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## Taming the Animal Spirits of the Stock Markets: A Behavioral Approach to Securities Regulation

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“[Our decisions] to do something positive . . . can only be taken as a result of animal spirits . . . and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities.”

--- John Maynard Keynes, A GENERAL THEORY OF  
EMPLOYMENT, INTEREST AND MONEY 131 (1936)

The recent Enron bankruptcy is one of those rare events that brings corporate and securities law close to sustained public attention.<sup>1</sup> It has shaken confidence that the prevailing legal norms work as well as we want, or that the marketplace imposes the kind of self-discipline we have assumed. Among its many puzzles is one about the stock markets. How was the market for such a widely-followed stock so easily fooled, especially when (in hindsight, at least) warning signs about obscure accounting, risk-shifting and self-dealing practices were visible?

To a skeptic about the markets, Enron is no surprise. It was an issuer-specific stock bubble, different from countless predecessors only in terms of its size and the political attention it gained. The market fell in love with the company, and like many lovers, was far too slow to

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<sup>1</sup> Amidst the extensive press coverage, the clearest description of the key events underlying the rapid demise of the company is the Report of the Special Committee of the Board of Directors, chaired by University of Texas Law School Dean William Powers. See REPORT OF INVESTIGATION BY THE SPECIAL INVESTIGATIVE COMMITTEE OF THE BOARD OF DIRECTORS OF ENRON CORP. (Feb. 1, 2002)(on file with author); *Enron Internal Probe Finds Abuses; Board Claims No Knowledge*, 34 Sec. Reg. & L. Rep. (BNA) 246 (Feb. 11, 2002).

realize that the object of devotion was cheating. Keynes' animal spirits were at work. By contrast, Enron cries loudly for explanation from believers in market efficiency, especially those whose faith is so strong in its miraculous curative powers that they think legally-mandated disclosure has at best a minor role to play in investor protection.<sup>2</sup>

It is much too early to judge whether any plausible rational explanation is available as to Enron in particular, though no doubt some will be offered. Instead, this article revisits more generally the increasingly sophisticated debate over the efficient market hypothesis ("EMH"), the most venerable tenet of financial economics and a staple of contemporary legal analysis. The EMH teaches that the prices of the stocks of actively-traded companies – like Enron – rapidly adjust to reflect the rational expectations generated by all available information as it becomes available. Stocks are always "rationally" priced, in other words. But faith in the EMH among economists has been weakening for some time.<sup>3</sup> That is not new news; by the mid-1980's, market efficiency was already under attack by finance scholars of considerable prominence.<sup>4</sup> Since then, however, the battle has turned into something akin to a siege. Critics are still increasing in visibility and numbers, with seldom an issue of the best finance journals appearing without at least one or two major papers offering either theoretical or empirical claims inconsistent with strong views of efficiency. Yet the orthodox are far from dead, and still have sizable numbers on their side.<sup>5</sup> As often

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<sup>2</sup> See, e.g., Frank Easterbrook & Daniel Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 Va. L. Rev. 669 (1984).

<sup>3</sup> For a good current articulation, see the debate between Kothari and Lee. S.P. Kothari, *Capital Market Research in Accounting*, 31 J. Acct'g & Econ. 105 (2001); Charles M.C. Lee, *Market Efficiency and Accounting Research*, id. at 233.

<sup>4</sup> For an extensive, but now somewhat dated, literature review, see Stephen F. LeRoy, *Efficient Capital Markets and Martingales*, 27 J. Econ. Lit. 1583 (1989). The work of Robert Shiller was (and still is) seminal in the critiques of market efficiency. For a collection of his early work, see ROBERT J. SHILLER, *MARKET VOLATILITY* (1989). I used this literature in my first look at the relevance of the efficiency debate to securities regulation. See Donald C. Langevoort, *Theories, Assumptions and Securities Regulation: Market Efficiency Revisited*, 140 U. Pa. L. Rev. 851 (1992) ("Theories"). For another early effort in the legal literature, see Lawrence Cunningham, *From Random Walks to Chaotic Crashes: The Linear Genealogy of the Efficient Capital Market Hypothesis*, 62 Geo. Wash. L. Rev. 546 (1994).

<sup>5</sup> The standard recent account is Eugene Fama, *Market Efficiency, Long-term Returns and Behavioral Finance*, 33 J. Fin. Econ. 3 (1998). For a balanced and thoughtful

happens with long sieges, if we look closely we see a good bit of intermarrying going on – scholars quietly redefining efficiency or inefficiency in a way that mediates between the two camps.<sup>6</sup>

In this article, I will explore this contest, which – as Enron shows – is profoundly important to legal academics.<sup>7</sup> What I especially want to draw from is the most interesting development in the past decade from the critics' camp. It is one thing to attack market efficiency simply by showing that empirical reality does not conform to its predictions or offering explanations for why not. It is a more ambitious task, both empirically and theoretically, to build an alternative model of market pricing. If so-called irrational activity is simply random and unpredictable, then markets are nothing more than noisy. However, if the non-rational properties of the securities markets reflect predictable behavioral tendencies – in other words, that the animal spirits that seemingly drive the markets are well grounded in cognitive and social psychology – then there is something more to say, something that might be useful to the task of securities regulation. While psychological explanations for market behavior have been offered since the early days of the critical finance literature,<sup>8</sup> the last few years have seen this field mature into a subject with a name – “behavioral finance.”<sup>9</sup>

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review from the pro-efficiency side, see Mark Rubenstein, *Rational Markets: Yes or No? The Affirmative Case*, Fin. Analysts J., May-June 2001, at 15; see also Kothari, supra. For a neutral evaluation of the state of the literature, both rational and non-rational, see John Y. Campbell, *Asset Pricing at the Millenium*, 55 J. Fin. 1515 (2000).

<sup>6</sup> See Alon Brav & J.B. Heaton, *Competing Theories of Financial Anomalies*, Rev. Fin. Stud. (2001)(forthcoming)(observing that the differences between what behavioral theories predict and what models based on rationality but incomplete information predict are small). Rubenstein, supra at 17-18, takes a strongly pro-efficiency view but also believes that investors are systematically overconfident, which leads to much more disagreement and trading than a perfectly rational world would produce.

<sup>7</sup> The classic law-oriented study of efficiency in the capital markets is Ronald J. Gilson & Reinier Kraakman, *The Mechanisms of Market Efficiency*, 70 Va. L. Rev. 549 (1984).

<sup>8</sup> An early and persistent proponent in the psychology of investing as grounds for a contrarian investment strategy was David Dreman. See DAVID DREMAN, *THE NEW CONTRARIAN INVESTMENT STRATEGY* (1979).

<sup>9</sup> Book length treatments include ANDREI SHLEIFER, *INEFFICIENT MARKETS: AN INTRODUCTION TO BEHAVIORAL FINANCE* (2000); HERSH SHEFRIN, *BEYOND GREED AND FEAR: UNDERSTANDING BEHAVIORAL FINANCE AND THE PSYCHOLOGY OF INVESTING* (2000). Robert Shiller has focused again on behavioral theories in his recent book *IRRATIONAL EXUBERANCE* (1999). For a readable and entertaining study of the

Securities regulation is an especially important place to think about behavioral claims, for two reasons. First, as has repeated been said about the now flourishing subject of behavioral law and economics, there is a natural difficulty in the extending what is observed in artificial laboratory experiments into the real world, with its Darwinian incentive structure, rich institutional context, and opportunities for learning from experience.<sup>10</sup> Empirical testing for the presence of bias in most real economic settings is difficult, because we lack an extensive enough set of data. But, as finance scholars have shown for years, one important characteristic of the financial markets is that they generate extensive data. Because of this transparency, behavioral finance is somewhat better positioned to test for the real world impact of bias in market prices than research in more opaque economic settings. It is still not easy, of course, but if empirical headway is to be made anywhere in behavioral law and economics, it is as likely to be made here. And that leads to a related point. Another oft-repeated claim is that the capital markets are the ideal settings for efficiency. They are liquid and transparent, and offer immense competitive rewards. If the capital markets are not efficient, it is difficult to imagine many other markets that would be.<sup>11</sup> The securities markets (and securities regulation) are a natural proving ground for the research agenda of behavioral law and economics generally.

Hence the following set of exercises in “behavioral securities regulation.”<sup>12</sup> Necessarily, I cannot try to resolve, or even contribute

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history of risk analysis, particularly as it relates to the stock markets, touching on the behavioral materials, see PETER L. BERNSTEIN, *AGAINST THE GODS: THE REMARKABLE STORY OF RISK* chs. 16-17 (1998).

<sup>10</sup> See Richard Posner, *Rational Choice, Behavioral Economics and the Law*, 50 *Stan. L. Rev.* 1551 (1998); Jennifer Arlen, *The Future of Behavioral Economic Analysis of Law*, 51 *Vand. L. Rev.* 1765 (1998). But see note --- *infra*.

<sup>11</sup> See Robin Hogarth & Melvin Reder, *Perspectives from Economics and Psychology*, 59 *J. Bus.* S185, S199-200 (1986).

<sup>12</sup> For other work in behavioral securities regulation dealing largely with market pricing, see Robert Thompson, *Securities Regulation in an Electronic Age: The Impact of Cognitive Psychology*, 75 *Wash. U.L.Q.* 779 (1997); Lawrence A. Cunningham, *Behavioral Finance and Investor Governance* (SSRN); Stephen Bainbridge, *Mandatory Disclosure: A Behavioral Analysis*, 68 *U. Cinn. L. Rev.* 1023 (2000). In addition to this focus on behavioral finance, the research agenda in behavioral securities regulation attends to a number of issues unrelated to market efficiency. For example, it is useful in exploring the behavior of corporate managers in making disclosure decisions (see

much to, what still is a contested empirical battle. Part I simply reviews the critical literature from the last decade on a number of fronts. Then, beginning with Part II, we turn to the normative problems. Once we get there, we must proceed gingerly. It is unsatisfying simply to say that *if* the critics of market efficiency are right, then those aspects of securities law (or securities law scholarship) that rely on strong efficiency claims are wrong. That may be so, but the point is unlikely to be of much interest to those unpersuaded by the assumption. Positive strategies for regulation are hard to craft precisely because the alternative behavioral theories in the literature are so tentative. To finesse this problem, I want to try something a bit different. One of the first advertisements for the once-upon-a-time new genre of law and economics was not so much that it led to clear-cut normative solutions, but rather that it offered thought-provoking new ways of looking at problems. What I want to do in this paper is in that spirit. There are many vexing problems in securities law that might benefit from fresh possibilities, opening up new lines of thinking if not obvious answers. Judges and regulators often make bets with their behavioral predictions. What follows is simply the case for factoring psychology into the odds.

Part III deals with internet securities fraud. There have been celebrated allegations of people moving markets with brief chat room postings that, at first glance, defy explanation. The most obvious intuition, extreme gullibility, is possible but I think unlikely. Here, we consider the role of a more likely cognitive bias, overconfidence, in order to develop a more plausible story of what is going on, which in turn reorients how we might respond. Part IV is about securities analysts and the phenomenon of “selective disclosure” – companies secretly giving inside information to analysts. Conventionally, this poses a battle

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Donald C. Langevoort, *Organized Illusions: A Behavioral Theory of Why Corporations Misperceive Stock Market Investors (and Cause Other Social Harm)*, 146 U. Pa. L. Rev. 101 (1997)) and stockbroker-customer sales interactions (see Donald C. Langevoort, *Selling Hope, Selling Risk: Some Lessons for Law from Behavioral Economics About Stockbrokers and Sophisticated Customers*, 84 Cal. L. Rev. 627 (1996)). My apologies, by the way, to those psychologists who object to the term “behavioral” in this context – claiming that it refers to the now largely abandoned research program associated with B.F. Skinner – and believe that “cognitive” is the better word. See Jeffrey Rachlinski, *The New Law and Psychology: A Reply to Critics, Skeptics and Cautious Supporters*, 85 Cornell L. Rev. 739, 740 (2000). They are right, but the behavioral label has stuck in both law and finance.

between efficiency and fairness. But a large body of work has emerged within the critical finance literature about analyst biases, which if we take seriously changes the nature of this battle. More profoundly, however, the debate also reintroduces into securities regulation doubts about the rationality of individual investors. If cognitive biases are for real and more pronounced among individuals than institutions, that says something about how markets should be designed and structured. The debate also gives us an opportunity to observe what the behavioral literature does (and does not) say about the fairness objective familiarly invoked by regulators. Finally, Part V deals with open-market securities fraud and how we might rethink both our definition of “materiality” and the way we devise remedies when markets are less than rational or efficient. The pay-off here is that a vision of even mildly inefficient markets can help us see just how fruitless the current approach to remedies truly is. Part VI is the conclusion.

#### I. THE INEFFICIENCY HYPOTHESIS AND BEHAVIORAL FINANCE

The research agenda for critics of market efficiency proceeds in a series of steps. The initial step is the foundation – empirical studies that demonstrate that the markets are not behaving in accord with the predictions of the efficient market hypothesis. Second is the creation of alternative models or theories of stock price behavior, with some explanation of why they might generate more plausible predictions than the efficiency account. Here is where the psychology sometimes comes into play: to the extent that the new models are based on fairly sophisticated understandings of how human beings act, their plausibility increases.<sup>13</sup> These models can then be tested empirically to see if they fit the data better. These alternative theories, in turn, focus on two distinct questions. First, what forces drive stock prices out of line with rational expectations? Second, why doesn’t rational arbitrage promptly bring prices back to the rational expectations equilibrium?

This introductory section does not pretend to be an exhaustive overview of any of these steps. Reviews of each are now readily available in the finance literature, including some book-length

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<sup>13</sup> See SHLEIFER, *supra*, at 10-11. For a comprehensive survey, see David Hirshleifer, *Investor Psychology and Asset Prices*, 56 J. Fin. 1533 (2001).

treatments.<sup>14</sup> My aim here is simply to describe some of the more intriguing and well-supported ideas from what I will refer to as the *inefficient* market hypothesis (“IMH”) literature that might inspire a constructive theory of behavioral securities regulation.<sup>15</sup>

#### A. Evidence Against Market Efficiency

The Sunday May 3, 1998, edition of the *New York Times* carried a front page story about EntreMed, a biotechnology company with licensing rights to an exciting medical breakthrough. Its stock price rose dramatically and stayed at the higher valuation, as did (to a somewhat lesser degree) the prices of related biotech stocks. What is puzzling about this is that the *Times* article contained absolutely no “new news:” everything in it had been said, albeit with less prominence, in earlier stories in the *Times* and widely-respected scientific publications.

Puzzling to academics, perhaps. Most people, including many in the investment business, would hardly be surprised by the possibility that media attention alone can drive stock prices. But to conventional financial economists and their many followers in the legal community, this does not happen. Old news (i.e., no news) has no sustainable stock price impact. The EMH states that stock prices promptly impound all available information. Under most formulations – particularly those used normatively in legal analysis – this impoundment reflects market participants’ rational expectations, so that stock prices are deemed “fundamentally” efficient.<sup>16</sup> A number of important conclusions follow from this. Most importantly, once new information is impounded in the stock price, subsequent price movements must necessarily be based on

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<sup>14</sup> See note --- supra.

<sup>15</sup> To avoid undue repetition, I will concentrate on work published since my 1992 review of this literature. See Langevoort, *Theories*, supra at 862-72.

<sup>16</sup> A distinction between informational and fundamental efficiency is often-mentioned. Most tests of market efficiency emphasize speed of adjustment (informational efficiency), without purporting to demonstrate that the adjustment is based on rational expectations. By and large, economic theory – or different sorts of empirical tests – is invoked to justify the further step that the adjustment is rational. As such, mere informational efficiency is not necessarily inconsistent with the view that stock prices can over or under-react to information. See Baruch Lev & Meiring deVilliers, *Stock Price Crashes and 10b-5 Damages: A Legal, Economic and Policy Analysis*, 47 *Stan. L. Rev.* 7 (1994).



some new or different information – there is no basis for inferring the direction or magnitude of future price movements simply from the observation of past movements. More generally, the EMH says that it will be impossible on any sustained basis to make money by trying to discover “undervalued” or “overvalued” stocks unless one expects repeatedly to be the first to discover or infer new, heretofore non-public information.<sup>17</sup> Only a small number of people have the experience, contacts, resources and skill reasonably to hold that expectation. The vast majority of us should thus become passive investors, holding risk-adjusted portfolios designed to seek normal market returns and minimizing our trading costs.

The EntreMed story – recently explored by two Columbia economists in their field’s leading journal<sup>18</sup> – is but one of many efficiency-defying anomalies that have been unearthed since the late 1970’s by finance researchers. There are scores of such anomalies, which have provoked spirited debates as to whether they truly are violations of the EMH, or whether instead there might be some explanation that preserves the validity of the theory. Like most legal scholars, I cannot judge these specific disputes on the merits. What is impressive in the case against market efficiency is not the strength of any individual claim but their aggregate weight. As one proponent of market efficiency conceded recently “[t]he weight of paper in academic journals supporting anomalies is now much heavier than the evidence to the contrary.”<sup>19</sup> If far from dead, market efficiency is at least more contestable than ever.

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<sup>17</sup> A somewhat more realistic appraisal is that markets have a high (but not perfect) degree of efficiency: the residual inefficiency is that which makes it profitable for analysts and other professional investors to stay in business. See Sanford Grossman & Joseph Stiglitz, *On the Impossibility of Informationally Efficient Markets*, 70 Am. Econ. Rev. 393 (1980).

<sup>18</sup> Gur Huberman & Tomer Regev, *Contagious Speculation and a Cure for Cancer: A Nonevent that Made Stock Prices Soar*, 56 J. Fin. 387 (2001). The substance of the article is an effort to rule out all plausible rational explanations for what happened. In securities regulation, the frequency of insider trading cases where people steal advance copies (or trade with knowledge) of forthcoming publications that will mention individual issuers favorably or unfavorably is further testimony to the belief that publicity alone can influence stock prices. E.g., *United States v. Carpenter*, 791 F.2d 1024 (2d Cir. 1986)(*Wall Street Journal*’s Heard on the Street column); *United States v. Libera*, 989 F.2d 586 (2d Cir. 1993)(*Business Week* advance copies).

<sup>19</sup> See Rubenstein, *supra*, at 15.

There are many interesting anomalies, and we shall note only a few. Some of the first doubts arose because of observations that stock markets were more volatile and generate more trading volume than the EMH would predict. A rational person would hesitate to trade aggressively against the prevailing consensus without a private stock of nonpublic information, but such trading occurs with extraordinary frequency. And many significant market swings occur without any obvious new information – the market “break” of 1987 being one of the more closely examined.<sup>20</sup> There are also interesting studies of individual stocks and industries. The EntreMed example is one, and Enron will likely be soon. A recent study showing that much of the price movement in the Massmutual Corporate Investors closed-end fund is due to investors mistakenly confusing its ticker symbol (MCI) when they respond to information released by MCI Communications (MCIC) is another.<sup>21</sup> The recent technology stock “bubble” provides many more.<sup>22</sup>

For our purposes, however, the most interesting work is that which challenges the primary prediction of the EMH: that prices promptly and rationally impound all available information, so that subsequent price movements are independent of their antecedents. A large body of research rejects this and finds ample evidence of “momentum” in stock prices – i.e., that price moves in one direction or another are frequently followed by a continuation in that direction, without any “new news” to justify the trend.<sup>23</sup> Unfortunately for those who seek simplicity, this momentum can take two very different forms. Sometimes, especially with the case of newly publicized accounting data, there is a slow but sustained adjustment of the price.<sup>24</sup> In other words, it takes some time for the stock price to “drift” to a level that

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<sup>20</sup> E.g., Joseph Stiglitz, *Symposium on Bubbles – Introduction*, 4 J. Econ. Perspectives, Spring 1990, at 13, 17. See generally Frank Partnoy, *Why Markets Crash and What Law Can Do About It*, 61 U. Pitt. L. Rev. 741 (2000).

<sup>21</sup> See Michael Rashes, *Massively Confused Investors Making Conspicuously Ignorant Choices (MCI-MCIC)*, 56 J. Fin. 1911 (2001).

<sup>22</sup> See Eli Ofek & Matthew Richardson, *DotCom Mania: A Survey of Market Efficiency in the Internet Sector* (SSRN); see also text accompanying note --- infra.

<sup>23</sup> See, e.g., Harrison Hong et al., *Bad News Travels Slowly: Size, Analyst Coverage and the Profitability of Momentum Strategies*, 55 J. Fin. 265 (2000); Louis Chan et al., *Momentum Strategies*, 51 J. Fin. 1681 (1996);

<sup>24</sup> See Victor Bernard & Jacob Thomas, *Post-Earnings Announcement Drift: Delayed Price Response or Risk Premium?*, 27 J. Acct'g Res. 1 (1989).

reflects the information in question. Here, it is said that the market price under-reacts to the information. Other times, there is a quick but excessive reaction to the new information, sending the price to a level that is either too high or too low. Eventually, the price reverts to a more reasonable value. This is the over-reaction hypothesis, sometimes referred to as “positive feedback” trading when describing the creation of price bubbles.<sup>25</sup>

These are both important observations, because they suggest that at any given time, a stock price will often not be identical to rational expectations about its fundamental value. Important conclusions would flow from this in both corporate and securities law, and we shall examine a few of these shortly. However, we should be careful not to overstate these observations. One of the drivers in the market efficiency debate is the search for investment strategies that consistently deliver above-average risk-adjusted returns. The EMH says that, apart from the repeated discovery of new material information, they do not exist. If over- or under-reaction could be keyed to an observable triggering event with some predictability, then a profitable investment strategy would be present. Investors should be contrarians when overreaction is likely, but bet with the trend when under-reaction is indicated. To date, some contrarian strategies have been identified that would have, at least during the time period under observation, delivered superior returns.<sup>26</sup> But there is no compelling evidence that simple strategies along these lines remain exploitable on a sustained basis. Some of the more moderate supporters of market efficiency point to this as evidence that whatever anomalies might exist tend gradually to be discovered and eliminated, so that the market is at least “long-term” efficient.<sup>27</sup> Critics, in turn, can reply that the absence of obviously profitable investment strategies simply reflects the highly situational nature of things like over- and under-reaction. Their unpredictability in terms of both extent and duration makes it too hard to exploit these anomalies consistently without bearing excessive risk. Somewhere in the middle are finance theorists like Fischer Black, a

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<sup>25</sup> See, e.g., SHLEIFER, *supra*, ch. 6.

<sup>26</sup> See Bruce Grundy & J. Spencer Martin, *Understanding the Nature of the Risks and the Sources of the Rewards to Momentum Investing*, 14 *Rev. Fin. Stud.* 29 (2001); Narasimhan Jegadeesh & Sheridan Titman, *Profitability of Momentum Strategies: An Evaluation of Alternative Explanations*, 56 *J. Fin.* 699 (2001).

<sup>27</sup> See, e.g., Campbell, *supra*, at 1557-58.

Nobel Prize winner, who conjectured early in the debate that stock prices simply wander within a range that varies from roughly half their fundamental value to twice that value<sup>28</sup> – nothing approaching a faithful vision of efficiency, but not entirely removed from it either.

## B. The Psychology of Market Price Movements

Behavioral finance is the effort to build new and different models of stock price behavior that better fit the observable data. The element of psychology in them proceeds from the assumption that important forms of human behavior are unlikely to be “washed out” in the financial markets as conventional economists have long assumed. Large numbers of so-called noise traders investors buy and sell stock. If their cognitive biases are strong enough, they will have an impact on prices that is not arbitrated away. Thus, the models are constructed by reference to the many sorts of biases that have been identified in the explosion of work on judgment and decision making that has occurred over the last thirty years or so.<sup>29</sup>

As with the stock price anomalies, the research connecting psychology and finance has become too voluminous to catalog here. A recent cataloging by David Hirshleifer surveys the depth and breadth of this work.<sup>30</sup> Virtually every well-recognized bias has been considered some way or another, as well as some less obvious. Finance scholars, for example, have found evidence that moods triggered by good or bad weather can affect stock prices on a given day.<sup>31</sup> However, I want to concentrate on four biases on which finance scholars have built the most visible and sustained research efforts, with special emphasis on one – the phenomenon of investor overconfidence.

The first of these biases, and the one with the most distinguished pedigree in the cognitive bias literature, is loss aversion. People appear

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<sup>28</sup> Fischer Black, *Noise*, 41 J. Fin. 529, 533 (1986).

<sup>29</sup> See Daniel Kahneman & Mark Riepe, *Aspects of Investor Psychology*, 24 J. Portfolio Mgt. 52 (1998). In addition to the finance studies on which we will focus, there has been an explosion in laboratory studies that seek to replicate features of the financial markets. See, e.g., Ananda Ganguly et al., *Do Asset Market Prices Reflect Traders' Judgment Biases?*, 20 J. Risk & Uncert. 219 (2000).

<sup>30</sup> See Hirshleifer, *supra*.

<sup>31</sup> See Saunders, *Stock Prices and Wall Street Weather*, 83 Am. Econ. Rev. 1337 (1993); Hirshleifer, *supra*, at 1560.

to approach risk-taking differently depending on how the choice before them is framed. When evaluating a potential gain, there is a strong degree of risk aversion. But if prompted to see the choice as one of trying to avoid a loss of that currently possessed, the tendency is to be more risk-seeking. Thus, there could be differences in buying versus selling stocks. We might expect people to hold on to their losing stocks too long, and sell their winners too readily.<sup>32</sup> A prominent behavioral model incorporates loss aversion with an interesting twist. Drawing on prior work sometimes described as the “house money effect,” Barberis, Huang and Santos argue that one’s degree of loss aversion will vary depending on recent prior performance.<sup>33</sup> If one has recently enjoyed gains, “possession” effects do not operate as strongly; people are willing to take considerable risks with “found money.” On the other hand, when one has suffered recent losses, people are reluctant to gamble much unless it is necessary to preserve what they have left (usually not the case with investments, where safe options are available to preserve capital). This suggests that after a run up in prices, people become more aggressive – one reason why we might observe greater volatility than traditional models might suggest.

The next two biases seem confusing, because they suggest opposite tendencies.<sup>34</sup> Cognitive conservatism is an extremely robust behavioral construct showing that people change their views slowly even in the face of persuasive evidence. They cling as long as possible to what they previously believed. This, of course, could be the basis for the under-reaction phenomenon described earlier. However, under some circumstances, this tendency is reversed – new information has an excessive effect on judgment, prompting over-reaction. This is the “representativeness” effect, under which peoples’ attention is distracted from the baseline. Much work in psychology and finance tries to reconcile these two.<sup>35</sup> One possibility relates the new information to the

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<sup>32</sup> See Terrence Odean, *Are Investors Reluctant to Realize their Losses?*, 53 J. Fin. 1775 (1998); Hersh Shefrin & Meir Statman, *The Disposition to Sell Winners Too Early and Ride Losers Too Long: Theory and Evidence*, J. Fin. 777 (1985).

<sup>33</sup> Nicholas Barberis et al., *Prospect Theory and Asset Prices*, 66 Q. J. Econ. 1 (2001). See also Nicholas Barberis & Ming Huang, *Mental Accounting, Loss Aversion and Individual Stock Returns*, 56 J. Fin. 1247 (2001).

<sup>34</sup> See SHLEIFER, *supra*, at 128-30.

<sup>35</sup> See Hong & Stein, *supra*; Nicholas Barberis et al., *A Model of Investor Sentiment*, 49 J. Fin. Econ. 307 (1998); Roni Michaely et al., *Price Reactions to Dividend Omissions:*

pattern of prior news events. Another is the salience of the new information.<sup>36</sup> When the new information is presented in a way that makes it particularly dramatic, for example, it might be over-weighted; when it is presented normally, it isn't, allowing cognitive conservatism to control the process of inference. This is a possible explanation for the EntreMed story. The ever-increasing volume of media coverage of investment information – on the internet, cable TV and the financial press – means that some stories will gain substantial saliency, while others will be buried under a heavy load of other information.<sup>37</sup>

While media attention is no doubt part of the story, many IMH scholars say that the yet most under-explored aspect of behavioral finance is social contact among investors.<sup>38</sup> It is very likely that investors affect each other not simply by trading, but through conversations (including internet-based talk<sup>39</sup>) and other forms of social influence.<sup>40</sup> Hence, it is possible that further research will be able to document an “epidemiology” of investor behavior – tracking the contagion of excitement or panic within embedded communities of traders. That eventually may help us understand better, if not predict, why information gets over-weighted in some circumstances while similar information is under-weighted in others.

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*Overreaction or Drift?*, 50 J. Fin. 573 (1995). In the options market, see Allen M. Poteshman, *Underreaction, Overreaction and Increasing Misreaction to Information in the Options Market*, 56 J. Fin. 851 (2001).

<sup>36</sup> See Peter Klibanoff et al., *Investor Reaction to Salient News in Closed-end Country Funds*, 53 J. Fin. 673 (1999).

<sup>37</sup> In addition, increases in demand – for whatever reason – may themselves start bandwagon effects, even if no other information is conveyed. See SHILLER, *supra*, at 60-62.

<sup>38</sup> See SHILLER, *supra*, at 153-62; Hirshleifer, *supra*, at 1552-53, 1577; Robert Shiller & John Pound, *Survey Evidence on Diffusion of Interest and Information Among Investors*, 12 J. Econ. Behav. & Org. 47 (1989). For some early efforts in this direction, see Wayne Baker, *The Social Structure of a National Securities Market*, 89 Am. J. Soc. 775 (1984); Michael Klausner, *Sociological Theory and the Behavior of Financial Markets*, in 2 THE SOCIAL DYNAMICS OF FINANCIAL MARKETS 57 (Patricia Adler & Peter Adler, eds., 1984). See generally Ellison & Fudenberg, *Word of Mouth Communication and Social Learning*, 110 Q.J. Econ. 93 (1995).

<sup>39</sup> See Part III *infra*.

<sup>40</sup> Of substantial relevance here is work on rumors. See Nicholas DiFazio & Prashat Bordia, *Rumor and Prediction: Making Sense (but Losing Dollars) in the Stock Market*, 71 Org. Behav. & Hum. Decision Processes 329 (1997).

Although each of the foregoing biases plays an important role in behavioral finance, the last of our four has gained a particularly high level of prominence in recent years: the phenomenon of investor overconfidence. In an oft-repeated quotation in the finance literature, DeBondt and Thaler state that “perhaps the most robust finding in the psychology of judgment is that people are overconfident.”<sup>41</sup> People have a strong tendency to have greater faith in their intuitions and judgments than the evidence warrants.<sup>42</sup> They overweight their private stock of information or inference, and calibrate poorly even when they realize the presence of some uncertainty. This bias has a comparative dimension to it: people are overconfident in their skills vis-a-vis others. Far more than 50% a sampling of active investors will rate themselves as above average compared to their peers at the task of investing.<sup>43</sup> There is an interesting gender element at work here: overconfidence is dominantly a male trait.<sup>44</sup>

This bias is popular among economists (even some conventional ones<sup>45</sup>) for a few reasons. First of all, much observable economic behavior seems hard to explain except by reference to a hubris hypothesis – the volume of corporate takeover activity, for example, and the consistently high premiums that winning bidders pay for what often turn out to be unprofitable acquisitions.<sup>46</sup> Second, there is an interesting evolutionary story behind the bias, which appeals to economists.<sup>47</sup>

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<sup>41</sup> Warner Debondt & Richard Thaler, *Financial Decisionmaking in Markets and Firms: A Behavioral Perspective*, in *Finance*, vol. 9 of HANDBOOK OF OPERATIONS RESEARCH AND MANAGEMENT SCIENCE, chap. 13, at 385-86 (1995).

<sup>42</sup> See Terrance Odean, *Volume, Volatility, Price and Profit When All Traders Are Above Average*, 53 J. Fin. 1887 (1998). For a review of the psychology literature, see Dale Griffin & Carol Varey, *Towards a Consensus on Overconfidence*, 65 Org. Behav. & Human Dec. Processes 227 (1999). For a linking of overconfidence with corporate disclosure policy, see Langevoort, *Organized Illusions*, supra.

<sup>43</sup> See Don A. Moore et al., *Positive Illusions and Forecasting Errors in Mutual Fund Investment Decisions*, 79 Org. Behavior & Hum Decision Processes 95, 97 (1999).

<sup>44</sup> See Brad Barber & Terrance Odean, *Boys Will Be Boys: Overconfidence and Common Stock Investment*, 116 Q.J. Econ. 261 (2000).

<sup>45</sup> See Rubenstein, supra, at 17-18.

<sup>46</sup> See Richard Roll, *The Hubris Hypothesis in Corporate Takeovers*, 59 J. Bus. 197 (1986). See also Colin Camerer & Dan Lovallo, *Overconfidence and Excess Entry: An Experimental Approach*, 89 Am. Econ. Rev. 306 (1999).

<sup>47</sup> See Albert Kyle & F. Albert Wang, *Speculation Duopoly with Agreement to Disagree: Can Overconfidence Survive the Market Test?*, 52 J. Fin. 2073 (1997);

Illusions of control and over-optimism are associated with a variety of positive outcomes: greater willingness to take risk, more persistence in the face of adversity, etc. One can readily see why being unrealistically confident (within moderation) can lead to more success, even if it also leads to more mistakes as well. Those who bear greater risk are compensated for it, on average. Indeed, when they are also beneficiaries of a streak of good luck, we might expect that highly successful people – an important group in the world of investing – might be particularly infused with hubris.<sup>48</sup>

Finally, and most importantly, there is an increasing body of empirical evidence that directly supports investor overconfidence as an important trait. In what became a widely-reported study, Barber and Odean studied the investment performance of a large number of on-line brokerage accounts.<sup>49</sup> Such accounts are held by those who think they can make their own trading decisions without the assistance of a stockbroker as adviser, and have been the fastest growing segment of the brokerage industry over the last few years. What the researchers found is that the rate of trading increased once the accounts were established, especially after an initial spurt of good performance (or good luck). Notwithstanding this increasing volume of trading, overall average performance lagged what a more passive, well-diversified trading strategy would generate. Not surprisingly, most all of the lag was due to the costs (e.g., commissions) associated with active trading. The authors state their conclusion simply: “Overconfident investors will overestimate the value of their private information, causing them to trade too actively, and consequently, to earn below-average returns.”<sup>50</sup>

One of the notable features of overconfidence is its dynamic character. A long-recognized trait in human behavior, a self-esteem bolstering device, is the tendency to take credit for positive results, but externalize blame for bad ones. This is one reason that people learn poorly from experience – recognition that one’s failures are due to lack

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Alexander Benos, *Aggressiveness and Survival of Overconfident Traders*, 1 J. Fin. Mkts. 353 (1998).

<sup>48</sup> See Simon Gervais & Terrance Odean, *Learning to Become Overconfident*, 14 Rev. Fin. Stud. 1 (2001).

<sup>49</sup> Brad Barber & Terrance Odean, *Trading is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors*, 55 J. Fin. 773 (2000).

<sup>50</sup> Id. at 800.



of competence or skill is one of the last things people are willing to accept. As a result, a streak of good luck will be attributed as skill, whereas a run of losses will be bad luck or someone else's fault. Thus, when prices rise and investors gain from that alone, their investment decisions are readily characterizable as talent, which in turn will promote even more aggressive trading. Downswings will not have a comparable cautionary influence.<sup>51</sup>

Many different behavioral finance models have been built on overconfidence and biased self-attribution. Perhaps the best known is by Daniel, Hirshleifer and Subrahmanyam, which explicitly uses a dynamic model that assumes that overconfident traders overreact to private informational signals but under-react to those which are public, enabling them to explain both the observed under-reaction and over-reaction phenomena.<sup>52</sup>

### C. The Limits of the Smart Money: Arbitrage and Advice

The behavioral models discussed above only predict that cognitive biases systematically affect the decision-making of some investors, and that these biases could potentially affect stock prices. But they do not, for the most part, deal with what has long been the economists' trump card: that any systematic irrational tendencies are likely to be countered immediately by "smart money" forces in the market. This countering takes two main forms. One – far and away the more important – is that smart money will arbitrage away any noisy price movements that have no fundamental rationality. The other is that sophisticated institutions will offer investment advice and analysis to the unsophisticated in a way that will "de-bias" many of them. Each of these, not surprisingly, has received substantial attention in the IMH literature.

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<sup>51</sup> Obviously, there are many parallels here with gambling behavior. For a legal discussion linking these two phenomena, see Theresa Gabaldon, *John Law, with a Tulip, in the South Seas: Gambling and the Regulation of Euphoric Market Transactions*, J. Corp. L. 225 (2001).

<sup>52</sup> Kent Daniel et al., *Investor Psychology and Security Market Under- and Overreactions*, 53 J. Fin. 1839 (1998). See also Robert Bloomfield et al., *Underreactions, Overreactions and Moderated Confidence*, 3 J. Fin. Mkts. 113 (2000).

## 1. Arbitrage

The standard EMH argument is that if irrational price moves were to occur, rational investors would quickly see that the stock has become over- or under-valued vis-à-vis its fundamentals and trade accordingly. This contrarian trading would promptly move back the price to its rational expectations level.

The literature critical of market efficiency has built a substantial case against the likelihood of fully-effective arbitrage.<sup>53</sup> The two major points have been understood for some time. First, there are significant limits on the ability to arbitrage away an inflated price because the principal technique needed to do so – short-selling – is both legally and practically difficult.<sup>54</sup> Second, if neither the extent nor the duration of the irrational impulses can be determined with accuracy ex ante, then it is a very risky bet to make. The irrationality may persist for some time. For a variety of reasons, the smart money will hesitate to make this bet and may indeed prefer an alternative strategy – playing the momentum game by *buying* in the face of an irrational price increase, so long as the buying occurs early enough and the investor is disciplined to sell before the noise traders do.<sup>55</sup> That, too, is risky, but may have the higher expected pay-off. The consequence, of course, is that the price swing is exacerbated, not countered.

Somewhat more aggressively, some behavioral critics have also cast doubts on the rational decision-making of professional investors. We shall explore this in some more depth below in our discussion of the investment analyst. For instance, there is substantial evidence of herding

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<sup>53</sup> See SHLEIFER, *supra*, at 13-16; Andrei Shleifer & Robert Vishny, *The Limits of Arbitrage*, 52 J. Fin. 35 (1997). For a perspective integrating overconfidence and the arbitrage problem, see Kent Daniel et al., *Overconfidence, Arbitrage and Equilibrium Asset Pricing*, 56 J. Fin. 921 (2001).

<sup>54</sup> This is not to say that short-selling is not at least partially effective as a counter to noise trading. See generally Patricia M. Dechow et al., *Short-sellers, Fundamental Analysis and Stock Returns*, 61 J. Fin. Econ. 77 (2001); Jonathan Macey et al., *Restrictions on Short Sales: An Analysis of the Uptick Rule and Its Role in the 1987 Stock Market Crash*, 74 Cornell L. Rev. 799 (1989).

<sup>55</sup> See SHLEIFER, *supra*, at 174.

by professionals,<sup>56</sup> though whether this has a psychological explanation as opposed to one reflecting the skewed economic incentives faced by portfolio managers (thereby raising a conventional agency cost problem<sup>57</sup>) is not easy to parse through. Most accounts emphasize rational limitations more than the irrational and assume that institutions exploit noise trader biases, albeit incompletely.<sup>58</sup>

## 2. *Investment Analysts*

Investment analysts have long been identified in both law and economics as a strong positive force in market efficiency. Analysts are paid (handsomely) to do investment research, and fall into two rough categories. “Buy-side” analysts work for institutional investors, like mutual funds and pension funds, as part of the portfolio management team. Their success in investment analysis redounds solely to their private clients. “Sell-side” analysts work for brokerage firms and typically publish their guidance publicly. The public nature of the estimates and recommendations is meant to influence the retail segment of the investing public. Various services, such as First Call, aggregate sell side analyst advice into consensus estimates and recommendations, so that savvy investors can set a sense of either agreement or dispersion from a broad range of analysis.

Because buy-side advice is private, its effects can be observed only by looking at the performance of the large institutional investors who, by law, must make performance data available to their investors or beneficiaries. While much of this research shows that institutional investors, on average, under-perform market indices – so that the large sums of money spent on analysis are essentially wasted – this is not an

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<sup>56</sup> See David Scharfstein & Jeremy Stein, *Herd Behavior and Investment*, 80 Am. Econ. Rev. 465 (1990); Russ Wermers, *Mutual Fund Herding and the Impact on Stock Prices*, 54 J. Fin. 581 (1999). For a behavioral view, see Bradford DeLong et al., *The Survival of Noise Traders in Financial Markets*, 64 J. Bus. 1 (1991).

<sup>57</sup> See Judith Chevalier & Glenn Ellison, *Career Concerns of Mutual Fund Managers*, 114 Q.J. Econ. 389 (1999).

<sup>58</sup> See Randolph Cohen et al., *Who Underreacts to Cash-flow News? Evidence from Trading Between Individuals and Institutions* (SSRN); Paul Gompers & Andrew Metrick, *Institutional Investors and Equity Prices*, 116 Q.J. Econ. 229 (2001); John Nofsinger & Richard Sias, *Herding and Feedback Trading by Institutional and Individual Investors*, 54 J. Fin. 2263 (1999).

argument against market efficiency. To the contrary, it is usually offered as part of the EMH case.<sup>59</sup> Most commonly, the wastefulness is seen as an agency cost issue, however, not evidence of the cognitive biases of buy-side managers.<sup>60</sup> The one point of relevance here has to do with the incentives of portfolio managers. To the extent that they are evaluated on a periodic basis against their peers, they have less of an incentive to take long-term risky bets against the direction of the market. This agency-cost problem is often cited as one reason that smart money arbitrage is less powerful than might otherwise be expected.<sup>61</sup>

Sell-side analysts are more thoroughly studied because of the public nature of their recommendations.<sup>62</sup> And the 1990's were not kind to analysts, in the finance literature at least. Prior to that point, there was a strong assumption that analysts and their employers had such strong reputational incentives that they could not afford to be anything but diligent and unbiased in their research. If so, then investors would be justified in following their advice, supporting their role as efficiency-drivers.<sup>63</sup> But a decade of work, both empirical and theoretical, has taken issue with this. Some studies are explicitly behavioral. A number of researchers offer evidence of analyst overconfidence,<sup>64</sup> as well as other biases.<sup>65</sup> But as noted above, researchers have mainly emphasized agency cost problems. The primary concern has to do with conflicts of

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<sup>59</sup> E.g., Rubenstein, *supra*, at 20-21.

<sup>60</sup> Indeed, recent evidence is that mutual funds do pick stocks reasonably well, but that the costs charged to their customers remove all the abnormal return. See Russ Wermers, *Mutual Fund Performance: An Empirical Decomposition into Stock Picking Talent, Style, Transaction Costs and Expenses*, 55 J. Fin. 1655 (2000).

<sup>61</sup> See sources cited in note --- *supra*.

<sup>62</sup> See, e.g., John Easterwood & Stacey Nutt, *Inefficiency in Analysts' Earnings Forecasts: Systematic Misreaction or Systematic Optimism?*, 54 J. Fin. 1777 (1999); Kent Womack, *Do Brokerage Analysts' Recommendations Have Investment Value?*, 51 J. Fin. 137 (1996); Vijay Chopra, *Why So Much Error in Analysts' Earnings Forecasts?*, 54 Fin. Analysts J. 66 (1998).

<sup>63</sup> Though as just observed, any assessment that sell-side analyst recommendations have investment value is itself an IMH point. The EMH says that what analysts learn is impounded in market price before the recommendations are made public.

<sup>64</sup> See David Hirshleifer et al., *Security Analysis and Trading Patterns When Some Investors Receive Information Before Others*, 49 J. Fin. 1665 (1994); Gilles Hilary & Lior Menzly, *Does Past Success Lead Analysts to Become Overconfident?* (SSRN). .

<sup>65</sup> See generally Kenneth Fisher & Meir Statman, *Cognitive Biases in Market Forecasts*, J. Port. Mgt., Fall 2000, at 72.

interest. Multi-service investment banks make considerable amounts of money from corporate finance activities for issuer clients. The analysts might thus be pressured to be unduly favorable to current or potential clients, with the revenue from those tasks outweighing the reputational risk from the biased advice.<sup>66</sup> Anecdotally, this pressure is intense, both in terms of issuer demands and firm responses. The *Wall Street Journal*, for example, quoted a high level internal Morgan Stanley memorandum stating “[a]s we are all too aware there have been too many instances where our security analysts have been the source of negative comments about clients of our Firm.... [Our] policy is that we do not make negative or controversial comments about our clients as a matter of sound business practice.”<sup>67</sup> A second concern had to do with access to information. The easiest and most reliable source of non-public information is through private contacts with issuer officials, and the insider trading laws were for a long time at least ambiguous as to whether such contacts were lawful. Because of the ambiguity, the enforcement risk was minimal. Under those circumstances, it would be rational for the analyst to trade off some skewing of the advice in a positive direction in order to keep channels of communication open.<sup>68</sup> Each of these would lead to a positive bias in analyst recommendations, on average. Stories about the Enron bankruptcy, for example, have observed both kinds of analyst conflicts in explaining why the sell-side was pushing the company’s stock right up until insolvency.<sup>69</sup>

Having made the case at least for worrying, the task became one of evaluating the actual performance of the analysts. Superficially, at least, one glaring concern emerged: in the aggregate, buys substantially outnumbered sells, with the imbalance growing throughout the decade. The presence of an investment banking relationship did indeed exacerbate the bias. As a whole, the analyst community was heavily

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<sup>66</sup> E.g., Roni Michaely & Kent Womack, *Conflict of Interest and the Credibility of Underwriter Analyst Recommendations*, 12 *Rev. Fin. Studies* 653 (1999); William Carleton et al., *Optimism Biases Among Brokerage and Non-brokerage Firms’ Equity Recommendations: Agency Costs in the Investment Industry*, 27 *Fin. Mgt.* 17 (1998). For a sociological perspective, see Mathew L.A. Hayward & Warren Boeker, *Power and Conflicts of Interest in Professional Firms: Evidence from Investment Banking*, 43 *Admin. Sci. Q.* 1 (1998).

<sup>67</sup> See *Wall St. J.*, July 14, 1992, at 1.

<sup>68</sup> See Terrence Lim, *Rationality and Analysts’ Forecast Bias*, 56 *J. Fin.* 369 (2001).

<sup>69</sup> See *Analysts’ Picks of Enron Stock Face Scrutiny*, *Wall St. J.*, Feb. 26, 2002 at C1.

pushing technology stocks up through the time the technology bubble deflated. In all fairness, the empirical data is not entirely critical.<sup>70</sup> At least prior to the market downturn in 2000,<sup>71</sup> following aggregate analyst recommendations would have been mildly profitable for investors vis-a-vis other investment benchmarks.

A particularly interesting study, for our purposes, is a “clinical” dissection by Bradford Cornell of analyst behavior with respect to Intel Corporation before and after September 21, 2000, when the company announced lower than expected third quarter earnings.<sup>72</sup> The stock price dropped 30%, erasing \$120 billion of market value. The consensus recommendations were strongly on the buy side before the announcement. Afterwards, when the price was much lower, a fair number of analysts shifted to the sell side. This was perplexing, because the earnings announcement was of relatively small fundamental significance with respect to the company’s long-term financial circumstances. It would be odd, then, that a company stock that was worth *buying* at \$60 should, on that news alone, be *sold* at \$43.

Cornell tests whether the reported information could, on a discounted cash flow basis (the standard method of fundamental investment analysis) justify the stock price drop, much less the shift to sell recommendations. He concludes not, and is disturbed by the fact that the recommendations done both before and after gave no indication that discounted cash flow analysis was even relevant to the advice. If analysts in the Intel situation were not doing this, what were they doing? Cornell suggests that analyst recommendations were reacting to recent stock price performance rather than anticipating changes in the company’s fundamentals. A series of good news announcements and upward price movements leads to an escalation of buy recommendations, until bad news occurs and the price drops. That causes a shift in recommendations. If this is right, then there is relatively little added value in the recommendations. And if these recommendations

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<sup>70</sup> See Brad Barber et al., *Can Investors Profit from the Prophets? Consensus Analyst Recommendations and Stock Returns*, 56 J. Fin. 531 (2001).

<sup>71</sup> On the 2000 downturn, which analysts missed badly, see Brad Barber et al., *Prophets and Losses: Reassessing the Returns to Analysts’ Stock Recommendations* (SSRN)

<sup>72</sup> Bradford Cornell, *Is the Response of Analysts to Information Consistent with Fundamental Valuation? The Case of Intel*, Fin. Mgt., Spring 2001, at 113.

nonetheless influence investor behavior, it would tend to exacerbate stock price volatility.<sup>73</sup>

Cornell's qualifier with respect to this last point is important. The fact that there are biases or methodological flaws in the recommendations of sell-side analysts does not in itself that they influence investors. If investors are smart enough to anticipate the biases or the flaws, they will discount or ignore the recommendations. Anecdotally, of course, there is a strong assumption that analysts are influential, especially with their earnings forecasts. Empirically, however, we have to be more cautious.<sup>74</sup> Without trying to resolve this at least partially open question, we should simply take note of where it leaves us. If there is an influence, this kind of work gives reason for concern. If there is little or no influence, then sell-side analysts should forfeit the privileged position that law and economics have heretofore given them. This is an issue to which we shall return in Part IV.

## II. FIRST STEPS TOWARD BEHAVIORAL SECURITIES REGULATION

Lawyers and policy makers cannot hope to resolve the academic dispute over market efficiency reflected in the foregoing finance scholarship. However, they cannot avoid it either. If the law is built on either a strong vision of efficiency or a strong vision of inefficiency, then we face a serious risk of error if the assumption turns out to be inaccurate. So far as the pro-efficiency risk is concerned, there may not be all that much to worry about in current law. In a previous article, I tried to show that notwithstanding some strong rhetoric, relatively few important rules or principles of securities law depend strongly on market efficiency. Those most closely identified with the EMH, like the fraud-on-the-market theory and the SEC's simplified S-3 and shelf registration procedures for public offerings, can easily be justified without invoking it at all.<sup>75</sup>

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<sup>73</sup> Id. at 134. See also George Bulkey & Richard Harris, *Irrational Analysts' Expectations as a Cause of Excess Volatility in Stock Prices*, 107 Econ. J. 359 (1997).

<sup>74</sup> On this influence, see Eric Hirst et al., *Investor Reactions to Financial Analysts' Research Reports*, 33 J. Acct'g Res. 335 (1995). Investor credulity also is suggested in Siew Hong Teoh et al., *Earnings Management and the Long-Run Market Performance of Initial Public Offerings*, 53 J. Fin. 1935, 1941 (1998).

<sup>75</sup> See Langevoort, *Theories*, supra, at 876-86.

The real bite from faith in efficiency comes in the regulation *not* undertaken because of doubts that it is necessary. To return to Enron and the subject of earnings management, for example, a restrained posture that tolerated a high degree of accounting cosmetics could be justified if one thinks that the market effectively sees through the make-up.<sup>76</sup> The most aggressive uses of efficiency theory, however, are found in a variety of pending proposals for reform of the existing regulatory system. From both academics and interest groups, we see claims that the efficiency properties of the stock markets are sufficiently strong that more radical deregulation is called for.<sup>77</sup> Here, critics of efficiency have a fairly obvious task. Behavioral finance can be invoked as a counterweight, to demonstrate the costs and risks of these kinds of proposals under an arguably more realistic view of how markets behave.<sup>78</sup>

But as noted at the beginning, this task, though surely important, is unsatisfying for two reasons. First, because of the siege-like state of the debate, neither side is inclined concede the underlying empirical assumptions of the other. (Put in legal terms, neither side could obtain a directed verdict in its favor). A behavioral criticism, however sophisticated, can be deflected simply by saying that the case for rejecting the EMH has not yet been made.<sup>79</sup> There is also the familiar point that even if the case for efficiency has been partly undermined, the IMH theorists lack a widely-accepted, tractable theory of their own on how markets do behave. That is very much an early work in progress. In this sense, the behavioral research works better defensively than as a

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<sup>76</sup> See Claire Hill, *Why Financial Appearances Might Matter: An Explanation for Dirty Pooling and Some Other Types of Financial Cosmetics*, 22 Del. J. Corp. L. 121 (1997).

<sup>77</sup> See Roberta Romano, *Empowering Investors: A Market Approach to Securities Regulation*, 107 Yale L.J. 2357 (1999); Stephen Choi & Andrew Guzman, *Portable Reciprocity: Rethinking the International Reach of Securities Regulation*, 71 S. Cal. L. Rev. 903 (1998). The common element of these proposals is that the markets “price” risk rationally and precisely, so that investors are fully compensated for the risk they bear. Although the IMH literature does not, so far as I know, address this pricing claim directly, the natural implication is that noisy markets will wash out pricing precision. Moreover, highly salient risks (or non-salient ones) may themselves be the subject of market misperception.

<sup>78</sup> See Robert Prentice, *Whither Securities Regulation? Some Behavioral Observations Regarding Proposals for its Future*, Duke L.J. (2002)(forthcoming); Cunningham, *supra*.

<sup>79</sup> E.g., Romano, *supra*, at 2366 n. 17.



positive vision of how regulation should be designed or evaluated, and thus underwhelms.

In what follows, then, I will try a different tack. One of the contributions of the behavioral finance research is that it may help us explain otherwise puzzling marketplace behavior, even if it doesn't yield clear-cut answers on what to do in response. The pay-off here is that this literature may point us in directions that we might not otherwise have considered. While this is my main aim, we will also take note of a new kind of exploitation of the IMH research. As conventional economics did twenty-five years ago,<sup>80</sup> behavioral finance has begun to seep from academia to real-life policy discussions. This offers an opportunity for those of us sympathetic to the IMH agenda to take the measure of this seemingly friendly fire.

### III. FRAUD ON THE INTERNET

The emergence of the internet as an economic and cultural phenomenon in the 1990's was disorienting for securities regulation in a number of different ways.<sup>81</sup> First, it created a new communications medium for the dissemination of information and opinion about financial matters. Persons could establish web sites, or participate in discussions on existing ones, in a way that created world-wide visibility for what was said. Popular sites attracted extensive attention. This "democratization" of the dissemination of investment-related information supposedly wrested control from the established institutional sources of advice and analysis that had theretofore dominated the financial media.

The second major change related to the trading process. Formally, brokers have always operated as gatekeepers to the exchanges – direct trading was not practicable, and certainly not encouraged. A retail customer had to communicate with a broker, and brokerage firms

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<sup>80</sup> See MARTHA DERTHICK & PAUL QUIRK, *THE POLITICS OF DEREGULATION* 246 (1985).

<sup>81</sup> For interesting perspectives, see Lynn Stout, *Technology, Transactions Costs and Investor Welfare: Is a Motley Fool Born Every Minute?*, 75 Wash. U.L.Q. 791 (1997); Tamar Frankel, *The Internet, Securities Regulation, and the Theory of Law*, 73 Chi.-Kent L. Rev. 1319 (1998); Jeffrey Hass, *Small Issue Public Offerings Conducted Over the Internet: Are They Suitable for the Retail Investor*, 72 S. Cal. L. Rev. 67 (1998); Robert Prentice, *The Future of Corporate Disclosure: The Internet, Securities Fraud and Rule 10b-5*, 47 Emory L.J. 1 (1999).

used this opportunity as a place to practice the arts and science of salesmanship.<sup>82</sup> But the internet created a chance for on-line brokers like Charles Schwab and Datek to emerge and offer customers on-line trading capacity at very low cost (because the firms had lower personnel costs and less physical office space to maintain). These firms succeeded by convincing investors that they were empowered to make their own trading decisions, without the need for extensive professional advice.<sup>83</sup> These first two changes were closely related: the explosion in web-based investment information operated as a substitute for brokerage firm guidance, supporting (if not inflating) the sense of confidence for the retail investor.<sup>84</sup> Web-based execution mechanisms became the basis for the phenomenon of “day-trading” – retail investors devoting nearly full time to investing and mimicking the behaviors of professional traders by seeking to profit from very short-term price movements.<sup>85</sup>

The third change was different, though still part of a unified story. Internet-based issuers became extraordinarily popular investments in the 1990’s, rising in valuation well beyond what conventional fundamental investment analysis could apparently justify.<sup>86</sup> Firms with no positive net income (or even near-term hopes of such) achieved market capitalizations in the billions of dollars, with increasingly elevated stock prices until the popping of the “tech bubble” in 2000. Although institutional investors were involved in technology stocks throughout the period, the available data suggests that retail investors held larger portions of tech stock compared to the more heavily institutional holdings in other kinds of industries.<sup>87</sup>

For our purposes, the performance of technology stocks in the 1990’s is noteworthy mainly because of the research attention that it generated. Both during and after the growth of the bubble, many critics pointed to the high valuations as evidence of market inefficiency – how

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<sup>82</sup> See Langevoort, *Selling Hope*, supra.

<sup>83</sup> See SEC Special Study – *On-Line Brokerages: Keeping Apace of Cyberspace*, [1999-2000 Tr. Binder] Fed. Sec. L. Rep. (CCH) par. 86,222 (Nov. 22, 1999).

<sup>84</sup> See Brad Barber & Terrence Odean, *The Internet and the Investor*, 15 J. Econ. Persp. 41 (2001).

<sup>85</sup> See Caroline Bradley, *Disorderly Conduct: Day Traders and the Ideology of “Fair and Orderly Markets,”* J. Corp. L. 63 (2000); Gabaldon, supra, at 238.

<sup>86</sup> See Ofek & Richardson, supra; Cornell, supra.

<sup>87</sup> See John Hand, *Profits, Losses and the Non-Linear Pricing of Internet Stocks* (SSRN).

could a rational market price the shares of unprofitable start-up companies so highly? A recent survey of both new and existing evidence by two self-described believers in market rationality finds “a strong circumstantial case against market prices reflecting fundamentals in the internet sector.”<sup>88</sup> Some of the examples in this literature border on amusing, if not sad. During the height of the frenzy, simply changing a firm’s name to an internet moniker (e.g., adding “.com” to the name) produced a 53% abnormal return over the subsequent five-day period.<sup>89</sup> In another well-known example, 3Com sold a 6% stake in its Palm subsidiary (maker of Palm Pilots) in a transaction that promptly produced an estimated \$53 billion market capitalization for Palm. Yet at the same time, the total market capitalization of 3Com was approximately \$28 billion, which could make sense only if the market was valuing the remainder of the 3Com assets as, essentially, a basket of liabilities.<sup>90</sup> The Intel example recounted in the previous section is another example. Cornell’s analysis suggests not so much that the market overreacted when Intel’s price dropped by 38% on minimally important bad news as that Intel’s stock price was much too high before the news. To be sure, supporters of the EMH have not thrown in the towel in the face of all this,<sup>91</sup> but concede that they have work to do.

The single legal issue I want to explore here comes at the confluence of these three developments, posing a problem that goes deep into the heart of what securities law is (or should be) all about. It involves a case that gained extensive media attention,<sup>92</sup> including a segment on the television news program *60 Minutes* and a cover story in the *New York Times Magazine* by celebrated author Michael Lewis.<sup>93</sup> In

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<sup>88</sup> Ofek & Richardson, *supra*.

<sup>89</sup> See Michael Cooper et al., *A Rose.com By Any Other Name*, 56 J. Fin. 2371 (2001).

<sup>90</sup> See Owen Lamont & Richard Thaler, *Can the Market Add and Subtract? Mispricing in Tech Stock Carve-outs* (SSRN).

<sup>91</sup> See, e.g., Schwartz & Moon, *Rational Pricing of Internet Companies*, 56 Fin. Analysts J. 62 (2000); Robert E. Hall, *Struggling to Understand the Stock Markets*, 91 Am. Econ. Rev. 1 (2001).

<sup>92</sup> See Michael Schroeder & Ruth Simon, *Teenager in Stock-Fraud Case Kept \$500,000 in Profits*, Wall St. J., Oct. 20, 2000 at C1.

<sup>93</sup> Michael Lewis, *Jonathan Lebed’s Extracurricular Activities*, N.Y. TIMES MAGAZINE, Feb. 25, 2001, at 26. Lewis is well-known for his book LIAR’S POKER (1989), a recounting of his experience, before becoming a writer, as a Salomon bond trader.

late 2000, a young New Jersey teenager was the subject of an enforcement action by the SEC for “internet fraud.” He consented to a settlement, disgorging some but far from all of his hundreds of thousands of dollars of trading profits.<sup>94</sup>

The teenager, Jonathan Lebed, was accused of buying stock in small, thinly traded high-tech companies. He then would make multiple postings on various investment web sites, under different web addresses, extolling these stocks. According to the SEC, he had a sufficient presence on the internet that on-line investors would respond by buying the stock, causing its price to rise. Lebed would then sell out. While Lebed became the celebrity, he was only one of a number of people accused of similar activities (including a set of Georgetown University law students<sup>95</sup>). One variation in these other cases is that some of these persons established and advertised their own web sites to disseminate their views, charging fees for access to the advice.

Lebed’s postings were fairly consistent. He would provide some basic, presumably accurate information about the company in question. The hype, in bold and billed with exclamations, would be phrased in recommendations like “next stock to gain 1000%,” or “the most undervalued stock ever.” Occasionally, he predicted something like a 50% price gain in a day or two.

Assuming these facts, what did Lebed do that was unlawful? There are two possibilities that the SEC pursues in these kinds of cases. One is to claim that the person has gone into the business of giving investment advice, which is illegal absent registration with the SEC and creates a fiduciary-like duty vis-à-vis one’s advisees. The difficulty with this tack is that “mass media” advisory services are exempt from the definition of investment adviser, largely out of First Amendment concerns.<sup>96</sup> The SEC has tread gently in the internet area, recognizing both the constitutional and practical difficulties of trying to sanction

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<sup>94</sup> SEC v. Lebed, 73 SEC Docket 741 (Sept. 20, 2000). For a survey of the SEC’s enforcement position in this area, with extensive reference to the *Lebed* case, see Richard Walker & David Levine, *You’ve Got Jail: Current Trends in Internet Securities Fraud*, 38 Am. Crim. L. Rev. 405 (2001).

<sup>95</sup> See SEC v. Colt, Litig. Rel. 16461, 71 SEC Docket 1951 (March 2, 2000).

<sup>96</sup> See *Lowe v. SEC*, 472 U.S. 181 (1985) (establishing broad definition of exemption for bona fide financial publishers); see generally Bert Neuborne, *The First Amendment and Government Regulation of the Capital Markets*, 55 Brook. L. Rev. 17 (1989). For an SEC victory in this setting, see *SEC v. Park*, 99 F. Supp. 2d 889 (N.D. Ill. 2000).

persons who establish web sites under the Investment Advisers Act when they clearly could not go after comparable activity found in a newspaper or magazine, or on radio or television. Because Lebed did not have his own web site, this route was not available.

So, the claim was simply a more conventional one of simple “fraud and manipulation,” and here the fragility of the SEC’s case becomes visible. For a fraud case, the SEC must establish that the defendant made a materially false or misleading statement, with scienter.<sup>97</sup> Materiality is generally defined by reference to an objective standard, requiring that the information misrepresented be of sufficient importance that a *reasonable* investor would likely attach significance to it.<sup>98</sup> And the obvious problem for the SEC, were it to litigate a case like Lebed’s, is showing that anything that the teenager said could possibly have been treated as both true and significant by any reasonable person. The fact that a pseudonymous person on a web site says, even repeatedly, that he thinks that a stock is poised to gain an immense amount does not by itself convey any seemingly reliable information. In other areas of antifraud litigation under the securities laws, the courts have dismissed claims involving far more substantive assertions of forward-looking opinion than this – even when made by corporate insiders – as immaterial as a matter of law.<sup>99</sup>

One response to this is that materiality should be measured by its actual impact, not some idealized theory of reasonableness, and in the SEC’s view, what Lebed said was *in fact* relied upon by enough

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<sup>97</sup> See *Ernst & Ernst v. Hochfelder*, 425 U.S. 185 (1976)(establishing scienter requirement).

<sup>98</sup> See *TSC Indus. Inc. v. Northway, Inc.*, 426 U.S. 436, 449 (1976)(defining materiality).

<sup>99</sup> Even high-level executives of issuers are given freedom to make inflated claims about their companies, so long as there are no specific factual misstatements. See pp. -- -- infra (discussing the so-called “puffery” defense). The SEC apparently believes that unfounded predictions of price movements either are exempt from this treatment, which is unlikely, or could be treated as half-truths because of the omission of defendants’ intent to sell shortly after the recommendation. See Walker & Levine, *supra*, at 413. As to the latter, the only authority for imposing anything remotely approaching such a duty can be drawn from the treatment of securities professionals, who owe a different level of obligation to the public. See *Park*, *supra*. Absent such a predicate, the half-truth doctrine in fact provides very little support for the SEC’s claim. See Donald C. Langevoort, *Half-Truths: Protecting Mistaken Inferences by Investors and Others*, 52 *Stan. L. Rev.* 87, 101 (1999).

investors to move the market price. We will turn later to whether this approach is sound as a matter of law, something that will take us directly into the world of behavioral finance. But the first question is whether the factual claim of causation is even plausible. It is doubtful that the Commission did any econometric work to demonstrate that Lebed's postings actually moved the price, especially in a case that was settled so quickly. Hence, one possibility here is that the SEC itself confused coincidence with causation – perhaps Lebed's purchases and postings were in reaction to some other information (e.g., some price move that he observed), and the subsequent price increase was due to the delayed impoundment of that information rather than anything he said. He might simply have identified the early stages of momentum-driven bubble. A recent aggregate-data study of internet postings was unable to identify significant cause-and-effect relationships between postings and price changes generally, suggesting that the SEC perhaps was responding more to the media attention to the phenomenon than careful empirical analysis.<sup>100</sup>

That said, however, I think that there might well be substance to the SEC's concern with Lebed's conduct. But we need a much more plausible story about how those postings could in fact have affected the market price. Here is where behavioral finance can help, if used carefully. I will avoid the reductionist argument that because the behavioral literature demonstrates that investors often do not act rationally, we can simply presume the kind of gullibility that would lead people to trust in Lebed's predictions as solid investment analysis. That doesn't follow. The cognitive biases that are the stuff of behavioral finance are mental shortcuts, not abject stupidity. To be sure, wishful thinking among investors is commonplace, but is actually fairly challenging to exploit.<sup>101</sup> Moreover, we must remember that the category of direct "victims" is mainly the on-line investor community. Studies of on-line investors have shown some lack of insight, but hardly

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<sup>100</sup> See Robert Tumarkin & Robert Whitelaw, *News or Noise? Internet Postings and Stock Prices*, Fin. Analysts J., May-June 2001, at 41. The authors look at aggregate data to disprove the claim that there is a high incidence of message posting in advance of increased trading volume.

<sup>101</sup> Stockbrokers, especially on the shady side, have to work carefully and hard to exploit customer biases such as wishful thinking or self-serving inference. See Langevoort, *Selling Hope*, supra.

extreme foolishness.<sup>102</sup> Indeed, it is fair to assume that those technologically adept enough to establish on-line investment accounts and navigate the financial sites on the internet have somewhat greater sophistication than other segments of the investor community. The SEC's theory of causation remains dubious if all we can do is point to bounded rationality.<sup>103</sup>

But the behavioral literature offers a more focused possibility for explaining the causation puzzle, if not for making the Commission's legal case easier. Imagine Lebed simply as a focal point – a salient voice on the financial internet. How the salience came to be is hard to know. Most likely, he was initially lucky in predicting some stock moves, and others noticed to correlations. The psychological literature suggests that people over-attribute “hot hands” to skill rather than luck (and hence might well begin to rely),<sup>104</sup> but I would do not want to push this too far. At least as likely is the possibility that that others simply perceived the saliency of what he had to say and predicted that *others* would follow the advice, i.e., that the market price would therefore move up. If they believed that they could get in early on this game and sell before the crowd, they might well choose to buy. And if enough people chose to play this game on similar reasoning, we would have a self-fulfilling prophecy: the buying activity of the game players, if no one else, would be enough to cause the thinly-traded stock price to jump. As to who wins the game, it would be those with good – or better yet, lucky – timing with respect to selling out.<sup>105</sup>

A strong rationalist (especially a conventional game theorist) would object that this is a fool's game. If everyone were thinking similarly, there would be no reason to expect to be a predictably consistent winner. The game unravels quickly. But here is where the behavioral literature makes its clearest contribution. There are two

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<sup>102</sup> See Barber & Odean, *supra*. Indeed, their study shows that aside from trading costs, the stock picking abilities of the on-line investor community is respectable.

<sup>103</sup> While I am skeptical that this particular event deceived anyone, I don't doubt that other forms of publicity can fraudulently move prices by taking advantage of investor biases. See pp. --- *infra*.

<sup>104</sup> See THOMAS GILOVICH, HOW WE KNOW WHAT ISN'T SO 75-87 (1991).

<sup>105</sup> Obviously, this bears a strong similarity to classic psychological accounts of market behavior, which emphasize that traders try to anticipate what other traders will do as their prime strategy. Keynes was a strong proponent of this. See Robert Piron, *Correspondence – Keynes as a Noise Trader*, 5 J. Econ. Persp., 215 (1991).

possibilities to consider. One is that there is a second group of traders wholly unaware of Lebed or his game who trade on the momentum generated by the initial response, jumping onto the bandwagon.<sup>106</sup> Lebed's immediate audience might not think that they can outcompete each other, but might expect to beat the second-stage momentum traders.

The more likely possibility is that the immediate audience does not see the fool's game quality in the first place. Recall that the one cognitive bias that seems to have the greatest resonance in behavioral finance is overconfidence. People, especially younger males, overrate their own skills, and readily confuse luck with ability. Work by Barber and Odean shows this to be an especially strong trait among on-line traders, and that the bias does not easily wash out via the school of hard knocks. They note that the internet, with its overabundance of information, strengthens the illusion of control.<sup>107</sup> And especially in a bull market, there is much in the way of good fortune to confuse with brains, leading to a surprising persistence of biased belief. One can readily see how more traders would think that they could win Lebed's game than the statistical odds would indicate. They keep on playing.

To me, this latter story is far more plausible than one based on fraudulently-induced reliance by the web site participants on Lebed as a credible source of fundamental investment advice. If so, however, the hole in the SEC's fraud case simply widens. We are now telling a causation story where there is no deception at all. The traders are all simply overconfident in their ability to win a contrived trading game. If some web site participants also convinced themselves that Lebed was a good stock picker by seeing an illusory correlation, it is still hard to see any affirmative misrepresentation or omission with which the teenager could be charged that falsely created such a belief.

At the same time, this account also justifies the SEC's concern with the phenomenon. If Lebed promoted the kind of game-playing I've

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<sup>106</sup> Of course, Lebed's own purchases may have had an upward influence on the price, itself operating as a signal to the momentum traders that was then simply reinforced by the postings. So far as the law of fraud is concerned, however, he had no duty to others to disclose either the purpose or effect of his trading. Such a duty, generally, arises only when there is a fiduciary-like relationship between the parties. See *United States v. Chiarella*, 445 U.S. 222 (1980).

<sup>107</sup> See Barber & Odean, *Internet*, supra, at 46. See also Barber & Odean, *Trading is Hazardous*, supra.



suggested, it might be roughly analogized to another teen-age game: drag racing. Lebed sponsored a contest that caused other actors to engage in a highly competitive trading race, with the predictable risk of a crash at the end. The participants knew what they were doing, if overconfident with respect to their safety. Putting aside concern for the physical safety of the youths involved in a real drag race (which is not likely replicated in the trading markets), the concern here is one of externalities. The reckless race preempts the streets, causing sensible people to travel elsewhere or not at all. So, too, a reckless trading race preempts the trading market for the stock in question, displacing any legitimate buying activity that might otherwise have taken place. That stock's trading market, and perhaps those of similarly situated stocks, are temporarily destabilized. If that is what Lebed was promoting, it was economically dysfunctional even if it wasn't fraudulent.

This is why I find myself sympathetic to the SEC's intervention, if it is factually sound (i.e., the Commission can indeed demonstrate causation in fact) and a persuasive legal theory can be unearthed to support it. The obvious place to dig for doctrinal possibilities is in the law of manipulation. Manipulation is a term of art that refers to a set of practices that seek "improperly" to move market prices up or down to serve the self-interest of the manipulator.<sup>108</sup> The term is often described by reference to its opposite: manipulation is conduct that deprives investors of prices set by the free interplay of supply and demand.<sup>109</sup> While these definitions are notoriously ambiguous, one can readily see their potential relevance to the internet trading scenario. Like the drag race, the irrational trading game allegedly set in motion by Lebed distorted the trading market of the stocks in question for a short period of time, depriving other investors of fair access.

Most manipulation is by trading, of course, often involving fictitious transactions. We should pause here to note the vigorous literature in both law and economics over whether, absent some evidence

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<sup>108</sup> See generally JAMES D. COX ET AL., *SECURITIES REGULATION: CASES AND MATERIALS* 691-700 (3d ed. 2001). For the SEC's view as applied to the internet, see Judith Starr & David Herman, *The Same Old Wine in a Brand New Bottle: Applying Traditional Market Manipulation Principles to Internet Stock Scams*, 29 Sec. Reg. L.J. 236 (2001).

<sup>109</sup> See, e.g., *Sullivan & Long Inc. v. Scattered Corp.*, 47 F.3d 857 (7<sup>th</sup> Cir. 1995)(Posner, J.); *United States v. Hall*, 48 F. Supp. 2d 386, 387 (S.D.N.Y. 1999).

of fraud, manipulative trading is even plausible in the first place. Ross and Fischel wrote a seminal article claiming that attempts at manipulation are inevitably self-defeating, partly because (in widely traded stocks, at least) it is so hard to move prices by trading, and partly because it is irrational to assume that one can successfully sell out without defeating the scheme once the price has moved.<sup>110</sup> Their argument, heavily dependent on market efficiency theory, has been criticized even on conventional economic grounds.<sup>111</sup> Behavioral finance, of course, gives ample reason to suspect that trade-based schemes can succeed by triggering positive momentum-trading activity by others. Noise traders often confuse past price moves with future profit opportunities – this is what “positive feedback” trading is all about.<sup>112</sup> With respect to thinly-traded stocks, especially, there is little reason to doubt their viability as a profitable strategy.

But Lebed’s activity did not involve fictitious trading. Nor, as we have seen, was there likely any conventional fraud. This seems to pose a problem, because the Supreme Court has said that deception is necessary in any manipulation case.<sup>113</sup> Here, the behavioral insights lead us to a question that I suspect securities regulation ought to confront head on. Should it be manipulative to deliberately say or do something designed to take advantages of heuristic thinking by investors, thereby at least temporarily destabilizing the market price, even if the investor response was in some sense “irrational?” In an IMH world, opportunities to exploit the judgment biases of investors abound, and we are likely to observe efforts in this direction with some frequency. Assuming that such a scheme and its harmful effect can be shown as a matter of fact, “manipulation” – in terms both of statutory intent and history<sup>114</sup> – is a sensible label to attach. Unlike fraud, manipulation is

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<sup>110</sup> Daniel Fischel & David Ross, *Should the Law Prohibit Manipulation in Financial Markets?*, 105 Harv. L. Rev. 503 (1991).

<sup>111</sup> See Steve Thel, *\$850,000 in Six Minutes: The Mechanics of Securities Manipulation*, 79 Cornell L. Rev. 219 (1994).

<sup>112</sup> See note --- supra.

<sup>113</sup> See *Schreiber v. Burlington Northern Inc.*, 472 U.S. 1 (1985).

<sup>114</sup> See Steve Thel, *The Original Conception of Section 10(b) of the Securities Exchange Act*, 42 Stan. L. Rev. 385 (1990); Steve Thel, *Regulation of Manipulation Under Section 10(b): Securities Prices and the Text of the Securities Exchange Act of 1934*, 1988 Colum. Bus. L. Rev. 359. Thel demonstrates that Congress intended in the

concerned less with the immediate victim than the integrity of the market.<sup>115</sup>

This rings of what is a justifiably controversial theory in the law of manipulation: that it is unlawful simply to trade for a bad purpose, i.e., simply to move the stock price for some selfish motive.<sup>116</sup> When stretching a doctrinal construct, we do need to ask whether imposing an elastic standard like this will do more harm than good. Subjective intent is hard to fathom – why someone traded, or said or did something, is difficult to prove, and will lead to a high frequency of prosecutorial and judicial error. This, in turn, raises the prospect of chilling legitimate behavior<sup>117</sup> (in our case, public speech, which brings constitutional concerns into play to a far greater extent than when the alleged manipulation is by trading alone).

To that end, those familiar with the psychology literature might even wonder whether Lebed had the requisite state of mind to be liable under this approach. He claims he did some rudimentary inquiry into the companies he hyped. I suspect that as his success grew, he might have deluded himself into thinking that he had skills as a stock-picker. While he was also aware of the games he was setting in motion and the likelihood of overreaction by others, he might honestly deny that his *only* purpose was to move the stock prices artificially in a direction that suited his interest. People are adept at rationalizing their actions and beliefs.<sup>118</sup> Perhaps the New Jersey teenager thought that these really were undervalued stocks, and that he was engaged in bona fide publicity of socially useful information using the only medium at his disposal. After

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securities laws to allow the Commission to treat as manipulative any speculative activity that distorts stock prices.

<sup>115</sup> Later, we will consider whether the concept of fraud should itself be revised to address the exploitation of investor biases, even if seemingly unreasonable. See pp. --- *infra*.

<sup>116</sup> See *Markowski v. SEC*, 274 F.3d 525 (D.C. Cir. 2001); *United States v. Regan*, 937 F.2d 828 (1991); *United States v. Mulherin*, 938 F.2d 364 (2d Cir. 1991)(recognizing and applying this theory *arguendo*, while questioning its viability). Indeed, we might refocus our attention away from Lebed's postings to his earlier purchases, which arguably had no rationale except to commence the game of exploitation.

<sup>117</sup> See *Fischel & Ross*, *supra*. Illustrative of this is that courts concede that it is not manipulation to trade even though it is foreseeable that one's acts will have an impact on price. That has to be the sole or dominating *purpose*.

<sup>118</sup> See Donald C. Langevoort, *Taking Myths Seriously: An Essay for Lawyers*, 74 *Chi.-Kent L. Rev.* 1569-1575-77 (2000).

all, it can hardly be unlawful for the owner of recently-acquired securities to publicize his research, even if the effect of the publicity (if credible) is to raise stock prices excessively.

There is another concern with going in this direction, one that Michael Lewis made much of in his article. If a sell-side investment analyst hypes a stock at a time when his investment bank employer has an interest in making the issuer a client, the likelihood of SEC enforcement is minimal. This is not because the law precludes such a theory. It would be fraud (or manipulation) for such a person knowingly to issue a falsely optimistic statement in a manner reasonably calculated to influence investors.<sup>119</sup> In contrast to other areas, the standard of materiality may be somewhat more generous here because of the analyst's status as an associated person of a brokerage or investment advisory firm. His opinions carry added reliability because of this status. What is difficult, however, is showing that he did not honestly believe in his opinion. (Psychological research would suggest that analysts, too, are more likely to believe that which they want to believe, or would benefit from believing<sup>120</sup>). Hence, in the view of Lewis and many others – and with some support from the research surveyed in Part I – biased opinions are common among securities professionals, as well in the journalistic community. For the SEC to pursue a teenager on a strained legal theory, while standing mute to the more powerful forms of bias in the Wall Street community, seemingly stands the historic mission of securities regulation on its head. A regime designed to protect the average investor from the professionals seemingly becomes one in which the average investor is put at risk for conduct practiced with impunity by

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<sup>119</sup> More specifically, the practice of front-running – buying in advance of a recommendation – is potentially sanctionable through a variety of legal and self-regulatory strategies. See, e.g., *SEC v. Blavin*, 557 F. Supp. 1304 (E.D. Mich. 1983), *aff'd*, 760 F.2d 706 (6<sup>th</sup> Cir. 1985); Lewis Lowenfels & Alan Bromberg, *Securities Market Manipulations: An Examination and Analysis of Domination and Control, Front-running and Parking*, 55 Alb. L. Rev. 293, 331-35 (1991). As a general matter, however, most front-running problems can be cured by adequate disclosure at the time of the recommendation. As noted earlier (see note – *supra*), it is possible to find a duty to disclose on the part of securities professionals, but not as easy when non-professionals are involved.

<sup>120</sup> See Robert Prentice, *The SEC and MDP: The Implications of Self-Serving Bias for Independent Auditing*, 61 Ohio St. L.J. 1597 (2000)(surveying literature as applied to the accounting profession).

economic elites.<sup>121</sup> *A fortiori* if people like Lebed honestly (if perhaps delusionally) believed they were providing investors with more objective advice than the professionals.

We shall explore this tension between professional privilege and marketplace democratization more deeply in the next Part. As to Lewis' point, I think it has more rhetorical flourish than substance – the SEC has been fairly even handed in its treatment of average investors and professionals in most areas (e.g., insider trading) where similar concerns arise.<sup>122</sup> Nonetheless, I concede for all the reasons just given that the pursuit of internet-based speech under an expansive manipulation theory leads to something of a quagmire for securities regulation. On the other hand, to stay out of the swamp invites more opportunistic destabilizing activity. There is no easy solution.

While I still favor intervention under a broad manipulation theory – to me, the “playing space” of the securities markets needs careful protection – final resolution of the right policy is beyond what I'm trying to do here. At least for the moment, it is enough to have shown how an understanding of behavioral finance (particularly the phenomenon of investor overconfidence) is useful to shed light on what would otherwise seem a hopeless puzzle – how Jonathan Lebed's words might really have moved the stock markets and why it is at least worth worrying about. Our thinking has advanced, if only to see more clearly the difficulty of the problem.

#### IV. THE ANALYSTS' PRIVILEGE

Our second puzzle is an older one in securities regulation. As the law of insider trading developed in its fits and starts over the last forty years, it quickly became clear enough that corporate insiders cannot

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<sup>121</sup> See Lewis, *supra*, at 32-33. Perhaps in reaction, the SEC did target analyst bias as part of its regulatory program shortly after the publication of the Lewis article. See Statement of Acting Chair Laura Unger, *Conflicts of Interest Faced by Brokerage Firms and their Research Analysts*, before the Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises, Committee on Financial Services, U.S. House of Representatives (July 31, 2001), available at [www.sec.gov](http://www.sec.gov).

<sup>122</sup> After making the securities industry the main target of insider trading enforcement in the 1980's, the focus shifted to insider trading “on Main Street.” See William McLucas & Angotti, *Insider Trading: Is it Back or Did It Ever Really Go Away?*, 9 *Insights* 2, 9 (1995).

trade for their own accounts in their own company's stock. Nor can they favor their friends or family by "tipping" them so that they can profit, or sell the information to those to whom it is valuable. These prohibitions are built on the fiduciary principle, more particularly the duty of loyalty. Insider trading and tipping are self-serving rather than motivated by a desire to benefit the issuer, the owner of the confidential information. When the Supreme Court drew this line in the famous *Dirks* case,<sup>123</sup> it said that when insiders pass information on to others *without* acting selfishly, there is no taint for insider trading purposes.

So articulated, this rule seems to confer an important privilege on one class of persons who regularly seek nonpublic information from corporate insiders – investment analysts.<sup>124</sup> Although motivations can be complicated, executives will generally give inside information to an analyst because the insider genuinely believes that the company's interests will be served by the selective disclosure. Companies want analyst coverage, and want analysts to help them tell their stories to investors. When, as is predictable, company executives have an optimistic view of the company's prospects,<sup>125</sup> they want analysts to share those views. Face-to-face meetings with one or a handful of analysts, at which private information was conveyed, have long been treated as a means of good investor relations. Under the insider trading test as articulated above, this was at least arguably (perhaps even probably) lawful. Indeed, the Court in *Dirks* articulated the fiduciary breach test in part precisely in order to avoid a chill on analyst activity, which in the spirit of the early '80s it praised as an essential contribution to marketplace efficiency.<sup>126</sup>

Efficiency-minded academics have naturally been delighted with the analysts' apparent privilege, but the SEC has not. For a long time, it expressed chagrin with the apparent unfairness of the result, and on one

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<sup>123</sup> *Dirks v. SEC*, 463 U.S. 646 (1983). In addition to regulating insider and tippee trading, the securities laws also address – under a separate analytical structure – the trading in a company's stock while in possession of information entrusted to the trader by some other source. See *United States v. O'Hagan*, 521 U.S. 642 (1997).

<sup>124</sup> For a celebration along these lines, see Daniel Fischel, *Insider Trading and Investment Analysts: An Economic Analysis of Dirks v. SEC*, 13 Hofstra L. Rev. 127 (1984). Prior to *Dirks*, the place of investment analysts in insider trading doctrine was far less secure. See *SEC v. Bausch & Lomb Inc.*, 565 F.2d 8, 9 (2d Cir. 1977).

<sup>125</sup> See Langevoort, *Organized Illusions*, supra.

<sup>126</sup> 463 U.S. at 658-59.

occasion, sought to circumvent it via an enforcement action.<sup>127</sup> In 2000, however, the Commission became considerably more assertive in this area by adopting new Regulation FD (for “Fair Disclosure”).<sup>128</sup> Reg FD does not regulate analysts directly. Rather it makes it illegal for senior executives of publicly traded issuers to privately disclose material nonpublic information to any of a carefully defined class of persons, most notably investment analysts. The rule has infuriated the securities industry in particular, igniting a controversy that still continues in efforts at repeal or significant modification. It has also displeased many in the issuer and legal communities.

This opposition to Reg FD has a distinctly self-serving potential to it, of course: the securities industry lost a lucrative privilege and wants it back, and insiders are naturally concerned about a new source of potential liability. But the issue of the analysts’ privilege poses a legitimately hard policy question. Putting aside the awkward doctrinal structure that gave rise to the privilege in the first place, the standard argument in its favor is that private contacts contribute to marketplace efficiency, which in turn redounds to the benefit of all investors as well as the public interest in efficient allocation of economic resources.<sup>129</sup> This contribution comes in two ways. First, corporate executives may be more willing to release information if they can do it privately, rather than publicly. They can be more nuanced and forthcoming because they are dealing with sophisticated listeners, and can speak without attribution.<sup>130</sup> If so, more useful information makes its way into the market. Second, analysts will have a greater incentive to do research if they can ask sensitive questions privately and profit from their discoveries than if any material information they elicit has to be visible to and thus shared with

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<sup>127</sup> For a supportive review of the SEC’s position, see Donald C. Langevoort, *Investment Analysts and the Law of Insider Trading*, 76 Va. L. Rev. 1023 (1990). The enforcement action was *SEC v. Stevens*, noted in 23 Sec. Reg. & L. Rep. (BNA) 439 (S.D.N.Y. 1991), where the Commission alleged that the insider’s tip was motivated by his own reputational interests.

<sup>128</sup> Securities Act Rel. No.7881, Aug. 15, 2000.

<sup>129</sup> See Merritt Fox, *Regulation FD and Foreign Issuers: Globalization’s Strains and Opportunities*, 41 Va. J. Int’l L. 653 (2001).

<sup>130</sup> They may be willing to talk to analysts about more confidential matters, or ones where they wish not to be identified as the source.

other analysts and the public.<sup>131</sup> For smaller issuers, an offer of access may be needed to attract analysts in the first place.

The main empirical attack on Reg FD therefore has been cast in terms of likely adverse efficiency consequences from the adoption of the rule.<sup>132</sup> Predictably, one claim is that less information will now be made available by issuers. The second is that either research quality or analyst following will diminish, especially for smaller companies. And a third was not anticipated above: that market *volatility* will increase. This last prediction is of particular interest to us because it has an explicit behavioral tint to it. The idea here is that if all sensitive disclosure is forced into public channels, then noise traders will compete with the professionals in defining the all-important initial reaction to the news. The overconfidence and lack of sophistication that so many retail investors bring to this task will result in mindless and erratic price movements only partially countered by the smart money. In other words, the teachings of behavioral finance arguably counsel against Reg FD. To this end, a Securities Industry Association document prepared after the adoption of the rule claims that “[t]he barrage of unorganized data is simply too much for investors, most of whom have neither the time nor the inclination to sort through the data and perform quality analysis of their own. Investor behavior was beginning to indicate information overload even prior to Reg. FD, as evidenced by behavioral finance studies that illustrate an inability to process ever growing informational inputs.”<sup>133</sup>

#### A. Fairness

The SIA’s point is an interesting one, which I want to consider more fully below. Before that, however, we need to put the FD debate in context. The SEC’s primary argument is that the rule is built on fairness,

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<sup>131</sup> In large part, concern over materiality drives the debate. There is no bar, in Reg FD or the law of insider trading, against giving immaterial information to analysts, even if it helps them piece together the mosaic from which profitable insights are gleaned. But because materiality is a fuzzy definition, a legal prohibition may chill all contacts.

<sup>132</sup> See *Industry Participants Want SEC to Issue Guidance on Regulation FD*, 33 Sec. Reg. & L. Rep. (BNA) 637 (April 30, 2001).

<sup>133</sup> SECURITIES INDUSTRY ASS’N, COSTS AND BENEFITS OF REGULATION FAIR DISCLOSURE 17 (May 2001), available at [www.sia.com](http://www.sia.com).



not efficiency. This argument, despised by most economics-oriented academics,<sup>134</sup> is that giving the issuer's managers the ability to play favorites among recipients of information gives an unfair advantage to those connected with large institutions compared to the average retail investor. The behavioral risk is that the perception of unfairness by individuals or others who expect to be disadvantaged might lead to their withdrawal from the equity markets, with a resulting loss of depth and liquidity.

This claim has received so much attention in the academic literature (mostly unkind) that it is both impossible and unnecessary to revisit it thoroughly here. My more narrow interest is in whether anything in the research in behavioral finance or economics helps much on this particular point. There is a strong temptation to invoke a body of literature that shows, fairly robustly, that people will often eschew their own immediate self-interest in order to spite someone else who is treating them unfairly.<sup>135</sup> The laboratory tests that demonstrate this typically take the form of bargaining games where one party is given the right to split a sum of money, keeping some and offering the rest to the other party. The only condition is that the other party must accept what is offered. If she doesn't, neither party gets anything. The results seem fairly clear: unless a reasonable amount is offered to the other party, she will frequently reject the offer and take nothing, thereby being worse off.

Yet I doubt that this gets us very far on the selective disclosure issue. First of all, note that the fairness research does not say that equal sharing is necessary to get players to agree. Rather, there is simply some tipping point where what is offered is sufficiently unfair that the person will abstain. There is probably some point at which investors' sense of fairness could become so offended by a legal or economic practice that it leads to withdrawal. But it is unlikely that selective disclosure resonates anywhere near this strongly. Indeed, the long-standing increase in retail investor participation in the U.S. markets at a time when selective

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<sup>134</sup> See, e.g., HENRY MANNE, *INSIDER TRADING AND THE STOCK MARKETS* (1966); Dennis Carlton & Daniel Fischel, *The Regulation of Insider Trading*, 35 *Stan. L. Rev.* 857 (1983). Compare Kim Lane Schepple, *It's Just Not Right: The Ethics of Insider Trading*, 56 *Law & Cont. Probs.*, no. 3, at 123 (1993).

<sup>135</sup> See Matthew Rabin, *Incorporating Fairness into Game Theory and Economics*, 83 *Am. Econ. Rev.* 1284 (1993); George Loewenstein, *Emotions in Economic Theory and Economic Behavior*, 90 *Am. Econ. Rev.* 426 (2000).

disclosure was a notorious practice indicates otherwise. The second point to make is that other behavioral traits – like over-optimism or the illusion of control – tend to counterbalance perceptions of unfair disadvantage. Retail investors who think themselves smarter than average will play in the markets even against structurally-induced odds.

In sum, I think that all that behavioral economics offers in support of the “fairness” argument is that *some* set of legal or social institutions – law or norms – must guarantee a threshold level of confidence in the fairness of the system. That threshold need not be a high one, however, and it is not clear that any particular prohibition (even insider trading generally<sup>136</sup>) must necessarily be part of it. With respect to selective disclosure to analysts, the normative argument should probably move to more substantive grounds.

## B. The Criticism

The more substantive grounds begin with the empirical questions noted earlier. Will a ban on selective disclosure cause more or less information to be imparted by issuers, or have no perceptible effect? On this, the behavioral literature offers little help one way or the other. We can, of course, use it to predict that highly salient forms of legal risk will produce excessive issuer caution, especially when there is a high level of ambiguity regarding the meaning of the prohibition in question. And the adoption of Reg FD produced a barrage of publicity, mostly from lawyers, that might prompt such an effect. But this is likely just a temporary phenomenon anyway. In fact, Reg FD was carefully designed to minimize the threat of sanction,<sup>137</sup> and the SEC is unlikely for political reasons to pursue cases where issuer officials have acted in good faith.<sup>138</sup> If the marketplace pressure is strong enough, executives will adjust the rule and disclose what analysts want short of clear-cut violation of the

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<sup>136</sup> See Bernard Black, *The Legal and Institutional Preconditions for Strong Securities Markets*, 48 UCLA L. Rev. 781, 803 (2001)(insider trading regulation is important, but not necessarily crucial).

<sup>137</sup> The SEC carefully drafted the rule to avoid creating any liability in a private right of action – one of the few places in the securities laws with such an exclusion.

<sup>138</sup> See *Pitt Concurs in Staff Views on Good Faith Reg FD Compliance*, 33 Sec. Reg. & L. Rep. (BNA) 1206 (Aug. 20, 2001) .

law.<sup>139</sup> If the SEC does not take an unusually aggressive enforcement posture, in other words, the fear-induced chill is likely to be minimal.

The bigger empirical question is the effect on market efficiency. If sell-side analysts on balance produce more accurate stock prices, their claim to a privilege is bolstered considerably. But if there are serious doubts about that, then Reg FD is more appealing. And here is where the explosion of finance literature critical of analysts in the 1990's becomes important. Although a distinctive part of the IMH literature, most of this criticism deals with conflicts of interest as opposed to cognitive bias. I suspect, with a good deal of support from psychology, that these conflicts do play out unconsciously in many cases – the pecuniary incentive leads the analyst to see things differently that she would otherwise so that the bias is not bad faith.<sup>140</sup> But so far as effects are concerned, awareness is not the important issue.

Again, the conflicts come in a variety of forms. First, analysts may bias their analysis and recommendations in order to please managers of the issuer. This may accomplish two things. Pleasing recommendations may generate more business for the corporate finance department of their employer, with the analyst being compensated for business brought into the firm.<sup>141</sup> Also, pleasing recommendations will create better and deeper access to private information, as insiders can be expected to favor those analysts over ones who adopt a more negative posture.<sup>142</sup> A second kind of conflict arises when analysts personally own stock in the companies they recommend. They may be overly bullish, especially at times when they are considering selling the stock.<sup>143</sup> There is both empirical and theoretical support for all these concerns, some of which were cited in passing by the SEC in its rule making. So far as recommendations are concerned, for instance, the presence of an

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<sup>139</sup> For a study (admittedly, partially funded by the SEC) surveying preliminary evidence and finding no harmful effects from Reg FD, see Frank Heflin et al., *Regulation FD and the Financial Information Environment* (SSRN).

<sup>140</sup> See note --- supra.

<sup>141</sup> See sources cited in note --- supra.

<sup>142</sup> See Lim, supra. I have expressed this concern with specific application to the selective disclosure debate. See Langevoort, supra.

<sup>143</sup> See Jeff Opdyke, *Many Analysts Found to Invest in Companies They Covered*, Wall St. J., Aug. 1, 2001, at C1.

investment banking relationship plainly leads to a higher incidence of buy recommendations on average than if there is no such relationship.<sup>144</sup>

While recommendations are important, the more closely-watched task that analysts perform is making short-term quarterly earnings estimates. These estimates are better than simple extrapolations from historic performance data, and hence add some value to what is known in the markets.<sup>145</sup> But both conflicts of interest and forecasting imperfections have been identified in the finance literature. The conflicts are the same as noted earlier, but play out somewhat differently. Managers generally want to beat analyst expectations, or at least meet them. They (and their company's stock) are punished for falling short, if only but a small bit. Hence – in contrast to the optimistic bias always wanted in recommendations – managers do not want too much optimism in the short-term forecast, because that sets the bar too high. Hence, the bias so far as business-getting incentives are concerned is generally toward over-conservatism.<sup>146</sup> There is also some literature on earnings forecasting that indicates that some cognitive biases may infect the process. For instance, overconfidence grows with past success: analysts on a hot streak tend to become more aggressive in their subsequent forecasts in comparison to their peers, with a higher than average likelihood of inaccuracy.<sup>147</sup>

Accuracy aside, there is also concern about the analysts' undue emphasis on short-term earnings forecasts. While these forecasts offer significant information, they are far from the fundamental investment

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<sup>144</sup> See, e.g., Lin & McNichols, *supra*.

<sup>145</sup> See Brown & Rozeff, *The Superiority of Analyst Forecasts as Measures of Expectations: Evidence from Earnings*, 33 J. Fin. 1 (1978).

<sup>146</sup> This is part of the phenomenon of earnings management. Managers and analysts would negotiate forecasts that permitted managers to meet or beat expectations, while not overly compromising the analysts' reputations. Managers would exercise discretion in financial reporting to assure that the numbers come out right. See Hill *supra*; Hong et al., *supra*; Harris Collingwood, *The Earnings Game: Everyone Plays, Nobody Wins*, Harv. Bus. Rev. June 2001, at 65. . In many ways, Reg FD was designed to prevent this from happening, and some preliminary reports suggest success along these lines. See Peter Edmonstron, *Shhh! Focus on Whisper Numbers Fades as Pundits Sidestep the Informal Targets*, Wall St. J., July 26, 2001, at C1.

<sup>147</sup> See note --- *supra*. See also John Jacob et al., *Expertise in Forecasting Performance of Security Analysts*, 28 J. Acct'g & Econ. 51 (1999); Michael Mikhail et al., *The Development of Expertise: Do Security Analysts Improve their Performance with Experience?*, J. Acct'g Res. 131 (1997).

analysis that the sell-side is supposed to be doing. Here, Cornell's study of the Intel stock drop is instructive.<sup>148</sup> His expression of concern was largely that analysts were largely following short-term performance data in their stock recommendations, to the exclusion of long-term fundamental analysis. This, coupled with undue attention to earnings forecasts, created an environment in which the analyst community may have contributed to mispricing rather than helped to correct it, until the company itself introduced a note of caution.<sup>149</sup>

The critical literature on sell-side analyst behavior, then, runs fairly deep. Of course, as with efficiency studies generally, this criticism is not dispositive, and sell-side analysts are still deemed a positive rather than negative force in marketplace efficiency by many economists and finance scholars. A widely publicized study by some well-known behavioral economists demonstrates that at least up until the technology bubble burst of 2000, analyst recommendations reasonable predictors of positive performance: net of trading costs, at least, a trading strategy of following consensus recommendations immediately would beat market indices by a statistically significant amount.<sup>150</sup> This suggests that on average analyst recommendations have investment value, a story seemingly inconsistent with the criticisms recounted above. (Interestingly, this result was put forth as evidence of stock market *inefficiency*, because the EMH predicts that public recommendations will necessarily occur after the market adjusts to incorporate any new information that might lead to alterations in those recommendations). And indeed, this research should be a caution to anyone wanting to indict the analyst community for wholesale bias. The unanswered question here is whether the analyst recommendations themselves – rather than any information discovered by the analysts – may be what moves the prices and generates the positive abnormal returns. If the mere presence of a highly publicized buy recommendation causes retail investors

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<sup>148</sup> See text accompanying note --- supra.

<sup>149</sup> In addition to forecasts and recommendations, a third role that analysts play is as interpreters of complex information. They simplify and evaluate, using skills that most investors lack. Here again, the literature is not entirely supportive. For a detailed case study of the difficulties analysts had in interpreting the United Airlines employee buy-out, see Stuart Gilson, *Analysts and Information Gaps: Lessons from the UAL Buyout*, Fin. Analysts J., Nov.-Dec. 2000, at 82.

<sup>150</sup> Brad Barber et al., supra. Once trading costs were taken into account, the gains largely disappeared.

demand more of the security, and arbitrage and other countervailing forces do not counter the demand, the recommendation becomes a self-fulfilling prophecy.<sup>151</sup> It could be the equivalent to the *Times*' front page story about EntreMed, where the saliency of what retail investors naively treat as positive news is the force that drives the price of the stock to a higher level. Consistent with this – albeit other explanations as well – the research also showed that any delay in responding to changes in the consensus recommendations (e.g., trading a day or two later) washed away most of the profitability of this strategy.

### C. The Policy Debate

#### 1. *Bias*

With this background from the IMH literature, we can return to the policy question. The strongest claim against Reg FD is that it removes a useful predicate to the efficiency of the stock market, leaving it less well calibrated and more volatile. The literature critical of sell-side analysts does not prove that their net effect is bad, but it does muddy the waters considerably about both the direction and magnitude of their contribution. If permitting selective disclosure invites managers to skew disclosure to a greater extent than if it is banned, then there could be a palpable benefit to the rule.

Criticism of Reg FD has come from many quarters. In the academic literature, a number of major articles have recently taken it to task. Goshen and Parchomovsky have developed an elegant theory of “negative property rights” that they would allocate to professional investors and their analysts in order to promote marketplace liquidity and efficiency.<sup>152</sup> Though in the abstract they would prefer a norm of nondiscrimination among analysts, they treat selective disclosure as a necessary practice for their system of rights to work. Differently, Steve Choi argues that discretion over selective disclosure ought to be given to

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<sup>151</sup> See Dennis Logue, *Discussion: Discrete Expectational Data and Portfolio Performance*, 41 J. Fin. 713 (1986); Narasimhan Jegadeesh et al., *Analyzing the Analysts: When Do Recommendations Add Value?* (SSRN).

<sup>152</sup> See Zohar Goshen & Gideon Parchomovsky, *On Insider Trading, Markets and “Negative” Property Rights in Information*, 87 Va. L. Rev. 1229 (2001).

the issuer because it can most efficiently internalize the mix of costs and benefits that disclosure produces.<sup>153</sup>

Surprisingly, both articles largely ignore the extensive finance literature on analyst conflicts, and significantly downplay the risks that their proposed allocation of entitlements might lead to either skewed disclosure or biased advice.<sup>154</sup> They do acknowledge the *abstract* risk that issuer executives might act selfishly in the way information is allocated among analysts, or that the allocation might become a reward for analyst favoritism. Goshen and Parchomovsky explicitly dismiss this by saying that “the SEC is not relying on any empirical studies, but rather on several ambiguous anecdotal instances” of favoritism. This seems a bit strong. True, the analyst bias literature does not establish the presence of abusive selective disclosure as such (analysts have numerous reasons to curry favor with managers). But both theory and observation do establish (1) a motive on the part of managers to cause analysts to skew both their forecasts and advice, and for analysts to respond in kind, (2) the opportunity to use selective disclosure as a form of currency, and (3) the existence of some degree of analyst bias in fact. While Reg FD may not neutralize these biasing incentives completely, we can’t say either that the risk is simply anecdotal or that the ban on selective disclosure will have no influence on biases in forecasts and recommendations.<sup>155</sup> Goshen and Parchomovsky also suggest that state

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<sup>153</sup> See Stephen Choi, *Selective Disclosure in the Public Capital Markets*, -- U.C. Davis L. Rev. -- (2001). The point made by Choi is elaborated on with respect to a theory of insider trading generally in a paper with Ian Ayres, also explicitly critical of Reg FD. See Ian Ayres & Stephen Choi, *Internalizing Outsider Trading* (SSRN).

<sup>154</sup> To be fair, neither is focusing particularly on the sell-side – both seem to work from assumption that the main virtue from investment analysis comes from the actions of the buy-side. Choi’s thesis, for example, is designed at least in part to encourage the formation of close monitoring relationships between the firm and a single block shareholder, or a small group of investors. See Ian Ayres & Peter Cramton, *Relational Investing and Agency Theory*, 15 Cardozo L. Rev. 1033, 1062-63 (1994). However, neither makes any distinction among kinds of analysts, and any such effort would be unworkable. Many sell-side analysts also provide private research to clients, for example. In the political debate, at least, there is little appetite for a special privilege for the buy-side, because that so closely resembles classic insider trading – especially when the buy-side analyst represents a dominant shareholder who could influence the control of the firm.

<sup>155</sup> Choi gives more attention to the problem of abusive selective disclosure, but proposes only alternative ways of dealing with them. For example, he suggests that

law fiduciary duties can be invoked to prevent any cases of abuse, but this confidence seems excessive. Putting aside the practical enforcement questions,<sup>156</sup> the business judgment rule alone makes it difficult as a matter of state corporate law to delve into subtle questions like these. To restate a brief behavioral point, in the eyes of an optimistic executive there is very little difference between rewarding the analysts who have been the most upbeat and a good faith desire to “get the true story” out to the investing public. I doubt that the courts have much stomach for policing here, especially once the issue is effectively privatized. And if so, the risk that their property rights structures might lead to a greater degree of disclosure bias remains far from trivial. In sum, criticism of Reg FD is premature unless it addresses this risk. And while Enron is only an anecdote at this point, it at least underscores the importance of this line of inquiry.<sup>157</sup>

## 2. Noise

Without knowing more about analysts’ biases than the research currently permits, however, it is hard to say much more than the foregoing. At the very least, there is a rational basis for justifying Reg FD by reference to the skewing potential of selective disclosure. Now, I want to shift to a different criticism of Reg FD that recently has been offered by the securities industry. In contrast to the academics, the industry repeatedly (if not persuasively) claims that it is *against* selective

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analysts could be given a right not to be cut off from information once granted. While theoretically appealing, perhaps, this is not something that could be accomplished within the framework of the securities laws as currently formulated.

<sup>156</sup> State law lacks a public surveillance or enforcement capacity, leaving the matter simply to the private shareholder-plaintiff. See Stephen Bainbridge, *Insider Trading Regulation: The Path Dependent Choice Between Property Rights and Securities Fraud*, SMU L. Rev. 1589, 1622-24 (2000).

<sup>157</sup> In the aftermath of both Enron and previously articulated concerns, the regulation of analysts has been strengthened by insisting, for example, on disclosure of existing relationships between the analyst’s firm and the issuer, and by limiting direct compensation based on issuer business brought in. See *Regulators, Lawmakers Unveil Proposals to Minimize Analyst Conflicts*, 34 Sec. Reg. & L. Rep. (BNA) 225 (Feb. 11, 2002). While these are helpful steps, they don’t by any means solve the conflict problem: indeed, in many ways the conflicts are inherent in the nature of investment banking.



disclosure.<sup>158</sup> What it says it is for is a fair, orderly, and efficient market. Reg FD allegedly interferes with efficiency in the ways noted earlier – a reduction in the quantity and quality of issuer-generated information, excessive reluctance by managers submit to one-one-one interviews with analysts, etc. Again, these present empirical questions outside the scope of our inquiry here. What is more intriguing is their argument that analysts play a necessary role as “buffers” against the noise-trading propensities of the retail investor, the point on which they cite the behavioral finance research.

In essence, their claim is this. When issuers comply with Reg FD, they present new data directly to the full range of interested persons. Overconfident retail investors (at least those with the time and inclination to follow conference calls and webcasts as they happen) will react in unsophisticated ways to the unvarnished information, for a time adding excess volatility to the stock price. Allowing analysts access and the opportunity to massage the information in advance of its public release means that the price will adjust more steadily in the right direction. The market can be conditioned, and hence less subject to shock, panic or undue exuberance.

Putting aside the yet unanswerable empirical question (such as whether there indeed is more volatility after public announcements under Reg FD<sup>159</sup>), there is an obvious retort here. If there is reason to doubt the objectivity of sell-side analysis, then the pre-release “massaging” of information is of questionable value. There might be a good bit of analyst-tolerated “spin” mixed in with the fundamental analysis. Or if Cornell’s fears are right, there may be too little fundamental analysis in the first place. Whether the retail investor really is able to sort through the various analyst views well enough to gain better perspective is not all that clear.

Indeed, at heart the claim here seems to be that smooth price movements are better than sharp ones in response to new information. On close inspection, this idea itself is shaky. To the extent that what is

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<sup>158</sup> See, e.g., SECURITIES INDUSTRY ASS’N, *supra*, at 3.

<sup>159</sup> A pre-Reg FD study comparing those companies that voluntarily opened access to analyst conference calls to those that do not found that during the open conference calls, volatility did increase. See Frankel et al., *An Empirical Examination of Conference Calls as a Voluntary Disclosure Medium*, 37 J. Acct’g Res. 133 (Spring 1999).

happening is smart money picking off the less savvy in advance of the public disclosure, the smoothness comes at a price that is not particularly appealing. Recall that critics of the ban on insider trading have long claimed that markets would be less volatile were *insiders* to be able to trade,<sup>160</sup> but their position is one now largely rejected. Similarly, we are quite tolerant of sharp breaks in some noteworthy instances – such as the merger deal that is successfully kept confidential until the announcement. Dramatic market swings in response to “new news” are a known risk of investing.

Having said this, however, we should pause to reflect on where this line of thinking is taking us, for there is a profound ideological issue lurking here. The more behavioralists are right that market prices are adversely affected by the emotions or cognitive biases of noise traders, the more noise traders can be seen as “bad guys.”<sup>161</sup> Good public policy would then be to eradicate their biases if possible, but if not – as Lynn Stout has suggested – to at least neutralize their social and economic influence.<sup>162</sup> That is why there is some bite (putting aside the specific concern about analyst biases) to the SIA’s argument. And this is the deep concern about where the behavioral literature leads us: if accurate, it invites regulation that is privileges the smart and treats unsophisticated traders as economic undesirables.<sup>163</sup>

Politically, that is impossible to advocate openly. Both Congress and the SEC have a strong interest in the support of the retail investor community and the presence of strong public markets. Indeed, in some ways, a fair amount of what the Commission does – especially the

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<sup>160</sup> See, e.g., MANNE, *supra*.

<sup>161</sup> Hong and Stein, *supra*, describe this as a “negative externality” imposed by noise traders. This assumes that professional investors demonstrate a higher degree of rationality, a point with which most behavioral finance scholars – even those that point out the suboptimal behaviors that institutions sometimes exhibit – would agree.

<sup>162</sup> Stout questions market efficiency in light of a host of factors, leading her to doubt the desirability of encouraging – much less romanticizing – the growth of the public marketplace for securities. E.g., Lynn Stout, *Are Stock Markets Costly Casinos?: Disagreement, Market Failure and Securities Regulation*, 81 Va. L. Rev. 611 (1995).

<sup>163</sup> Steve Choi, in a separate article, has sensed this and thus proposes to put some kinds of trading off limits to unsophisticated investors. See Stephen Choi, *Regulating Investors, Not Issuers: A Market-Based Proposal*, 88 Cal. L. Rev. 279 (2000). While I have doubts about the practicability (political and otherwise) of this proposal, it does have the virtue of intellectual coherence if we take the noise trader threat seriously.

Division of Corporation Finance’s review and comment on registration statements – is in the name of making disclosure “accessible” to the average investor. That has led to the creation of an awkward myth-story that probably few have deep faith.<sup>164</sup> In this story, the typical retail investor is very much an earnest and rational person, but with bounded capacity. He wants a substantial amount of government-mandated disclosure, and evaluates it fairly carefully in making his investment decision so long as it is packaged properly (e.g., in “plain English,” etc.). To be sure, some investors actually do this. But the Commission has never studied investor behavior deeply enough to say – publicly at least – what percentage of investors read or understand these documents, or what influence the fundamental analysis-oriented disclosure has on their investment decisions. I suspect that it does not really want to know,<sup>165</sup> for fear that the myth-story might have to give way to a vision of retail investors somewhat more in keeping with the predictions of the behavioralists.

Nor could it stomach the anti-democratic implication of these predictions. The Commission’s main “brand message” is about its role in empowering retail investors as a class. This brings us back specifically to Reg FD. I have come gradually to believe that insider trading regulation in the United States is only loosely related to any direct investor protection strategy.<sup>166</sup> As said earlier, the fairness ideology only requires a set of norms and institutions (including but not limited to law) that credibly promises a threshold level of fairness. Quite likely, even wholesale federal deregulation of the insider trading laws – making it a subject for issuer choice or state or stock exchange regulation – could occur without undermining this foundation, because the other

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<sup>164</sup> See Donald C. Langevoort, *Rereading Cady Roberts: The Ideology and Practice of Insider Trading Regulation*, 99 Colum. L. Rev. 1319 (1999).

<sup>165</sup> See HOMER KRIPKE, *THE SEC AND CORPORATE DISCLOSURE: REGULATION IN SEARCH OF A PURPOSE* 4, 18-20 (1979).

<sup>166</sup> See Langevoort, *Ideology*, *supra*. This is not to say that insider trading regulation is not economically justifiable, but rather that the nature and substance of the regulation goes beyond what is immediately necessary. I would agree with the many scholars, including Ayres and Choi, who believe that insider trading controls of some sort are an efficient response to the adverse selection problem and the potential for wider bid-ask spreads from market makers and specialists. And perhaps that applies to selective disclosure as well. As I have said before, however, it is hard to find any attention to these in the SEC’s formulation of its policy.

institutions are strong enough. At the very least, selective disclosure regulation is unnecessary from this standpoint. However, for a large number of reasons, insider trading regulation has become the most visible advertisement for American-style securities regulation, effectively attracting public support because of its sharp, resonant egalitarian appeal.<sup>167</sup> The SEC has invested a fair portion of its resources in building this brand message, and would no more let its trademark be compromised than would Coca-Cola or Anheuser-Busch. The main problem with selective disclosure is that, emotionally or intuitively, it is so visibly inconsistent with the rhetoric of retail investor empowerment. The growing publicity surrounding it introduced a level of static that interfered too much with the Commission's campaign. We would run too far afield were we to explore whether this kind of influence activity by the SEC is socially good or bad. (I part company with critics of insider trading because I think it is good<sup>168</sup>). The point here is simply that research showing that non-rational trading behavior is more than the province of a marginal segment of the retail investor community is potentially destabilizing.<sup>169</sup>

We, however, should not simply dwell on the political. An interesting question is whether there are unexpected behavioral costs to the SEC's myth-story, apart from what from purely an efficiency standpoint might turn out to be excessive regulation. The risk here is that the message of empowerment may contribute not simply to investor confidence, but to overconfidence. Henry Hu has argued, correctly, that the message the SEC has sent to investors implicitly overstates both the safety and promise of equity securities vis-à-vis other forms of savings

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<sup>167</sup> Id. at 1328-30.

<sup>168</sup> Without delving deeply into this question, I suspect that insider trading regulation helps the SEC gain the resources necessary to fight less salient, but more pernicious, forms of securities fraud and wrongdoing.

<sup>169</sup> The securities industry is unlikely to push too hard with a privileging claim either, even though it might like the FD policy consequences of its acceptance. In terms of revenue generation, overconfident investors are the broker's best friends: they are inclined to trade often, and are susceptible to well-crafted influence techniques. So, too, with the financial media. Investor empowerment is a key theme in the growth of specialty magazines, web sites and cable financial news channels, as well as for a lucrative set of products delivered by the mainstream media. They happily promote the Commission's message.

and investment.<sup>170</sup> This leads to overconfidence insofar as capital allocation is concerned. Similarly, it seems plausible that steps like Reg FD can contribute to a false sense of competitiveness on the part of retail investors that can lead to excessive trading and investment of time and resources in what is likely an unprofitable effort.

Once more, we can't take the behavioral research farther than it currently goes. We do not have settled empirical data that tells us about the "relative rationality" of retail investors compared to institutions, or to evaluate how serious the risk of inefficiency caused by noise trader activity really is. But it does seem likely that as we come to know more about investor behavior and its impact on stock prices, judgments about what constitutes optimal securities regulation are subject to considerable change. The Reg FD debate may not be the best example because of the agency cost problems relating to the analysts' filtration role. More fundamental, if fairly hidden from the general public, is a set of issues about the relative merits of public versus private markets as tools of capital formation. Much of how the SEC has set the rules relating to both corporate finance and market regulation has been influenced by the desire to keep the public securities markets the dominant place for trading. There has been growing pressure, however, to allow for "institution"-only (or "accredited investor"-only) markets that would be subject to far less regulation, thereby efficiently lowering the cost of capital. We see this in the structure of the Rule 144A exemption, and how the private placement rules are drafted.<sup>171</sup> The Commission has refused to make it too easy for limited access markets to flourish, fearing that these could gradually preempt the public markets. However, if encouraging limited access markets increases the likelihood of stock price efficiency by excluding noise traders, then it is not necessarily good policy to discourage them. Perhaps surprisingly, behavioral finance deserves at least some voice in this discussion.

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<sup>170</sup> See Henry T.C. Hu, *Faith and Magic: Investor Beliefs and Government Neutrality*, 78 Tex. L. Rev. 777 (2000).

<sup>171</sup> For a useful study of the "deregulated" offering environment for large-scale capital raising, see Howell Jackson & Eric Pan, *Regulatory Competition in International Securities Markets: Evidence from Europe in 1999*, 56 Bus. Law. 653 (2001).

## V. OPEN-MARKET FRAUD

### A. Fraud-on-the-Market Lawsuits

In securities regulation, the most visible use to which the EMH has been put is in fraud-on-the-market lawsuits, where a class of plaintiffs who bought or sold securities claims that the issuer and its associates lied to the investing public and thus distorted the stock price. Each class member seeks recovery for out-of-pocket damages. These lawsuits have become controversial because of fears about plaintiffs' attorney abuses, generating reactive legislation in the form of the Private Securities Litigation Reform Act of 1995.<sup>172</sup>

Famously, the Supreme Court invoked the EMH in its decision in *Basic Inc. v. Levinson*,<sup>173</sup> creating a presumption of reliance for most all investors simply upon a showing that the securities were traded in an "efficient" market, and there was a material misrepresentation or actionable omission. For a conservative Court, this was an oddly progressive use of economic theory in securities law – expanding the scope of issuer liability considerably – but one widely applauded even by many economics-oriented scholars.<sup>174</sup> As I have shown elsewhere, however, the EMH is unnecessary to justify the Court's approach, and potentially confusing.<sup>175</sup> The roots of the fraud-on-the-market

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<sup>172</sup> Compare Joseph Grundfest, *Disimplying Private Rights of Action Under the Federal Securities Laws: The Commission's Authority*, 107 Harv. L. Rev. 961 (1994) with Joel Seligman, *The Merits Do Matter*, 107 Harv. L. Rev. 438 (1994). On the legislation, see, e.g., James D. Cox, *Making Securities Fraud Class Actions Virtuous*, 39 Ariz. L. Rev. 497 (1997); Charles Yablon, *A Dangerous Supplement? Longshot Claims and Private Securities Litigation*, Nw. U. L. Rev. (2000).

<sup>173</sup> 485 U.S. 224 (1988).

<sup>174</sup> See, e.g., Daniel Fischel, *Efficient Capital Markets, the Crash and the Fraud on the Market Theory*, 74 Cornell L. Rev. 907 (1989). For some critics from the conventional law and economics side, see Paul Mahoney, *Precaution Costs and the Law of Fraud in Impersonal Markets*, 78 Va. L. Rev. 623 (1992); Jonathan Macey & Geoffrey Miller, *Good Finance, Bad Economics: An Analysis of the Fraud on the Market Theory*, 42 Stan. L. Rev. 1059 (1990).

<sup>175</sup> See Langevoort, *Theories*, supra, at 892-903. It is confusing in that there is no clear cut articulation of on what the plaintiff is presumed to be relying. If it is that the stock price is "correct" (i.e., a strong use of the EMH) then the presumption seriously overcompensates to the extent that large numbers of traders are instead assuming that

presumption have less to do with economic theory than practical case management.<sup>176</sup> One can readily justify the presumption as the only workable way to facilitate private litigation in this area, substituting causation in place of reliance. In this sense, the IMH literature does not indicate much need to rethink the doctrine.<sup>177</sup>

A second notorious usage of the EMH in fraud-on-the-market litigation is the so-called “truth on the market” defense.<sup>178</sup> Unlike the presumption of reliance, this is no case management tool. This doctrine states that once the defendant can show that the information that plaintiffs claim was misrepresented or omitted was actually known to the “smart money” segment of the marketplace, it is presumed impounded rationally into the stock price – so that even those allegedly deceived by an identifiable lie were not injured. No harm, no foul. As a strong presumption, this doctrine falls if the EMH falls. Much of the IMH literature purports to demonstrate that stock prices adjust more slowly to news (especially bad news) than the EMH predicts.<sup>179</sup> The notion of stock price drift with respect to earnings information is the best example, but the literature is filled with others. Under the IMH approach, a messier, arguably fruitless factual inquiry is necessary to try to determine whether there has in fact been an adjustment to the news at any given point in time.

That brings us to the third use of the EMH, which I want to explore here. If we assume prompt rational adjustment to new information, then measuring damages in fraud-on-the-market seems easy, at least conceptually. The standard out-of-pocket measure of damages asks the court to determine the difference between the price the plaintiff paid for the stock (or sold it at) and the *fair value* at the time of the transaction.<sup>180</sup> The latter figure is a hypothetical one. But economists have persuaded lawyers that it can be calculated with relative precision by examining the abnormal return on the stock the day the truth

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they can beat the market; if it is simply that the market is undistorted by fraud, then that has little to do with the EMH.

<sup>176</sup> See Note, *The Fraud on the Market Theory*, 95 Harv. L. Rev. 1143 (1982).

<sup>177</sup> Cunningham, *supra*, disagrees, and suggests devising substitute reliance standards.

<sup>178</sup> See, e.g., *In re Apple Computer Sec. Litig.*, 886 F.2d 1109 (9<sup>th</sup> Cir. 1989); *Wielgos v. Commonwealth Edison*, 892 F.2d 509 (7<sup>th</sup> Cir. 1989).

<sup>179</sup> See note --- *supra*.

<sup>180</sup> See J. Cox, *supra*, at 793-96.

finally came out, and “backing” that measure to the date of the fraud.<sup>181</sup> To be sure, this can in practice turn out to be very complicated, especially if there are suspicions that the truth leaked out to the market over time, or if other material events are simultaneously affecting the stock price. Even under the standard methodology, each side’s calculations can differ wildly.<sup>182</sup> But the principle is clear enough.

On the other hand, if we assume that market prices under-react or overreact to information, or both, so that the adjustment time lengthens (perhaps considerably), the measurement difficulties become obvious. Event study methodology can still be utilized to test for whether or when adjustment has occurred – i.e., abnormal returns disappear – over substantial periods of time. In fact, this is precisely what the empiricists critical of stock price efficiency do in their efforts to demonstrate inefficiency. But with respect to any one firm at a given period of time, the longer the potential period of adjustment, the more likely (indeed, almost necessity) that noise and the presence of other information will make the calculations imprecise and perhaps unusable. The ability of the econometrics to guide judge, much less jury, fact-finding toward a meaningful measure of damages, or to test rigorously the “truth on the market defense,” becomes increasingly doubtful.

I hesitate to push this point too far as a doctrinal matter because judicial calculations of damages in fraud-on-the-market class actions are so rare today that the doctrinal question is almost hypothetical. If cases get anywhere near the liability stage, they are almost always settled. On the other hand, the calculations play a substantial role in the settlement negotiations, setting at least the boundaries for discussions. Assuming that the merits matter to some extent,<sup>183</sup> thinking through the conceptual problem of how to fashion the out-of-pocket award is still significant.

The interesting question is whether the IMH offers something beyond methodological deconstructionism that might help move

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<sup>181</sup> E.g., Bradford Cornell & R. Gregory Morgan, *Using Finance Theory to Measure Damages in Fraud on the Market Cases*, 37 UCLA L. Rev. 883 (1990); Daniel Fischel, *Use of Modern Finance Theory in Securities Fraud Cases*, 38 Bus. Law. 1 (1982).

<sup>182</sup> See Janet Cooper Alexander, *The Value of Bad News in Securities Class Actions*, 41 UCLA L. Rev. 1421 (1994); Cone & Laurence, *How Accurate Are Estimates of Aggregate Damages in Securities Fraud Cases?*, 49 Bus. Law. 505 (1994).

<sup>183</sup> Compare Janet Cooper Alexander, *Do the Merits Matter?: A Study of Settlements in Securities Class Actions*, 43 Stan. L. Rev. 497 (1991) with Seligman, *supra*.



settlement negotiations to a meaningful end. Here, I want to examine two positive claims about damage calculations that others have put forward in law review articles, both of which draw explicitly from some of the literature we have been examining. One has actually had a policy impact already: Baruch Lev and Meiring deVilliers' claim that short-term stock market overreaction in response to bad news is so likely that damages should be measured by reference to the "leveled off" price after the truth has been told.<sup>184</sup> Congress cited their article in 1995 as justification for capping damages by reference to the mean price over a ninety-day period after disclosure of the truth.<sup>185</sup> The other is an article by a practicing lawyer specializing in defending class actions, William Fisher, contending that aggregate damages in fraud-on-the-market cases should be reduced to reflect what he calls the "analyst-added premium."<sup>186</sup> In essence, his claim is that analysts are often an independent cause of a large portion of inflated stock prices, separate from any fraud by the issuers. That portion should be deducted from what the issuer owes the defrauded investors.

### *1. The Analyst-added Premium*

We begin with Fisher, who believes that investors obsess on analysts' earnings forecasts, and that these forecasts are often erroneous. When the error is on the high side, the stock price is inflated. When the company fails to meet this excessive forecast, the price drops significantly. Unlike Lev and deVilliers, Fisher is not so much worried about the possibility of bounce-back after this drop as the drop's total distance – a drop that begins at an artificially inflated point. Fisher wants to create a deduction from the damages owed to the extent that the analyst-added premium was not caused by the issuer's fraud. The most obvious example would be when the analysts were hyping the stock before the misrepresentation or omission. The doctrine Fisher invokes to justify this is loss causation – the idea, well enshrined in securities litigation, that only losses proximately caused by the fraud itself are

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<sup>184</sup> Lev & deVilliers, *supra*.

<sup>185</sup> See Robert Thompson, *Simplicity and Certainty in the Measure of Recovery Under Rule 10b-5*, 51 Bus. Law. 1177 (1996).

<sup>186</sup> William O. Fisher, *The Analyst-Added Premium as a Defense in Open Market Securities Cases*, 53 Bus. Law. 35 (1997).

recoverable by plaintiffs.<sup>187</sup> In other words, he wants to deduct losses that would have occurred regardless of the fraud.

In evaluating this claim, we must keep our eyes on something very important. An illustration may help. Suppose a stock is trading at 30 at a time when management knows some unpublicized bad news. On July 1, they make a fraudulent misstatement touching on that same news and the price rises by 2.<sup>188</sup> On September 1, the truth is discovered, and the market drops by 12, so that the price is now at 20. A suit is brought by those who bought the issuer's stock between July 1 and September 1.

If we assume that the issuer had told the truth on July 1 instead of lying, the crucial loss causation question is whether that candor would have immediately triggered the full stock price drop to 20. If so, then plaintiffs – those who bought after that date – should recover the full measure of damages, without any deduction, because they would have bought at 20 and avoided the entire loss. Fisher understands this, but wants to make it a fact question whether the stock price *really* would have dropped so far.<sup>189</sup> Would analysts have in fact down-graded their estimates and recommendations, or instead have kept optimistically propping the stock up? I am far less sanguine than he is that this is a constructive idea. Recall from our prior discussion of analyst bias that analysts' predictions and recommendations may well be an effort to curry favor with management, and responsive to subtle nudges by managers that may fall short of the current legal definition for when the company bears responsibility for what analysts say. Perhaps, then, they would front for the company by remaining optimistic, but if so, that is not good reason to absolve the company from liability. Yet that assumption is hardly a safe one. Also keep in mind the phenomenon Cornell described in his Intel study, where analysts may have moved the price up mindlessly, but corrected fairly rationally once reality set in as a result of Intel's disappointing earnings report. My sense is that

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<sup>187</sup> See, e.g., *AUSA Life Ins. Co. v. Ernst & Young*, 206 F.3d 202 (2d Cir. 2000); J. Cox et al., *supra*, at 761-71; Andrew Merritt, *A Consistent Model of Loss Causation in Securities Fraud Litigation: Suing the Remedy to the Wrong*, 66 Tex. L. Rev. 469 (1988); Therese Gabaldon, *Causation, Courts and Congress: A Study of Contradiction in the Federal Securities Laws*, 31 B.C. L. Rev. 1027 (1990).

<sup>188</sup> For simplicity, assume that these price movements have been adjusted to remove general market influences.

<sup>189</sup> Fisher, *supra*, at 60-61.

surprising bad news from a company is often likely to lead to a correction, and if so, plaintiffs should recover under the standard measure. Even more bothersome is Fisher's suggestion for how this fact question gets resolved: testimony from the analysts' themselves regarding how much their forecasts would have changed had management told the truth. If the currying favor phenomenon is real, this testimony is likely to be pro-defendant.

Thus, I doubt that his argument for an "analysts-added premium" deduction is convincing, at least the way he frames it. However, I suspect that he could have made a far more powerful case by taking the doctrine of loss causation more seriously. If the right legal standard is to compare the plaintiffs' situation to that simply *had there been no fraud* rather than had the truth been told, then the measure of damages in our hypothetical might well be 2 rather than 12. This is because if the issuer had simply remained silent, neither lying nor revealing the truth, many of the plaintiffs would have bought anyway (except for those who specifically relied on the misstatement as the reason to buy). They would have suffered the drop of 10 in any event when the truth later came out.

This alternative approach is logical. There is no general duty to disclose bad news: the permissible alternative to lying is often simply to remain silent. If so, this would normally lead to the situation noted above: "bad news" injury for most plaintiffs even had there been no fraud. *If we ignore this, we significantly overcompensate the plaintiff class in a fraud-on-the-market lawsuit.* To avoid this overcompensation, we would want to deduct Fisher's analyst-added premium, but only because *all* of the portion of the drop that reflects the discovery of the truth (as opposed to the discovery of the fraud) should be deducted. All we would look for is the price impact of the specific misstatement, and then perhaps add to the damages the portion of the drop reflecting the reputational penalty the market imposes upon discovering the issuer's dishonesty.

While there is a fairly compelling conceptual basis for this approach, there is a powerful set of practical reasons counseling against it. Note that the backwards induction method cannot be used under the second approach, because it uses the total stock price drop as its baseline. It would have to focus on the time of the misstatement, and seek to

discover the abnormal returns associated with the given misstatement.<sup>190</sup> More seriously, there is the difficult causation problem of determining whether, if the lie had not been told, the truth may still have come out earlier than it did. Most corporate lies are cover-ups, and the lulling potential is real. The conventional approach obviates the need for this inquiry. To this we might add the concern that the alternative approach may not create enough damages to operate as enough of a deterrent to open-market securities fraud, given the problems of detecting wrongdoing in the first place.<sup>191</sup>

Admittedly, then, this revised approach is another quagmire, which may be why the problem largely has been ignored notwithstanding its underlying difficulty.<sup>192</sup> But that leaves in place the overcompensation concern, which exists even if markets are efficient but becomes all the more compelling when we take the IMH literature into account. Assume that psychological forces and analysts biases combine to cause significant mood swings in stock prices. A streak of good corporate fortune leads to an inflated valuation until some exogenous shock causes a correction. The inflation makes the managers nervous, and they issue false publicity to hide some dangers signs that begin to appear in order to buy time for a turn-around. But the truth then comes out, and there is a large stock price decline.

Under these circumstances, there is no good reason to impose the full range of manic repricing damages on the issuer, for the reasons Fisher hints at. This becomes all the more clear when we consider two things. First, any award against the issuer or settlement is funded directly or indirectly out of its shareholders' pockets – the fraud-on-the-

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<sup>190</sup> I am not skilled enough to compare the two techniques rigorously, but suspect that whatever the difficulties associated with backwards induction, they are compounded significantly when there is no observable correction to use as a guide.

<sup>191</sup> See Nicholas Georgakopoulos, *Fraud, Markets and Fraud-on-the-Market: The Tortured Transition of Justifiable Reliance from Deceit to Securities Fraud*, 49 U. Miami L. Rev. 671 (1995). There is very little doubt that courts have devised fairly large damage awards in fraud-on-the-market cases in order to generate an amount large enough to operate as a deterrence, given how difficult and costly these actions are to mount.

<sup>192</sup> Glancingly, at least, academics seem to be aware of the problem. See, e.g., Cornell & Morgan, *supra*, at 908-11. That notwithstanding, there is no proposed solution in the literature, and much of the writing on the subject simply assumes that the backwards induction methodology is sound.

market litigation system is premised almost exclusively on a system of vicarious liability.<sup>193</sup> Second, investors tend to be, directly or indirectly, diversified in their investments, and are just as likely to gain a windfall from issuer “fraud-on-the-market” as be a loser.<sup>194</sup> Under these circumstances, then, there is very little reason to use the class action device as what is essentially an insurance system against market mood swings.<sup>195</sup>

The foregoing seems so obvious to me that I wonder why (Fisher and a few others aside) there has not been more concern raised about it by either policy-makers or litigants. I would venture a guess that one unexpected cost of strong faith in the EMH is that it has blinded people to the remedial flaws in this litigation system. It makes too many questions seem too easily resolvable through the magic of econometrics. The more irrationality there is in the markets, the harder we have to work to find remedial solutions that are fair and reasonable.

## 2. *Panic Damages*

Now, let’s turn to Lev and deVilliers, whose arguments have a similar thrust, albeit with a different starting point. While they do not make any strong psychology-based claims (and indeed take pains not to be overly critical of rational actor accounts of stock market behavior), they put themselves squarely on the IMH side of the efficiency debate.<sup>196</sup> They distinguish between two different notions of efficiency: informational and fundamental. The latter is the standard understanding

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<sup>193</sup> See Jennifer H. Arlen & William J. Carney, *Vicarious Liability for Fraud on Securities Markets: Theory and Evidence*, 1992 U. Ill. L. Rev. 691.

<sup>194</sup> See Frank Easterbrook & Daniel Fischel, *Optimal Damages in Securities Cases*, 52 U. Chi. L. Rev. 611, 642 (1985).

<sup>195</sup> To me, the goal of class action securities litigation is deterrence of managerial misconduct – compensation is of far less importance than thought, given the pocket-shifting nature of the process and the immense legal fees that tax each litigation-induced transfer. A much more sensible system would be to take all the foregoing reliance and causation issues off the table, and fashion remedies in private litigation that simply reflect a penalty for the misconduct, with the amount adjusted upward to reflect the difficulty of detecting it. See Donald C. Langevoort, *Capping Damages for Open Market Securities Frauds*, 38 Ariz. L. Rev. 641 (1996); see also Janet Cooper Alexander, *Rethinking Damages in Securities Class Actions*, 48 Stan. L. Rev. 501 (1996).

<sup>196</sup> See Lev & deVilliers, *supra*, at 19-22.

invoked by strong EMH proponents. It refers to prices that at all times conform to a consensus rational expectation about fundamental value. By contrast, in their view, informational efficiency only assumes that prices promptly respond to news, without any claim of close coupling with fundamental value. Thus, informationally-efficient markets can be quite volatile, and prices can overreact to news. The authors take a fairly moderate view here, estimating that reversion to something approximating fundamental efficiency typically occurs within a few days for larger issuers, and a week or two for smaller ones.

Lev and deVilliers' claim is that overreaction is likely upon the announcement of bad news that corrects some prior misrepresentation. Their simple solution is thus to wait some relatively short period of time (depending on the size of the issuer) before assessing the price that is used as the baseline for the backwards induction described earlier, thereby allowing the price to stabilize from its "panic." They say that panic-based damages operate as an inappropriate award of consequential damages. Like Fisher, their point in this regard is that even had there been no fraud, and the truth told at an earlier point in time, there still would have been a panic reaction to it. Hence, the reaction is not properly part of actual damages.

This last claim is the interesting one, and strikes me as plausible if not obviously correct. Before addressing it, however, let's note a problem that illustrates the risks of using the IMH literature prematurely in policy formulation. Lev and deVilliers invoke a fairly moderate proxy for speed of adjustment. My reading of the literature is far less clear that adjustment occurs as quickly or predictably as they suggest. (Were it so clear that an overreaction and quick bounce-back occurs so quickly in reaction to bad news, there would be very exploitable profit opportunities and we would expect the phenomenon to disappear). In fact, the literature suggests that *under-reaction* is actually more common in response to bad news,<sup>197</sup> especially for smaller issuers, and adjustments occur somewhat more slowly. If the IMH predictions are less consistent, developing a coherent approach is harder.

This aside, their immediate point is fairly persuasive.<sup>198</sup> The overreaction levels off, fairly quickly in their view. If this bounce-back

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<sup>197</sup> See Hong & Stein, *supra*.

<sup>198</sup> What Congress did with the Lev and deVilliers suggestion is much different from their proposal, but simply illustrates the biases of the political process. Using a ninety-

is an empirical regularity, then we should not use the excessive short-term response to the news as the baseline for backwards induction. That would be the equivalent of saying that had the truth been told at the time of the fraud, the excessive reaction would have lasted throughout the class period.

#### B. Irrational Reactions, Materiality and the Puffery Defense

Lurking in Lev and deVilliers' analysis – with their invocation of “consequential damages” thinking (which I think is the same thing as loss causation) – is a harder question. Suppose management makes a misleading announcement of good news: say, a pharmaceutical discovery. The consequence, perhaps aided by media hype, is a significant increase in the company's stock price. Later, there is disappointment, and the stock price drops. In contrast to our earlier examples, here we will assume that the announcement was the *sole significant cause* of the entire price increase, and none of the subsequent decline reflects any pre-fraud bad news. In an action by buyers, should we allow a defense that the market overreacted to the news, and limit the recovery to what a “reasonable” market, devoid of animal spirits, would have done?

There are two possibilities. One is that the falsity was significant (i.e., material) but that noise traders overreact to it, pushing the price higher than it should rationally go. Here, a court might entertain the argument that the reliance – at least in extent – was unreasonable. There is some indirect doctrinal support for so doing in a long series of cases dealing with face-to-face transactions, where courts deprive plaintiffs of recovery on grounds that their reliance was extremely unreasonable (i.e., reckless). Widespread belief in the EMH has largely precluded

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day mean as a floor in terms of recovery is surely a ham-fisted solution. Imagine that the stock price is at 30 when the news is announced, and quickly falls to 20. Over the next three months, the stock market rallies, and the issuer's stock moves back up to 29 without any significant abnormal performance vis-à-vis the market as a whole after the first week. Plainly, this results in under-compensation. Congress “forgot” to treat the 90-day mean as simply the starting point for backwards induction, as Lev and deVilliers had recommended, and instead turned it into a cap on damages.

recognition of this possibility in open market cases; the IMH invites us at least to consider it.<sup>199</sup>

The other possibility is that what was said would not have triggered any reaction by a reasonable investor at all, but did move the noise traders. Here, we revisit the notion of materiality, which as we have already seen is a crucial concept in securities regulation conventionally defined by reference to what might likely be of significance to the “reasonable investor.” Recall that in our discussion of internet fraud, we saw this definition as a possible constraint,<sup>200</sup> but used an insight from behavioral finance to find an explanation for what might have happened there that did not depend on extreme gullibility on the part of those who see the chat room messages. In the securities fraud context, however, there are many more places where the same kind of question is posed: is the test for materiality satisfied in cases where market participants seemingly respond in a heuristic fashion to a falsehood by defendants? This is a powerful possibility. If something is immaterial, people are free to lie about it without any liability at all.

Although there are numerous instances where this might arise, I want to begin with a very popular defense in class action securities litigation, the so-called “puffery” defense.<sup>201</sup> Courts today frequently

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<sup>199</sup> It is probably best here to distinguish between wrong and remedy. In a world of hype and overreaction, an excessive market response to news is a foreseeable consequence of a false statement. Familiar tort principles say that what is foreseeable is presumptively intended, and this should suffice to establish the wrong. To make this clear, imagine that the falsity was designed specifically to move the stock price to a point that made profitable some executive compensation grants. The defendants were counting on the overreaction effect in styling the misinformation. A remedy in full makes sense when this kind of self-serving manipulative purpose can be shown. On the other hand, there are many cases where the overreaction is to information that was disseminated without such a purpose. A false press release makes claims about a company product, mainly to influence some other audience (e.g., retailers or customers), not harm investors. See Langevoort, *Half-Truths*, supra. Investors say they were misled. Recalling the primacy of deterrence over compensation in open market cases, it would be worth considering whether an overreaction defense could be applied here, because it might be a useful corrective to the over-compensatory bias currently built into the law.

<sup>200</sup> See pp. --- supra.

<sup>201</sup> See Jennifer O’Hare, *The Resurrection of the Dodo: The Unfortunate Re-emergence of the Puffery Defense in Private Securities Fraud Actions*, 59 Ohio St. L.J. 1697 (1998).



dismiss cases on grounds that all the management was doing when it spoke was generally expressing optimism about the firm's prospects. This, they say, is inherently non-actionable, even if the managers at the time knew that things were not as positive as represented. Most courts have justified this on grounds that reasonable investors simply do not rely on such statements.<sup>202</sup> In a more extended analysis, Judge Posner has stated that investors anticipate optimism from managers and interpret it correctly. If managers were instead actually tell the truth, he says, investors would be misled into believing that things were far worse than they really are.<sup>203</sup>

Here, we run into the ever-troublesome borderline between the normative and the descriptive. My focus is first on the latter: is it clear that *typical* investors do not rely on puffery? There is little research that studies this specifically, and so judges are guessing.<sup>204</sup> As before, I want to avoid the reductionism of confusing cognitive bias with mere foolishness and simply presuming that the latter is what the behavioral literature predicts, justifying reliance on just about anything. However, we can tell a story that comes closer to capturing what is going on in these kinds of cases, suggesting that too easy a dismissal on materiality grounds may be unwarranted.

These cases almost always arise in a setting in which a company has had a very visible streak of success. A new product was developed or marketed, or lucrative contracts negotiated. The stock price rises accordingly. Then, allegedly, problems are discovered, in the form of technical glitches or cancelled orders. These are kept secret from the market, but public expressions remain optimistic (without specific false statements). If we focus simply on those statements, we can see why an efficiency-minded court might doubt any significant incidence of reliance by any but the most gullible of investors – after all, who buys simply because management brags about how things are going?

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<sup>202</sup> E.g., *Lasker v. New York State Elec. & Gas Co.*, 85 F.3d 35 (2d Cir. 1996); *Raab v. General Physics Corp.*, 4 F.3d 286 (4<sup>th</sup> Cir. 1993).

<sup>203</sup> *Eisenstadt v. Centel Corp.*, 113 F.3d 738 (7<sup>th</sup> Cir. 1997).

<sup>204</sup> To be sure, one could say that there is a normative dimension here, and that judges are saying that investors should not rely on these things, whether or not they do in fact. For a discussion of judicial heuristics in this area, see Stephen Bainbridge & G. Mitu Gulati, *Judging Shortcuts: How Do Judges Maximize? (The Same Way Everybody Else Does – Boundedly): Rules of Thumb in Securities Fraud Opinions*, Emory L.J. (forthcoming).

My story is a bit more complicated. I suspect that we have to go back to the set of facts that originally gave rise to the optimism – the good news, and the price rise. Behavioral finance suggests that investors do extrapolate too readily, and see in past success too much likelihood of future gains. Those are probably the drivers for continued buying activity among investors, especially if analysts are also recommending the stock or estimating continued earnings growth. From this alone, the continued statements of optimism would be non-events, and courts might be justified in discounting their significance alone as part of a fraud case. But I think there is more to it, echoing the EntreMed experience. If managerial hype succeeds in gaining media attention, it will draw a higher level of investor attention to the company and its past success, prompting the kinds of heuristic reasoning that makes investors want the company stock.<sup>205</sup> In other words (similar to the internet fraud story in Part III), whether or not what is said is deceptive in and of itself, it sets the stage for a harmful behavioral reaction by its salience.

If that is a good description, we can turn back to the law's proper response. The conservative inclination would be to declare that any such behavioral reaction is irrational or gullible enough not to deserve legal protection.<sup>206</sup> Such a response could use the doctrine of materiality to say that such weak-minded thinking doesn't rise to the level of reasonableness, so that no legal wrong ever occurred. When animal spirits roam the markets, however, this strikes me as dangerous for the same reason identified in our discussion of chat room fraud. If we are describing commonplace investor behavior, then we are inviting a high incidence of exploitation if the law takes this kind of hands-off posture. Here again is the condundrum that securities law will have to face up to: the more likely heuristics-driven investor behavior is descriptively, the more *expansive* the definition of materiality has to become unless we are willing to tolerate the distortions that occur when savvy people take advantage of those heuristics. I suspect that courts to date have assumed

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<sup>205</sup> See SHLEIFER, *supra*, at 129 (“When a company has a consistent history of earnings growth over several years, accompanied as it may be by salient and enthusiastic descriptions of its products and management, investors might conclude that the past history is representative of an underlying earnings growth potential.”)

<sup>206</sup> On the politics of reliance on psychological explanations, see Philip Tetlock, *Cognitive Biases and Organizational Correctives: Do Both Disease and Cure Depend on the Politics of the Beholder?*, 45 *Admin. Sci. Q.* 293 (2000).

efficiency or that noise trader influence is small. If so, a fairly strict definition of materiality in open-market cases works.<sup>207</sup> If not, then they have made a bad bet.

My preference here is to keep the definition tied to what is commonplace or normal, whether we admire the behavior or not. If what we want is some semblance of market price integrity (i.e., unmanipulated markets), we have little other choice. With respect to puffery in particular, I would treat a general expression of optimism as if it were a half-truth, and inquire into the circumstances of its making. If the publicity appears to be a deliberate effort by company managers to attract investor attention to the company's past successes, it should be treated as misleading. (The same result would follow, without the need to resort to much in the way of investor psychology, if the communicative content of the general statements were an expression that nothing from the recent reported past has changed<sup>208</sup>). As before, courts could treat some such expressions as material by reference to predictable investor heuristics, but still exercise restraint on the private remedies side when plaintiffs' investment judgment fell too far short of the rational ideal.

A concrete example of all this has arisen amidst the controversy associated with an SEC staff accounting bulletin (SAB 99) on the subject of earnings manipulation.<sup>209</sup> The most important question there had to do with the company that makes a tiny upward adjustment in reported earnings (perhaps less than 1%) in order to meet analyst expectations for a particular quarter. The bulletin says that small amount is material because the market treats it as important, punishing companies that fall short. Fundamentally, it is hard to imagine how a reasonable investor would treat that data as significant. It is possible that the SEC is assuming an irrational overreaction here. But there are other possibilities, too. If we follow Cornell's story, the small shortfall may actually operate as a wake-up call, rationally correcting what had heretofore been an irrationally inflated valuation. Or, unexpected

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<sup>207</sup> For a thoughtful and highly contextual consideration of materiality, see Victor Brudney, *A Note on Materiality and Soft Information Under the Federal Securities Laws*, 75 Va. L. Rev. 723 (1989).

<sup>208</sup> See Langevoort, *supra*.

<sup>209</sup> Staff Accounting Bulletin No. 99, 64 Fed. Reg. 45150 (1999). For an application, see *Ganino v. Citizens Utilities Co.*, 228 F.3d 154 (2d Cir. 2000).

shortfalls may simply be salient focal points, triggering a cascade of selling simply in anticipation of similar actions by others – the overconfidence-driven story we put forth earlier to explain some kinds of internet fraud. Whatever the causal explanation, however, IMH thinking suggests that we define materiality in terms of *likely* market behavior, heuristic or not.

## V. CONCLUSION

The route toward a behaviorally-sophisticated form of securities regulation is a slow one, and I have tried here not to jump too far ahead of the available empirical evidence. To me, that evidence presents a fairly strong case for the presence of significant market inefficiencies. But it is not dispositive, and leaves open to question both the specific directions that the inefficiency takes and the magnitude of the deviations. For now, the most valuable use of it may well be in the form that I have followed here: using the IMH and behavioral literature to see possibilities (like the overconfidence-induced drag race on the internet, the subtle nature of analyst biases, or the bloating of liability in fraud-on-the-market cases if stock prices exhibit manic-depressive symptoms) that can help us think through difficult problems outside the box of conventional theories of investor behavior.

To the extent that they point in any particular regulatory direction, behavioral insights are more likely than not to be pro-regulatory. That is, they do weaken the comparative appeal of marketplace discipline vis-à-vis the possibility of regulatory correction. With respect to earnings management of the sort typified by Enron, for example, we should be less confident of the market's ability to correct for accountings' shortcomings. What is less obvious, however, is the extent to which these same insights also call into doubt some cherished pro-regulatory strategies – if we deliver better transparency to investors, will they use it effectively? The SEC's myth-story about investors carefully perusing the details of disclosure documents that regulation delivers gives way to an image of sustained investor overconfidence and self-serving inference. An investor convinced that he has skillfully spotted a trend and can ride the momentum for a while is not going to be

moved by clearer “plain English”<sup>210</sup> disclosure about the risks the company faces. People with an inflated view of their investment capacities don’t necessarily want the help regulation offers. Even fraud-on-the-market remedies – a beloved regulatory intervention with a wide base of academic support – look less appealing in the light shed by inefficiency accounts of stock price movements.

Indeed, as I suggested in Part IV with respect to Reg FD and the analysts’ privilege, one of the unexpected directions this research points is to see average investors as a risk, not just suppliers of depth and liquidity to the market. This is disorienting, for sure. If the evidence in this direction builds further, there are two plausible responses, neither of which is politically appealing. One is to isolate the noise trader, allowing markets to evolve and develop that are less subject to their whims. This is the direction of Steve Choi’s interesting but politically fanciful proposal for licensing investors,<sup>211</sup> taking the likely noise trader into a limited world where he can do little harm. But there are more subtle ways to get there, too, such as energizing the private markets. The other direction – inviting a role that securities regulation has never taken that seriously – is to become an aggressive therapist, seeking to de-bias investors from all their dangerous propensities. In contrast to some others who have suggested this role,<sup>212</sup> I doubt that the government could do this well, or that the intended audience would have the inclination to learn.

Of course, we could be rescued from all this by a turn in the finance research back toward efficiency. Perhaps investors are really better learners than the critics think, or smart money forces powerful enough to moderate most all of the harmful effects of the average investors’ cognitive limits. Critics of efficiency can’t be so wedded to their contrarian visions that they deny this possibility. If efficiency is indeed the better description of marketplace behavior, then we thankfully have less to worry about. But we shouldn’t commit to that account simply because it offers the more comforting solutions or is politically more palatable. And the lesson of Enron is hardly encouraging.

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<sup>210</sup> ’33 Act Rule 421(d), 17 CFR sec. 220.421(d).

<sup>211</sup> See note --- supra.

<sup>212</sup> See, e.g., James Fanto, *We’re All Capitalists Now: The Importance, Nature, Provision and Regulation of Investor Education*, 49 Case W. Reserve L. Rev. 105 (1998); Cunningham, supra.

Those involved in securities regulation, then, need to look harder at the evidence in both directions, and in fact help generate more of it. Neither the SEC nor academics have spent enough time on detailed field studies of investor behavior, so we lack a solid sense of how decisions occur or what social dynamics are at work that might drive market prices.<sup>213</sup> In-depth interviews and survey data would take us in this direction, as would more laboratory studies on investor behavior. Somewhat more conventionally, it would also be helpful to know the relative balance between individual and institutional trading – something roughly measurable by reference to trade size – when prices are on their way up compared to when they reach their top and start coming back down. In other words, who ends up winning or losing from stock-price gyrations? The data developed during discovery in fraud cases like Enron might be of special interest along these lines. We can't be too confident about our behavioral predictions one way or the other until much more of this kind of work is done.

In the meantime, however we should at least prepare for the possibility that it may lead us down a darker road than the one we've been on. That may be Enron's biggest contribution along these lines. Enron's story rings true with so many of the IMH predictions: a momentum play fed by accounting illusions that worked largely because investors (and maybe many of the company's senior executives) wanted to believe them; analysts whose judgments were clouded by a desire for Enron's business, fed insider insights only when their enthusiasm was unqualified; a manic-depressive crash that came only once reality became too stark to ignore. If that story helps push us to a new realism in securities regulation that displaces undue faith in market efficiency, that will be a small payoff amidst all the damage.

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<sup>213</sup> See note --- supra. Interestingly, Finland has a particularly rich data set to offer on individual investment decisions. See Mark Grinblatt & Matti Keloharju, *The Investment Behavior and Performance of Various Investor Types: A Study of Finland's Unique Data Set*, 55 J. Fin. Econ. 43 (2000).