 96, at 1068 (describing SEC's initial posting of the alert).

¹²⁵ SEC, Analyzing Analyst Recommendations *supra* note 5.

¹²⁶ Regulation Analyst Certification, 17 C.F.R. § 242 (2002), available at <http://www.sec.gov/rules/final/33-8193.htm>.

¹²⁷ The Regulation also mandates disclosure in connection with public appearances by research analysts. *Id.*

the bank has provided investment banking services to the issuer in connection with a public offering or otherwise.¹²⁸ The SRO rules also require disclosure of certain ownership positions by analysts and their firms in covered securities as well as explanations of the terms used in rating stocks and information about the percentage of ratings per term, and comparisons of historical performance with the firm's ratings.¹²⁹

Sarbanes-Oxley, the SRO rules, and the Global Research Settlement go beyond disclosure however and impose structural limitations to separate research analysts from investment banking operations. Section 501 of the Sarbanes-Oxley Act requires the SEC or the SROs to promulgate rules to address analyst conflicts of interest.¹³⁰ In addition to requiring increased disclosure of analyst conflicts, the Act identified specific structural safeguards such as Chinese walls.¹³¹ The SROs have adopted rules that insulate research analysts from investment banking influence by, *inter alia*, prohibiting analysts from participating in the solicitation of investment banking business, barring firms from tying analyst compensation to investment banking revenues, and limiting contact between analysts and issuers.¹³² The rules impose quiet periods around offerings and lock-up expirations during which analysts may not issue research reports. The rules also impose a variety of restrictions on analyst trading, including prohibiting analysts from trading contrary to the position advocated in their last published report.¹³³ The Global Research Settlement requires the investment banks participating in the Settlement to separate research from investment banking in a similar manner to the SRO rules.¹³⁴ In addition, the Settlement requires the defendant firms to provide their customers with independent research for a period of five years.¹³⁵

¹²⁸ NASD and NYSE Rulemaking, Exchange Act Release No. 34-45908, 67 Fed. Reg. 34,968 (May 10, 2002), available at <http://www.sec.gov/rules/sro/34-45908.htm> ("First SRO Release").

¹²⁹ *Id.*

¹³⁰ Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, § 501, 116 Stat. 745 (2002).

¹³¹ *Id.*, 116 Stat. at 792.

¹³² Self Regulatory Organizations; Order Approving Proposed Rule Changes by the New York Stock Exchange, Inc. Relating to Exchange Rules 344 ("Supervisory Analysts"), 345A ("Continuing Education for Registered Persons"), 351 ("Reporting Requirements"), and 472 ("Communications with the Public"), and by the National Association of Securities Dealers, Inc. Relating to Research Analysts Conflicts of Interest, and Notice of Filing and Order Granting Accelerated Approval of Amendment No. 3 to the Proposed Rule Changes by the New York Stock Exchange, Inc. and Amendment No. 3 to the Proposed Rule Change by the National Association of Securities Dealers, Inc. Relating to Research Analyst Conflicts of Interest, Exchange Act Release No. 34-48252, 68 Fed. Reg. 45,875 (Aug. 4, 2003), available at <http://www.sec.gov/rules/sro/34-48252.htm>; First SRO Release, *supra* note 128.

¹³³ *Id.* The rules also, for the first time, impose registration, qualification, and continuing education requirements on research analysts.

¹³⁴ See Donaldson Testimony, *supra* note 97 (describing structural reforms required by the settlement).

¹³⁵ *Id.* The Settlement also set aside \$80 million to fund investor education. In May 2005, the Wall Street Journal reported that the federal investor education program had all but collapsed and that the state program had dispersed almost none of the allocation. Deborah

The regulatory changes addressed to analyst conflicts of interest are designed to address irrational investor reliance on analyst research by making such reliance rational. By requiring analyst independence, imposing qualification requirements, and dictating a variety of details in the analyst report, the regulations appear to make analyst research a reliable source of investor information. Having determined that investors cannot be dissuaded by using and relying on analyst research despite the fact that the research may be tainted or biased, regulators have responded by attempting to remove the taint.¹³⁶

Assuming, for purposes of discussion, that regulators have correctly identified investor reliance on biased analyst research as irrational, the regulatory response of mandating independence is problematic. Restricting analyst conflicts of interest is likely to reduce the quality and quantity of research available to retail investors.¹³⁷ Prohibiting analyst conflicts of interest reduces the ability of investment banks and brokerages from subsidizing research costs through other business revenues.¹³⁸ Quality research is both costly and difficult to sell on a stand-alone basis.¹³⁹ To the extent it can be sold, the purchasers will be institutional customers. Indeed, a number of independent analysts declined the opportunity to have their research provided to brokerage firm customers as part of the Global Settlement because public dissemination of their research would lower its value to their institutional clients.¹⁴⁰ In short, regulators cannot mandate that retail investors receive high quality research for free; and if investment banks and other suppliers cannot subsidize the cost of providing research to retail investors, they will simply not provide it.

More problematic is the question of whether regulators have correctly identified investor irrationality. Through their recent reforms, regulators have

Solomon, *Investor Education Spurs Looming Duel Between US, States*, WALL ST. J., May 26, 2005 at C1.

¹³⁶ Although it is unclear that this strategy can improve the quality of analyst research there is some preliminary evidence that it may be effective in reducing the extent of the bias. See Ohad Kadan et al., *Are Analysts Still Biased? Evidence from the Post "Global Settlement" Period*, at 4 (working paper 2004), <http://ssrn.com/abstract=591227> (finding that the Global Settlement had a significant effect in reducing relative optimism of investment bank affiliated analysts).

¹³⁷ See Jill E. Fisch, *The Analyst as Fiduciary: A Misguided Quest for Analyst Independence?* (working paper 2005) (copy on file with author), (arguing that mandated independence will reduce retail investor access to information). It will also reduce market information about smaller issuers. See *id.* (detailing reductions in research coverage of smaller issuers in response to increased analyst regulation).

¹³⁸ See Choi & Fisch, *supra* note 98, at 311–12 (identifying concern that eliminating cross-subsidization will cause financial firms to reduce or eliminate funding of research coverage).

¹³⁹ See *id.* at 285–86 (identifying the public good problem with selling research on a stand-alone basis).

¹⁴⁰ See, e.g., Thor Valdmans, *Few Believe \$1.4B deal will change Wall Street*, USA TODAY, Apr. 29, 2003, available at http://www.usatoday.com/money/industries/brokerage/2003-04-29-settle-cover_x.htm (quoting several independent firms as stating that their research was inappropriate for retail investors or that participation in the settlement would detract from the value of their research and cost them institutional clients).

interposed themselves into the position of gatekeepers, deciding the types of conflicts and level of independence that make analyst research suitable for the investing public.¹⁴¹ Notably, despite the range of incentives and biases that can affect the accuracy of securities information provided to the investing public, the SEC has focused almost exclusively on investment banking conflicts of interest.¹⁴² At the same time, the SEC has championed so-called independent research even though non-investment banking-affiliated analysts may also be subject to a variety of conflicts.¹⁴³ It is unlikely that Congress and the SEC are particularly well suited to evaluate the quantity of knowledge that qualifies an investor to participate in the securities markets or to judge the quality of information that investor may consider.¹⁴⁴ With respect to investment banking conflicts, for example, regulators have required investment banks to sever ties between investment banking and research, despite empirical evidence showing that IB-affiliated research may be more informative.¹⁴⁵

Even disclosure-based approaches to potentially irrational investor behavior impose costs.¹⁴⁶ Importantly, however, once regulators move beyond disclosure into substantive efforts to constrain irrational behavior, regulation imposes substantial costs on the securities markets. In the case of analyst regulation, both the benefits and the costs of recent reform efforts have yet to be evaluated. When regulation is directed at reducing irrational behavior, an evaluation of its effectiveness must also consider the rationality of the response. Bounded rationality may cause people to fail to appreciate the risk of climbing a ladder, but stern warnings of the dangers associated with ladders may lead to an overreaction in which people forsake ladders altogether in favor of sitting in the dark when a light bulb burns out.¹⁴⁷

This issue is of particular concern with respect to regulations aimed at inducing investors to act more rationally in their reliance on securities information. If analyst research is untainted by investment banking conflicts,

¹⁴¹ See Pritchard, *supra* note 8, at 1078–92 (identifying a variety of shortcomings in the ability of the SEC and Congress to implement appropriate investor protection regulation).

¹⁴² Thus, for example, brokers typically determine analyst compensation on the basis of commission revenues generated by that analyst's research. The SEC has not prohibited this practice despite its potential to bias analyst recommendations.

¹⁴³ See Fisch, *supra* note 137 (examining potential conflicts by purportedly independent analysts); Choi & Fisch, *supra* note 98, at 284–85 (considering extent to which non-investment banking affiliated analysts are independent).

¹⁴⁴ See Langevoort, *supra* note 6, at 173 (warning that the SEC has not fully studied the nature of investor behavior or the factors that influence investment decisions); see also Choi & Pritchard, *supra* note 104, at 71–72 (warning that regulators may suffer from their own behavioral biases that limit their ability to respond appropriately to investor biases).

¹⁴⁵ See, e.g., Amanda Cowen et al., *What Types of Analyst Firms Make More Optimistic Forecasts?* (working paper 2003), <http://ssrn.com/abstract=436686> (finding that analysts who work for brokerage only firms are more optimistically biased as well as less accurate than investment banking affiliated analysts).

¹⁴⁶ See Pritchard, *supra* note 8, at 1088 (criticizing the SEC's failure to obtain empirical evidence to support its disclosure requirements).

¹⁴⁷ Somewhere in there, there must be a joke about the number of irrational actors that it takes to change a light bulb.

that does not mean that investors should buy when an analyst says buy and sell when an analyst says sell. Obviously, the independence of an analyst is no guarantee of the accuracy of his or her research, and the accuracy of research is similarly no guarantee of future performance. Moreover, the suitability of an investment for any particular investor depends on a variety of factors, including the investor's time horizon, risk profile and other investments.

At the same time, if investor access to analyst research is reduced because of the costs of regulation, what information sources will replace that research? Existing evidence demonstrates that investors remain surprisingly willing to trade securities on the basis of chat room postings, anonymous phone messages, and other shockingly unreliable sources of information. Moreover, these sources lack both the transparency and the reputational constraints that, even at the height of the bull market, arguably limited the distorting effect of analyst research. Jack Grubman is no longer issuing information to the public about telecommunications companies. Jonathan Lebed continues to do so. Are investors better off?

These questions suggest that regulators should give further consideration to an additional regulatory alternative: do nothing and allow irrational investors to bear the consequences of their trading decisions. In questioning the ability of investors to demonstrate a sufficient causal nexus between analyst misstatements and omissions and the investors' subsequent trading losses, the Second Circuit noted the significant policy implications of the issue.¹⁴⁸ The Second Circuit's concern (and implied resolution of that concern in favor of the defendant analysts) may be analogized to the traditional use of proximate cause in common law torts—as a policy-based tool for limiting the scope of a defendant's legal responsibility.¹⁴⁹ The reluctance of federal courts to impose securities fraud liability on research analysts may reflect the policy judgment that regulation cannot enforce the mandate that investment information be reliable, and that government efforts to assess information reliability are doomed to failure.

VI. CONCLUSION

Academics are only beginning to understand the nature and effect of behavioral biases. Applying this understanding to the securities markets presents a particular challenge because of the difficulty in clearly distinguishing between rational and irrational trading in markets in which investor reaction to information—rather than the information itself—plays a substantial role in determining prices.

¹⁴⁸ *Hevesi v. Citigroup Inc.*, 366 F.3d 70, 80 (2d Cir. 2004) (stating that “the issue presented in this case is . . . significant, because the application of the fraud-on-the-market doctrine to opinions expressed by research analysts would extend the potentially coercive effect of securities class actions to a new group of corporate and individual defendants—namely, to research analysts and their employers.”).

¹⁴⁹ See W. PAGE KEETON, et al., *PROSSER AND KEETON ON TORTS*, § 42, at 273 (5th ed. 1984) (arguing that proximate cause deals with the question of legal responsibility and, as such, is “not a question of causation, or even a question of fact . . .”).

2006] REGULATORY RESPONSES TO INVESTOR IRRATIONALITY 83

The so-called analyst scandals exemplify the problem. Was analyst over-optimism justified by the irrational exuberance of the late 1990s technology bubble? Or did analyst recommendations fuel the bubble and cause prices to spin out of control? And whatever the explanation, is the regulatory response of imposing greater separation between investment banking and research likely to improve the quality of investor decision-making?

More generally, the post-Enron regulation of research analysts illustrates the difficulty in fashioning an appropriate regulatory response to irrational behavior. If, as in the case of securities trading, there are existing market checks on irrationality, regulators should think carefully about the costs and benefits of intervening in that market.