IS THERE A CURE FOR "EXCESSIVE" TRADING?

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INTRODUCTION

WRITING during a world-wide depression that followed a stock market crash, John Maynard Keynes likened stock markets to casinos and suggested that a stock transfer tax might "mitigate the predominance of speculation over enterprise in the United States."1 Recent scholarship in financial economics has revived Keynes' metaphor at a time when stock market volatility has again become a matter of public concern. The literature has modeled mathematically what Keynes described intuitively: a market in which so-called "noise traders" strive to anticipate each others' irrational whims rather than evaluate the prospects of businesses, and in so doing assert a persistent and destabilizing influence on asset prices.2 This influence is so pronounced that rational arbitrageurs are unwilling to bet against the noise traders at sufficient levels to maintain prices that reflect only fundamental information. Instead, the arbitrageurs may end up trying to anticipate the noise traders' next move.3

At first glance, the normative implications of the noise trader model of financial markets are profound. If some investors' mistaken beliefs that they can beat the market account for a significant portion of observed trading, then the voluntary exchange of risky financial assets does not benefit, but rather harms, both those indi-

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individuals and society. This implies that one of the dominant themes of law and economics scholarship, that law can make us all better off by reducing transaction costs, is wrong in the context of financial markets. If we systematically use our freedom to buy and sell financial assets to our own disadvantage, it would be better for a wise and sympathetic central authority to limit that freedom.

To say that these suppositions run counter to most of what economists believe about financial markets would be an understatement. That is presumably why the contributors to the noise trader literature (including Keynes himself) have drawn much more tentative normative lessons from their attempts to build a positive model of the behavior of securities traders. Some contemporary economists have made “cautious” arguments in favor of a modest stock transfer tax. Beyond this, the noise trader literature has been content to observe that regulatory measures that reduce the cost of trading might be counterproductive. This self-restraint is in recognition of the heavy burden that should be met by those who argue in favor of prohibiting or deterring voluntary commercial transactions between reasonably sophisticated parties who have ample alternatives and substantial access to relevant information.

In the pages of this journal, Lynn Stout also attempts to update the Keynesian approach by offering an explanation of the apparently excessive trading that characterizes financial markets. In her “heterogeneous expectations” model, imperfectly and heterogeneously informed traders learn the deficiencies in their knowledge and trading acumen only through making repeated losing trades.

4 Keynes cautioned:

[A] little consideration of this expedient [trading curbs] brings us up against a dilemma, and shows us how the liquidity of investment markets often facilitates, though it sometimes impedes, the course of new investment . . . If individual purchases of investments were rendered illiquid, this might seriously impede new investment, so long as alternative ways in which to hold his savings are available to the individual.

Keynes, supra note 1, at 160.


Moreover, she claims that, unlike the noise trader model, her model does not require an assumption of investor irrationality. On a rhetorical level, Stout's hostility to secondary securities and derivative markets is more undiluted than that of the noise trader literature. She sees stock and derivative markets as a source of dramatic and pervasive social loss, and argues as an overarching principle that securities regulation should seek to reduce the amount of speculative trading. In particular, she suggests that "taxing or prohibiting stock trading will produce net welfare gains."

In this Reply, I will try to accomplish three things. First, I will attempt to show that Stout's model is actually one of irrational, rather than rational, investor behavior, and accordingly has more in common with the noise trader approach than she claims. Although there are differences between the two approaches, both seem to me to attempt to explain the puzzling behavior of investors by arguing that their decisionmaking is flawed. Thus, each potentially provides a basis for the normative claim that investors should be protected from themselves (and we from them) by making trading more expensive.

My second objective is to examine that normative claim without rejecting out of hand the possibility that some investors are irrational. The blunt approach of deterring securities transactions through taxes or regulatory restrictions has received a cold reception within the academic economic community, principally on the grounds that the noise trader approach has not been specified and tested with sufficient rigor to serve as the basis for policy prescriptions. Even if the existence of noise trading in significant amounts could be demonstrated conclusively, however, it would not necessarily follow that curbing all trading would be an appropriate response. Conducting a careful welfare analysis of trading curbs without a convincing theory to explain the remaining, rational, trading is impossible. Yet the motivations that prompt securities trades, beyond a few obvious ones such as the possession of inside

7 Id. at 702.
information, are seldom discussed in the economics literature, probably because until recently there has been little indication that the welfare effects of permitting consenting adults to trade are controversial. But unless we know why rational investors trade, we cannot determine how much trading is optimal or how heavily to deter trading. Nor can we know whether the trading volumes of rational traders are likely to be more or less elastic with respect to the cost of trading than those of irrational traders.

My final objective, therefore, is to suggest an alternative explanation for apparently excessive trading and to explore its normative implications. I suggest that much trading may result from the incentive structures facing investors and financial intermediaries. Most investment takes place through intermediaries such as brokers, banks, and mutual funds. The compensation of intermediaries is often tied to the amount of trading they generate, which (assuming it is in the interests of investors not to trade) creates a conflict between the intermediaries' and investors' interests. When we add to this conflict the fact that intermediaries may be much better informed than investors about the prospects of making winning trades, we have the sort of agency problem sometimes referred to as an incentive compatibility problem.9 If agency problems are a source of excessive trading, these problems may be appropriately addressed by changing the focus of securities regulation. In particular, the heavy emphasis that securities regulation puts on the provision of firm-specific data to investors may be inappropriate. The regulatory system appears to assist intermediaries in convincing investors to trade both by reducing the cost of firm-specific data and by providing an imprimatur for the intermediaries' claim that the analysis of such data can generate significant trading profits. Moreover, recognizing that the current regulatory system subsidizes trading is significant wholly apart from the perspective of agency costs. If excessive trading exists—whether it is caused by noise trading, heterogeneous expectations, agency problems, or some other cause—we should think about removing these subsidies before attempting to raise the costs of trading through taxes or other means.

Part I of the Reply describes the noise trader model and Stout's model of heterogeneously informed trading. Part II briefly outlines the arguments for trading curbs designed to reduce noise trading and argues that they are informed by an overly simplified model of rational trading. Because the "right" amount of trading from a welfare perspective is hard to determine and may be substantial, trading curbs could be very costly. Part III outlines an alternative, or possibly complementary, approach to apparently excessive trading that focuses on agency problems between investors and intermediaries. Finally, Part IV examines the normative implications of the agency cost focus and argues that they should also be attractive to those who believe in irrational trading.

I. TWO EXPLANATIONS FOR EXCESSIVE TRADING

Observed trading volumes are puzzling. The evidence seems strong that only "informed" traders—those with access to data not incorporated into security prices—can sufficiently outperform a broadly diversified buy-and-hold strategy to justify the cost of trading, yet many people who are clearly not informed trade frequently. Moreover, people behave as if they believe that they are improving their returns by trading. They trade more often than not through full service brokers, who provide both execution and investment advice, rather than through less expensive discount brokers, who provide only execution. Most of the money invested in mutual funds is in actively managed funds rather than index funds, notwithstanding the higher expense ratios of the former. People thus appear willing to pay for nonpassive trading strategies. There is no generally accepted explanation for these phenomena. The most ambitious recent attempt to explain apparently excessive trading is the noise trader approach, which assumes a limited degree of investor irrationality. Stout argues that similar results

10 Stout provides statistics on the amount of trading in the U.S. equity markets. See Stout, supra note 6, at 623.
11 The Securities Industry Association estimates that discount brokers accounted for 14% of total retail (i.e., individual investor) commissions in 1993. Securities Indus. Ass'n, 1994 Securities Industry Fact Book 36 (Grace Toto & George Monahan eds., 1994). Because their commissions are lower than those of full-service brokers, discounters would of course account for more than 14% of retail trading volume.
12 See Stout, supra note 6, at 663.
can be obtained without assuming investor irrationality. This Part summarizes the noise trader approach, as well as Stout’s heterogeneous expectations model, and shows that despite their differences, both are models of irrational behavior.

A. Noise Trading

In a series of articles, J. Bradford De Long, Andrei Shleifer, Lawrence Sumners, and Robert Waldmann ("De Long et al.") present an asset pricing model in which a subset of investors do not have rational expectations with respect to the expected returns on risky assets.13 These traders are called “noise traders” because one intuitive interpretation of their behavior is that they confuse noise with information. “Information” is any data that is not reflected in security prices. From this definition, it follows (assuming perfect arbitrage) that trading strategies based on information can have a positive expected return, but trading strategies not based on information cannot have a positive expected return (that is, cannot outperform a buy-and-hold strategy). “Noise” is any data that is not information. A noise trader might make purchases or sales based on noise in the mistaken belief that the noise is information. The investor who believes that his broker’s “hot tips” can be used to make profitable trades, if objectively they cannot, is a noise trader. Because noise traders misperceive expected returns, they are willing to pay more (or less) for a share of stock than is warranted by its actual expected return.14 De Long et al. argue that rational, risk-averse arbitrageurs with finite time horizons would not bet against the noise traders in sufficient quantity to prevent prices

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14 De Long et al. present a model in which the risky asset is in fact not risky; it pays a fixed dividend in each period. Because of noise trader irrationality, however, the price of the asset is variable. See De Long et al., Noise Trader Risk, supra note 3, at 707-11.
from deviating from their "fundamental" values (i.e., the prices that would obtain if all traders had rational expectations).¹⁵

The noise trader literature departs from the typical assumptions of neoclassical financial economics in two respects. First, it assumes the existence of a subset of traders who do not have rational expectations. Investors' expectations with respect to a future stochastic event are said to be "rational" if they have the same distribution as the objective expectation.¹⁶ Put more simply, if investors have rational expectations with respect to the future price of a security, their forecasts of the price are an unbiased estimate of the actual outcome. Although any individual trader may make an incorrect forecast, the errors should be random, not systematic, and over time traders should learn from their mistakes. Thus, in a rational expectations equilibrium, the price that investors are willing to pay for a particular asset will accurately reflect the objective return-generating process, or the "fundamental" economic facts about the asset. In order to explain apparent deviations from fundamental values, the noise trader literature introduces a set of traders whose beliefs are mistaken, and these mistakes are correlated among investors. Such traders are "irrational."

Even the presence of irrational traders would not be enough to make prices deviate from the objective expected price if rational arbitrageurs exist in sufficient number to offset the effect of the noise traders. If noise traders systematically overestimate (underestimate) the future return on a security, rational arbitrageurs can profit from selling short to (buying from) noise traders. Prices will eventually fall (rise) to reflect the realized return, and over time the noise traders should lose their entire wealth to arbitrageurs and drop out of the market.¹⁷ The noise trader literature, however, assumes that such arbitrage opportunities will not be fully exploited. It notes that noise trading increases the variance of

¹⁵ Id. at 705, 712.
¹⁷ Milton Friedman is the most prominent proponent of the view that irrational speculators should not destabilize prices if rational speculators exist. See Milton Friedman, The Case for Flexible Exchange Rates, in Essays in Positive Economics 157, 175 (1953).
security prices, thus creating additional risk that reduces the willingness of rational, but risk-averse, traders with finite time horizons to engage in arbitrage. Consequently, irrational trading can persist. If this is the case, securities prices may not always be an unbiased predictor of future returns, and in that sense may be inefficient.

De Long et al. argue that the noise trader approach can explain a number of phenomena in financial markets that appear inconsistent with the efficient markets hypothesis. In particular, the fact that noise trading increases the variance of stock prices is consistent with the observation that stock prices are more volatile than the underlying fundamental economic data, particularly for dividends. Similarly, the additional risk created by noise traders can explain the apparently excessive risk premia of equities as compared to debt securities, known as the Mehra-Prescott puzzle. If we assume that equities would be more attractive to overoptimistic traders than debt securities, equity prices should reflect more "noise trader risk" than bonds, and should accordingly earn an abnormally high return.

Of course, we can explain any market puzzle by selectively attributing irrationality. Irrationality shares with preferences an unlimited malleability. We can use it to explain the fact that small-capitalization stocks generally outperform large-capitalization stocks in January; if the opposite occurred next January, however, irrationality could just as easily explain that phenomenon. Irrationality, standing alone, does not give us any predictive capacity.

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18 See De Long et al., Noise Trader Risk, supra note 3, at 705.
19 Id. at 724-31. Although the noise trader literature describes itself as an alternative to the efficient markets approach and the anomalies as violations of the efficient markets hypothesis, it is more precise, as noted in the text, to describe the literature as a departure from the rational expectations hypothesis. An informationally efficient market could exist without rational expectations so long as market prices were an unbiased aggregator of the (erroneous) expectations of market participants. Like the noise trader literature, however, I will ignore the distinction for purposes of this Reply.
The noise trader literature anticipates this objection by grounding its assumptions about human behavior in part on evidence from experimental psychology. It argues that investors will predictably exhibit particular types of irrationality, such as chasing trends. Such behavioral assumptions lead to empirically testable hypotheses—for example, that stock prices should exhibit short-term autocorrelation (which they do). Because many stock market anomalies can be predicted in this fashion, the noise trader theorists argue, a carefully delineated form of irrationality can be introduced without reducing the resulting explanations to tautologies.

B. Heterogeneous Expectations

The central dichotomies employed by the noise trader literature distinguish rational expectations and systematic errors as well as perfect and imperfect arbitrage. In apparent contrast, Stout's central dichotomy distinguishes homogeneous and heterogeneous expectations. She posits a world of rational traders and costly information. Because information is costly, traders will be both imperfectly and heterogeneously informed. Imperfect information will lead them to make errors, and heterogeneous expectations will cause them to trade based on those errors. In Stout's model, bullish John buys General Motors stock because he believes that it will outperform the market whereas bearish Mary sells it to him because she believes that General Motors will underperform the market. Although one of them must be mistaken, each acts on the basis of the best information available (at reasonable cost) to him or her, and accordingly, Stout claims, each is behaving rationally. Thus her model seems to account for excessive speculative trading even when all traders are rational, and accordingly pro-

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24 See De Long et al., Positive Feedback, supra note 13, at 382.
25 See Shleifer & Summers, supra note 13, at 29.
26 Stout, supra note 6, at 626-35.
vides an attractive alternative to the noise trader approach. The distinction between heterogeneous expectations and irrationality breaks down, however, unless the heterogeneous expectations are based on information, in which case they cannot result in "excessive" trading.

Stout's model differs from the noise trader model in several respects. Most obviously, the "HE model" is not an equilibrium asset-pricing model. Instead, it is an intuitive attempt to explain observed trading volumes and investor behavior. Therefore its point of departure is excessive trading, rather than (as is the case with the noise trader model) excessive volatility. Its assumptions about how investor expectations are formed are somewhat different from those of the noise trader model. But Stout also attempts to draw a sharp (and I believe unwarranted) distinction between the two models by claiming that hers is a rational model, and therefore ought to be more acceptable to economists and policymakers than the noise trader model, which assumes investor irrationality. When John and Mary trade General Motors stock in Stout's model, however, they are trading on the basis of differing beliefs. Beliefs are not the same thing as information. If John consistently discovers that his beliefs are not realized, then he is trading on noise, not information. If he is rational, he will learn from his mistakes and stop trading. On the other hand, if he keeps trading (and losing), he is behaving irrationally.

The deviation from the rational expectations hypothesis in Stout's model is slightly different than that in the noise trader liter-

27 See id. at 635.
28 Compare, e.g., Stout, supra note 6, at 636-37 (arguing that investor behavior results from optimistic self-selection) with De Long et al., Noise Trader Risk, supra note 3, at 706 ("Noise traders falsely believe that they have special information about the future price of the risky asset."). The distinction should not be overstated, however. One of the lynchpins of the psychological evidence on which the noise trader literature relies is overoptimism. See De Long et al., Survival, supra note 13, at 4-6. Although the mathematical model presented by the noise trader literature can result in noise trader survival with either optimistic or pessimistic noise traders (so long as noise traders misperceive the variance of returns), the intuitive explanations offered center precisely on overoptimistic self-selection. See id. at 5 ("[O]verconfidence in the precision of one's estimate is likely to become more extreme over time as those who succeed attribute their success to their own skill and judgment."); id. at 16 ("We conclude that there is, in fact, a presumption that overconfident investors ... will tend to control a higher proportion of the wealth invested in securities markets as time passes.").
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In the latter, mistakes are correlated among traders; at any given moment, noise traders are in the aggregate bullish or bearish and therefore can affect asset prices. Because Stout is not presenting an asset-pricing model, she can claim that her traders' erroneous beliefs are uncorrelated and therefore not inconsistent with rational expectations. Nonetheless, the failure of her traders to learn from their mistakes is inconsistent with individual rationality. Stout attempts to address this point by incorporating "delayed learning." In her model, traders who consistently lose eventually discover that they are losing and exit the game, but new generations of traders continuously enter and make the same mistakes as their predecessors. But the mechanism by which traders stop trading in Stout's model is, as she puts it, "Darwinian"; winners keep playing and losers exit. In a rational expectations framework, however, learning is not merely Darwinian, but Bayesian. The diverse expectations with which traders began would converge as traders adapted both to the underlying economic laws of motion and to the expectations of other traders, leading to an equilibrium in which no trader would wish to recontract after observing the market price. Thus in a rational expectations model, winners as well as losers would stop trading. Stout's traders, in contrast, never arrive at an accurate model of the return-generating process; they simply exhaust their tolerance for the game. It would, I think, be more accurate to call Stout's model an adaptive expectations model, in which learning is delayed in the sense that traders' expectations lag behind the information available to them.

We would expect the learning process to be extremely rapid where stock markets are concerned because in a market with low transaction costs, market prices should serve as a good aggregator of the information possessed by other traders. Indeed, under the

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29 See Stout, supra note 6, at 637-41.
right assumptions, no trading at all is required in order for market prices to react to new information. Imagine, for example, that John and Mary are the only traders, and each is rational and knows that the other is rational. Because each is rational, each would want to trade only when in the possession of information. That means, however, that if John observes that Mary wishes to purchase, and Mary observes that John wishes to sell, they will not transact as we might expect. John’s desire to trade indicates that he has information, and the same goes for Mary. Both parties should reevaluate their forecasts of future returns (and accordingly the price at which they are willing to transact) after observing the willingness of the other to trade. As Fischer Black puts it: “I do not believe it makes sense to create a model with information trading but no noise trading where traders have different beliefs and one trader’s beliefs are as good as any other trader’s beliefs.”

I belabor the point because I sense, perhaps unfairly, an implication in Stout’s article that policymakers should be more quick to embrace HE theory than noise trader theory because the former does not assume investor irrationality. In fact, however, the HE model incorporates a limited amount of irrationality, just as the noise trader theory does. HE theory cannot serve as a preferred source of normative lessons, therefore, solely on the basis of more palatable assumptions.

II. The Normative Implications of Irrational Trading

This Part assumes arguendo that irrational trading exists, and asks whether that justifies restrictions on securities transactions. The discussion is principally responsive to arguments made by

32 See Milgrom & Stokey, supra note 31 (stating that when all traders have rational expectations and it is “common knowledge” that other agents will trade only if they can improve their returns by doing so, no trading will occur in response to new private information).

33 Black, supra note 2, at 531. It should be noted that Black is using the term “noise trading” in a broader sense than that term is used in the articles by De Long et al., supra note 13. Black defines as noise trading any trading that is not based on information, whether rational or irrational. Black, supra note 2, at 529-30. Sanford Grossman and Joseph Stiglitz also found it necessary to introduce a set of uninformed traders into their rational expectations model in order to generate an incentive for information search. See Sanford J. Grossman & Joseph E. Stiglitz, On the Impossibility of Informationally Efficient Markets, 70 Am. Econ. Rev. 393 (1980).
Lawrence and Victoria Summers ("Summers & Summers"), who claim that the presence of noise traders would justify raising the cost of trading through a securities transaction excise tax.\(^{34}\) However, I think those arguments, and mine, can be applied more generally. Stout, for example, argues that the machinery of securities regulation should be used to decrease speculative trading, while also suggesting that a tax would reduce the social losses associated with excessive trading.\(^{35}\) I think it would not be difficult to use Stout's approach to generate many of the same arguments as those made by Summers & Summers in favor of a transactions tax, although Stout does not do so herself.\(^{36}\)

**A. A Word of Caution**

Before looking to the noise trader approach for policy lessons, we should recognize that its empirical basis is enormously controversial. The empirical point of departure for the noise trader literature, Robert Shiller's study finding that stock market volatility is excessive in relation to the underlying fundamental risks,\(^{37}\) has been vigorously attacked on methodological grounds.\(^{38}\) Similar controversy surrounds studies showing that experimental subjects make systematically erroneous probability assessments. The

\(^{34}\) See Summers & Summers, supra note 5, at 268-69 (arguing that reductions in noise trading would have a beneficial impact on securities prices). De Long et al. also suggest that a short-term capital gains tax could mitigate the external cost of noise trading. See De Long et al., Losses from Noise Trading, supra note 13, at 692-94.

\(^{35}\) See Stout, supra note 6, at 691-93, 699-702.

\(^{36}\) This observation follows from the fact that both Stout and the contributors to the noise trader literature seem to have similar intuitions about the social costs imposed by irrational trading, as well as the (in their view) more modest benefits of high liquidity. Stout identifies as costs the losses sustained by traders, including brokerage commissions and research costs, the cost of excessive investment in the securities industry, and the distortive effects on price, which may have adverse allocative effects. See Stout, supra note 6, at 669-91. Shleifer and Summers, in their description of the noise trader approach, identify similar concerns: utility losses suffered by noise traders themselves, excessive investments of human and physical capital in the securities industry, and possible reductions in physical investment. See Shleifer & Summers, supra note 13, at 30-31; see also De Long et al., Losses from Noise Trading, supra note 13 (asserting that noise trading may lead to a reduction in the aggregate capital stock); Summers & Summers, supra note 5, at 272 (suggesting that expenditures on zero-sum trading are a social loss).

\(^{37}\) See Shiller, supra note 20.

design of those tests has been strongly attacked by other psychologists, and contrary results have been achieved using different test designs.\textsuperscript{39} Finally, although the noise trader approach is broadly consistent with some available evidence regarding the behavior of asset prices, its implications have not yet been stated with enough specificity to permit rigorous empirical testing.\textsuperscript{40}

This is not to argue that the noise trader literature cannot provide potentially valuable normative insights until it has been universally accepted by financial economists. As no one theory of stock market behavior is universally accepted, policymakers may want to think in terms of probabilities rather than certainties. Nevertheless, because the claims made in the noise trader literature are hotly contested, policymakers should, if possible, seek prescriptions that would alleviate noise trading to the extent it exists but that would not overly burden rational trading. Even if we assume the existence of noise traders, we should still prefer policy approaches that will minimize unnecessary harm to those market participants who are not noise traders.

Unfortunately, the normative programs of those scholars who have applied the noise trader model do not take this approach. To date, the principal normative claim generated from the noise trader model has been that increasing the costs of securities trading would have positive welfare effects. A simple way to increase costs is through imposing a tax on securities transfers. Thus, both Joseph Stiglitz and Summers \& Summers have resurrected the Keynesian argument for a securities transaction tax, and each makes reference to noise trading in support of the argument.\textsuperscript{41} The legal literature

\textsuperscript{39} See, e.g., Gerd Gigerenzer, How To Make Cognitive Illusions Disappear: Beyond “Heuristics and Biases,” 2 Eur. Rev. Soc. Psychol. 83, 86, 95 (1991) (arguing that “Tversky and Kahneman . . . have neglected conceptual distinctions that are fundamental to probability and statistics,” including the distinction between frequencies and single events).

\textsuperscript{40} There is every reason to expect similar controversy over the empirical point of departure for the HE model, which is excessive trading. The literature on the excessive volatility at least presents a theory of the “right” level of stock price volatility by tying it to the volatility of dividends. There is no such explicit theory of the right amount of trading. See infra notes 45-60 and accompanying text.

\textsuperscript{41} Stiglitz, supra note 5, at 101, 105; Summers \& Summers, supra note 5, at 263, 268.
has also been quick to argue that the noise trader analysis might justify significant restrictions on securities transactions.\(^4\)

Such policies would, of course, raise costs for all traders, not just noise traders. If most trading turns out to be rational and beneficial, these policies would be correspondingly detrimental. The economists who have argued in favor of transaction taxes as a means of improving the efficiency of securities markets and the legal scholars who have used the noise trader approach to suggest various types of curbs on securities transactions have done so on the basis of insufficiently careful assumptions about the costs of such steps. Even if we accept the noise trader model as a positive account of the behavior of investors, it does not follow that raising the cost of trading for everyone is socially desirable. Justifying that conclusion would require a much more comprehensive model of the behavior of the remaining, rational, investors than is currently available.

**B. Deterring Irrational Trading by Deterring Trading**

The arguments that have been advanced in support of trading curbs can be briefly summarized. Because the most detailed case for trading curbs has been made by Summers & Summers, who advocate a transaction tax, the discussion herein will also speak mostly of taxes, although most of what I have to say is applicable to trading curbs generally. It should also be noted that there are many ways to justify a tax. One might argue that securities transactions are undertaxed relative to, for example, real estate transactions, so that imposing taxes on securities transactions would be worthwhile on fairness or tax neutrality grounds. Alternatively, one might argue that a securities transaction tax could substitute for other taxes that we like even less. These are not the arguments made by the economists who have applied the insights of the noise

\(^4\) For a very incomplete sample of articles that attempt to glean the legal policy implications of the noise trader approach, see, e.g., Thomas L. Hazen, The Short-Term/Long-Term Dichotomy and Investment Theory: Implications for Securities Market Regulation and Corporate Law, 70 N.C. L. Rev. 137, 147 (1991) (arguing that noise trader approach calls into question "laissez-faire" attitude of corporate and securities law towards securities transactions); Reiner Kraakman, Taking Discounts Seriously: The Implications of "Discounted" Share Prices as an Acquisition Motive, 88 Colum. L. Rev. 891, 899-900, 936-39 (1988) (suggesting that noise trader approach might justify prohibiting hostile acquisitions).
trader approach, however. Instead, they argue that increasing the costs of trading would be beneficial to securities markets themselves.

Summers & Summers argue that the social benefits of liquidity are not everywhere increasing in the degree of liquidity.\textsuperscript{43} Liquidity, as it were, comes in three varieties: too little, too much, and just right. Once we go beyond just right—and Summers & Summers believe that point was passed a long time ago in the United States—further increases in liquidity encourage speculation and increase volatility. Decreasing the liquidity of U.S. securities markets, therefore, would decrease volatility and its attendant social ills. As evidence, Summers & Summers cite Kenneth French and Richard Roll's study of volatility during a brief period in 1968 when heavy trading volumes forced the U.S. markets to close on Wednesdays. During that period, volatility between Tuesdays and Thursdays was reduced compared to what it was when the markets were open on Wednesdays.\textsuperscript{44}

The argument against "excessive" liquidity draws on the noise trader approach, which links irrational trading and social loss.\textsuperscript{45} When securities transactions do not have a positive expected value, expenditures on these transactions and attendant research are, from a social perspective, wasted.\textsuperscript{46} These expenditures also prompt excessive investment of human and physical capital in the securities industry.\textsuperscript{47} Additionally, the irrational trades may create stock market inefficiency if arbitrage is imperfect. Excessive liquidity, therefore, leads to costly market volatility and should be discouraged by raising the cost of trading.

If our cure for irrational trading is to curb all trading, however, we must consider the cost of the cure as well as that of the disease. Summers & Summers argue that the benefits of curbing irrational

\textsuperscript{43} Summers & Summers, supra note 5, at 268.
\textsuperscript{44} Id. at 265-67 (citing Kenneth R. French & Richard Roll, Stock Return Variances: The Arrival of Information and the Reaction of Traders, 17 J. Fin. Econ. 5 (1986)). French & Roll, it should be noted, did not conclude that trading itself was the principal cause of this excess volatility, although they did not rule out its playing a role. Rather, they concluded that the main cause of the additional volatility was that private information was more likely to be used during trading hours. French & Roll, supra, at 6.
\textsuperscript{45} See Summers & Summers, supra note 5, at 268.
\textsuperscript{46} Id. at 272.
\textsuperscript{47} Id. at 270-71.
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trading would be significantly greater than the social loss resulting from curbing rational and value-adding trading. This is because irrational trading strategies tend to require frequent trading whereas rational trades should occur only infrequently. Rational traders should hold stable, diversified portfolios and trade only when necessary to increase or decrease the size of the portfolio or change its composition. Noise traders, in contrast, are described as trading at a furious pace. In any given period, therefore, a transaction tax would be visited on a representative noise trader many more times than on a representative rational trader.

To one who is willing to concede the possibility that noise trading exists, this analysis seems plausible but incomplete. In order to assess, even qualitatively, the welfare effects of a tax or other means of raising the cost of trading, we need some theory of the "right" amount of liquidity. After all, the issue is not whether to tax (investors already pay capital gains taxes), but how much to tax. In order to answer that question, it would be helpful to have some basis for approximating the ratio of noise traders to rational traders, the size of the private and social costs and benefits that result from their respective trading activities, and the likely response of each group to a rise in transaction costs. None of the arguments in favor of a transaction tax provide any explicit theory of rational trading, but all of them appear to rely implicitly on two basic notions. First, because rational traders do not need to trade much, the "right" amount of liquidity must be so low that any modest tax would not produce illiquidity. Second, a reasonable proxy for the "right" amount of trading might be the trading volumes observed during a period when transaction costs were much higher—for instance, prior to the end of fixed commissions on the New York Stock Exchange in 1975 or the repeal of the federal stock transfer tax in 1965.

48 See id. at 274. Stout also suggests that rational investors have little need to trade. Stout, supra note 6, at 682-88, 691-93 (arguing that trading volumes are higher than justified by such rational factors as liquidity and diversification); see also Black, supra note 2, at 530-31 (arguing that rational investors would rarely trade in individual shares).

49 See supra note 48 and accompanying text.

50 Stout describes both events and notes that they resulted in substantial reductions in the cost of trading. See Stout, supra note 6, at 634-35.
Summers & Summers note that the substantial decreases in the costs of trading securities since the mid-1970s have been followed by dramatic increases in trading volumes and conclude that most of the additional trading is undesirable.1 Apparently, they believe that the pre-1975 level of transaction costs was insufficient to deter investors with long time horizons, but high enough to deter at least some noise traders and, to that extent, beneficial. If the increased trading volumes since then are largely attributable to noise traders, returning transaction costs to pre-1975 levels should reduce noise trading without significantly affecting rational traders. As Summers & Summers note, "[t]he introduction of even quite substantial transaction taxes would raise trading costs in the American marketplace back only to their levels in the 1950s, 1960s and early 1970s. Major liquidity problems were not evident at that time."2

The indicia of irrationality employed by the noise trader literature, however, do not provide strong support for the notion that the amount of noise trader risk in the U.S. equity markets is significantly greater today than during the 1950s, 1960s and early 1970s. Consider volatility. It has been a source of concern to many economists and policymakers that the volatility of stock prices over short periods increased in the 1980s.3 For example, the annualized standard deviation of monthly returns on the stocks in the Standard & Poors 500 ("S&P 500") index averaged 13.6% in the period 1950-1975, but increased to an average of 16.6% in 1976-1993.4 Because so much of the short-term volatility associated with the 1980s is concentrated in the period surrounding October 1987, however, one has to decide what to make of the 1987 crash in order

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1 Summers & Summers, supra note 5, at 261-63; see also Stout, supra note 6, at 686-88 (noting that the costs of trading have dropped since the 1960s and arguing that the resulting liquidity carries with it high social costs).

2 Summers & Summers, supra note 43, at 274.


4 The calculations were made using the monthly standard deviations derived by Ibbotson Associates. Ibbotson Assocs., Stocks, Bonds, Bills, and Inflation 1994 Yearbook 5, 102-03 (1994).
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to draw more general conclusions about increased volatility.\textsuperscript{55} To conclude that the 1987 crash represents important tangible evidence of the effects of noise traders, and therefore represents part of a significant and permanent shift, might be to chase a trend. Looking only at the years after the 1987 market crash, 1988-1993, the average annualized monthly standard deviation of returns was 13.51\%, roughly the same as in the tranquil pre-1975 period.\textsuperscript{56} It is a bit early, therefore, to conclude that October 1987 was a result of the dominance of noise traders brought into the market by low transaction costs. The evidence is too weak to support a link between low transaction costs and high volatility, a conclusion that has also been reached in comparative studies.\textsuperscript{57}

This all assumes, of course, that the volatility of short-term, rather than long-term, returns matters greatly to rational traders. Volatility measured over longer periods actually decreased significantly during the period of interest; the average standard deviation of annual total returns on the S&P 500 stocks was 19.20\% in 1950-1975, and 12.96\% in 1976-1993.\textsuperscript{58} It is inconsistent to contend on the one hand that a transaction tax would have a negligible impact on investors with long holding periods, but on the other hand that such investors are harmed by short-term volatility. Alternatively, if we are concerned that short-term volatility interferes with the attempts of arbitrageurs to drive out noise traders, we should also be concerned that transaction taxes would do the same thing.

In addition, consider the equity risk premium. Recall that the noise trader literature interprets the Mehra-Prescott puzzle as resulting from the fact that equities are more attractive to noise traders, and therefore incorporate more noise trader risk, than bonds.\textsuperscript{59} If noise trading increased after 1975, we would expect the

\textsuperscript{55} See, e.g., G. William Schwert, Stock Market Volatility, Fin. Analysts J., May-June 1990, at 23, 26 (stating that except for 1987, monthly volatilities during 1980s were normal by historical standards). Becketti & Sellon conclude that the "normal" monthly volatility during the 1980s, as measured by the interquartile range of monthly returns, was not unusually high during the 1980s. The decade had an unusually high nnumber of outliers, but these were clustered around October 1987. Becketti & Sellon, supra note 53, at 7, 10-13.

\textsuperscript{56} See Ibbotson Assocs., supra note 54, at 103.

\textsuperscript{57} See Grundfest & Shoven, supra note 8, at 439.

\textsuperscript{58} The annual total return data are taken from Ibbotson Associates, supra note 54, at 36-37.

\textsuperscript{59} See supra note 21 and accompanying text.
risk premium to increase as well. In fact, just the opposite occurred. The average equity risk premium for the years 1950-1975 was 8.98%, whereas the average risk premium for the years 1976-1993 was 6.87%.\footnote{The equity risk premia used are those derived by Ibbotson Associates. See Ibbotson Assocs., supra note 54, at 84-85. The equity risk premium might fall if noise traders (who demand no extra compensation for bearing noise trader risk) drove out rational investors completely. So long as some rational traders stayed in the equity markets after 1975 (which seems to me the better assumption), however, increased noise trader risk should have resulted in a greater risk premium.}

In sum, it is not clear that the level of noise trading is correlated with transaction costs. Rational traders may respond as much as, or more than, noise traders to changes in the cost of trading. We simply do not know very much about what motivates rational but uninformed investors to trade, other than the pursuit of a few obvious objectives. For instance, investors trade in order to correct mismatches between income and consumption (that is, they buy securities as a means of saving and sell as a means of dissaving), to adjust the level of risk of a portfolio, or to generate gains or losses for tax purposes.\footnote{See, e.g., Douglas W. Diamond & Robert E. Verrecchia, Information Aggregation in a Noisy Rational Expectations Economy, 9 J. Fin. Econ. 221, 234 (1981) (discussing life cycle and tax motivations); Milton Harris & Artur Raviv, Differences of Opinion Make a Horse Race, 6 Rev. Fin. Stud. 473, 474 (1993) (discussing liquidity, portfolio rebalancing and tax motivations).} These motivations seem insufficient to explain all of the trading we observe, as Stout notes.\footnote{Stout, supra note 6, at 666-67.} But there is no reason to believe that we have yet identified every motivation for uninformed rational trading. Financial economics has not produced extensive studies of the behavior of rational but uninformed traders. This may be in part because of the role that such traders play in most models; they are not the focus of attention, but serve merely to give the protagonists (informed traders, market makers, etc.) someone against whom to trade.\footnote{See, e.g., Albert S. Kyle, Market Structure, Information, Futures Markets, and Price Formation, in International Agricultural Trade 45 (Gary G. Storey, Andrew Schmitz & Alexander H. Sarris eds. 1984) (modeling market makers, speculators, and random noise traders); Jeffrey F. Jaffe & Robert L. Winkler, Optimal Speculation Against an Efficient Market, 31 J. Fin. 49 (1976) (analyzing the behavior of informed traders, market makers, and liquidity traders); Kyle, supra note 2 (examining the behavior of insiders, market makers, and random noise traders).} As a result, their trades are
taken as stochastic events, and their motivations for making such trades remain largely unexplored.\textsuperscript{64}

It deepens the mystery to recognize that individuals, who are the only traders with life cycle reasons for trading, account for at most one-half of trading volumes in the principal equity markets.\textsuperscript{65} The remaining traders are institutions and professional traders of various sorts. We have even less basis for understanding what prompts their trades. Nevertheless, we might make a few limited observations.

The trading behavior of mutual funds is puzzling given the evidence that trading does not make mutual fund investors better off.\textsuperscript{66} Some commentators have also concluded, however, that the trading does not make these investors any worse off.\textsuperscript{67} Although the methodology for measuring mutual fund returns is imprecise

\textsuperscript{64} Jaffe & Winkler suggest that the liquidity traders in their model may trade to adjust risk or investment level. Jaffe & Winkler, supra note 63 at 52.

It is also possible that trading is a direct source of utility. See Black, supra note 2, at 534. People like to gamble. In addition, they seem to have a taste for innovation, as the constant change of styles in clothes and cars attest. Constantly changing investment fads may be a similar phenomenon. To an economist, “recreational” trading would be off-limits to normative analysis. A noneconomist, however, might be tempted to conclude that the enormous resources devoted to trading make regulatory curbs appropriate, even if people enjoy the activity. But this argument has no obvious stopping point. The social costs of securities trading are probably a lot less than those associated with the celebration of Christmas (including lost productivity and increased seasonality of earnings), to take just one obvious example.

\textsuperscript{65} In 1993, average daily volumes on the New York Stock Exchange, the American Stock Exchange, and NASDAQ totaled 1,092,400,000 shares in the aggregate. Traders identifiable as professional institutions and stock exchange members accounted for 373,800,000 of that amount on the New York and American Stock Exchanges, and traders identifiable as professional institutions accounted for 130,500,000 of that amount on NASDAQ. Securities Indus. Ass'n, supra note 11, at 32. Even if every trade not so identified were made by an individual (which is surely not the case), the trading volume attributable to individuals in 1993 would be 53.8% of total trading volume.


\textsuperscript{67} Compare Norman E. Mains, Risk, The Pricing of Capital Assets, and the Evaluation of Investment Portfolios: Comment, 50 J. Bus. 371 (1977) (finding that net abnormal returns on mutual fund shares for period 1955-1964, taking all expenses into account, were slightly greater than zero) with Jensen, supra note 66, at 400-15 (finding that gross abnormal returns for the same period were slightly less than zero, which implies that trading profits almost cover brokerage expenses but fail to cover all additional expenses). See also Hany A. Shawky, An Update on Mutual Funds: Better Grades, J. Portfolio Mgmt., Winter 1982, at 29 (reporting that net abnormal returns obtained using Jensen performance model were close to zero for period 1973-1977).
because of the difficulty of determining an appropriate benchmark, actively managed funds may earn just enough additional return to cover the additional costs associated with their trading activities. In other words, after deducting expenses, investors may earn the market return. This presumably would mean that fund managers sometimes have access to information that they can use to generate abnormal returns (before taking expenses into account). If so, investors in actively managed funds are not irrational, but merely indifferent between active and passive management, as they rationally should be.

Assuming that active management neither harms nor helps investors, why do managers actively manage? The answer must be that some of the items that represent "cost" to an investor represent income to a manager. Some of the additional expenses created by active trading include investment advisory fees, which are typically paid to the fund manager, and brokerage expenses, which may be paid at least in part to affiliates of the fund manager. From the manager’s perspective, then, it makes perfect sense to trade. But why does she trade so much? It seems unlikely that all trades by mutual fund managers are informed. Perhaps the fund manager receives lots of signals but is unsure which contain information. She only knows that on average just enough of them contain information to make active trading worthwhile. Alternatively, the manager may know which signals constitute information and which constitute noise but may try to hide her informed trades from the rest of the market by mixing in random trades.

Professional securities dealers also account for a significant amount of trading. Much of the trading among dealers is likely done for inventory management and cash management purposes. The professional dealer’s objective is to satisfy the demands of his customers for securities while minimizing the cost of carrying an inventory of securities. There is little need to carry an enormous inventory, however, given the presence of lots of other dealers who all share the same problem. At any given time, a dealer who has insufficient inventory can purchase from a dealer who has excess inventory. Buying or selling securities also may be a convenient means of cash management. The prosperity of dealers and other professional investors lies in earning a higher return on invested funds than the cost of those funds. This job gets harder to the
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Excessive trading extent funds are allowed to sit in demand deposit accounts or money-market instruments. At the end of each trading day, we would expect such professionals to determine whether they have too much or too little cash on hand. They could then pay off a portion of their credit lines or borrow additional amounts, as appropriate. But it might be cheaper simply to sell securities to raise cash or buy securities to use up cash.

The moral of these observations is that as the costs of trading decrease, trading may become a cost-effective means of serving a wide variety of rational objectives. It would not be surprising, therefore, to see rational traders trading more as the cost of trading decreases. We should not cavalierly assume that the increases in trading volumes that have resulted from lower transaction costs are a consequence of irrational trading, or that increasing transaction costs would have a much greater impact on irrational traders than on rational traders.

Moreover, the noise trader theorists may well underestimate some of the social benefits of liquidity that would be lost if trading were made more costly. An important example is the central role that liquidity plays in the market for corporate control. The ability to assemble large blocks of shares in a short period greatly facilitates takeovers, and thereby reduces shareholder/manager agency costs. Significant reductions in liquidity might make managers less attentive to shareholder interests. This is especially true in the United States, where legal restrictions discourage institutional investors from taking more of an active role in corporate management. Both Stout and Summers & Summers identify short-termism as one of the evils produced by excessive trading. Stout, supra note 6, at 682-88 (discussing investor short-termism); Summers & Summers, supra note 5, at 272-74 (discussing managerial short-termism).

69 Both Stout and Summers & Summers identify short-termism as one of the evils produced by excessive trading. Stout, supra note 6, at 682-88 (discussing investor short-termism); Summers & Summers, supra note 5, at 272-74 (discussing managerial short-termism).

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ket for corporate control is the better device for disciplining managers, it is surely the case that removing both mechanisms will leave managers largely unaccountable.

So strong is the connection between highly liquid trading markets and the market for corporate control that viewing takeovers as nonbeneficial seems to be a necessary condition for supporting trading curbs. Andrei Shleifer and Lawrence Summers, for example, have argued that many of the gains created by takeovers come not from better management, but rather from the acquirer’s ability to renege on a variety of informal bargains struck by the old management with employees and other nonshareholder constituencies. Louis Lowenstein, a persistent critic of investors’ focus on the short run, has also been critical of takeovers. Stout has argued that there is no convincing evidence that takeovers have positive welfare effects. Nevertheless, for the many commentators and policymakers who take the contrary position, the social costs of trading curbs must include their adverse effect on the market for corporate control.

In short, the proposition that raising the costs of trading would have a beneficial impact on the welfare of investors rests on a number of empirical presumptions that are highly contestable. It seems premature, to say the least, to prescribe trading curbs as a cure for excessive trading. The case for trading curbs becomes even less compelling when we consider an alternative explanation for excessive trading that suggests a different, less drastic, policy approach. The next Part will describe this alternative view, and Part IV will discuss its policy implications.

III. AN AGENCY APPROACH TO EXCESSIVE TRADING

This Part suggests another possible explanation for apparently excessive trading. Trading could result from conflicts of interest between investors and intermediaries whose compensation is linked to transaction volume. I refer to this as an agency problem,

71 See Louis Lowenstein, What’s Wrong with Wall Street: Short-Term Gain and the Absentee Shareholder 119-59 (1988).
partially in recognition of the fact that financial intermediaries typically occupy a fiduciary relationship with respect to their customers. Others might prefer to think of it as a problem of asymmetric information compounded by asymmetric sophistication. Nothing that I have to say about the problem or its implications turns on the distinction. I also leave for another day the question whether this approach provides insights into the behavior of asset prices. For now, it suffices to suggest that the agency approach is a quite plausible explanation of why investors, even those who do not otherwise appear infused with the gambling spirit, behave as they do. The agency approach has the additional benefit of generating a set of policy suggestions that, as I argue in Part IV, are superior to trading curbs, even from the perspective of reducing irrational trading.

Casual empiricism suggests that many investors do not think they are smarter than the rest of the market. On the contrary, they are afraid that they are not as smart as the rest of the market, and, as a result, they rely more heavily on “expert” intermediaries, such as their brokers, than the facts would warrant. Not surprisingly, these intermediaries invariably advise trading, which earns their fees. Small investors may pay these fees for worthless portfolio turnover or advice not because they have reached a considered judgment that an active trading strategy can beat a buy-and-hold strategy, but rather because they have not even recognized that this is an important question. It is easy for those who study financial markets to forget just how daunting the world of money management appears to the neophyte. Many people appear to be poorly informed about basic concepts of risk and return. We should not be surprised if many investors look to brokers for advice or turn their money over to intermediaries for active management simply because they have very little idea how to go about the whole business of investing and because the cost of learning how to go about it is simply greater than the savings that would be generated. The resulting losses from self-interested intermediary behavior may be

73 See, e.g., Jay Mathews, Maybe They Also Think Convertible Debt Is a Car Loan, Wash. Post, Oct. 18, 1994, at Cl (discussing research showing “that most Americans are abysmally ignorant of basic economic and financial facts”).
"residual losses" that cannot easily be eliminated by investor monitoring or intermediary bonding.\textsuperscript{74}

The securities industry is not uniquely affected by the lack of consumer knowledge about financial products. Depositors put their money in banks that charge high fees despite the presence of banks that charge lower fees. Many individuals for whom term life insurance would appear to be the most cost-effective product purchase whole-life insurance, typically on the advice of an insurance agent. These decisions do not seem explainable as attempts to outguess the herd or the products of persistently optimistic beliefs about the returns on the relevant financial instruments. More likely, they reflect costly information and bad (because partially self-interested) advice.

Investors’ lack of sophistication contributes to these agency problems, but it is not necessary for them to exist. For example, the sale of complex derivatives by intermediaries to their corporate customers appears to raise agency concerns. Because some derivatives are not standardized and traded on an established market, their value cannot be directly observed. Valuations require sophisticated models that may be beyond the technical capability of the customer, leaving the customer dependent on the intermediary for price information.\textsuperscript{75} There is an obvious temptation for the intermediary to shade to its own advantage the valuation information that it provides the customer.\textsuperscript{76} Stout is concerned that derivatives might help investors make ever larger gambles with less up-front money.\textsuperscript{77} The above analysis suggests that she may be right to be concerned, but for the wrong reason. The Securities and Exchange Commission ("SEC"), on the other hand, appears to have focused on the right problem; it has not sought to reduce the use of deriva-


\textsuperscript{76} See id. at 86,111-12 (discussing provision by Bankers Trust of valuation information to Gibson Greetings that differed significantly from Bankers Trust's own computer valuations).

\textsuperscript{77} See Stout, supra note 6, at 708-10.
tives, but instead to ensure that intermediaries provide accurate valuation information when they lead the customer to believe that such information will be forthcoming.

The assumptions about investor behavior that underlie the agency approach are different from those typically employed in rational expectations models. Agency problems arise in part because there exist "unsophisticated" investors, who start out with no explicit model of the return-generating process and may even be unsure whether an active trading strategy or a buy-and-hold strategy generates superior returns. That is why they turn to an intermediary for advice or portfolio management. These investors also may not learn much, if anything, about the return-generating process. Their failure to adapt might be thought of as rational, however, in that the cost of resolving their uncertainties may exceed the amounts they lose through brokerage commissions, mutual fund fees, etc. That would be so if these investors were not suffering dramatic losses by failing to diversify but were merely paying modest fees to intermediaries. It might be more plausible to divide unsophisticated investors into those who fail to diversify adequately and expose themselves to large uncompensated risks and those who avoid idiosyncratic risk but nevertheless trade too much. Investors in the former category would either learn from their mistakes or eventually lose their wealth and drop out of the game (unless their mistakes were correlated and arbitrage imperfect, in which case this part of the model might collapse into a noise trader model). Those in the latter category would earn the market return less some amount of transaction costs that would be paid to intermediaries. So long as the intermediaries did not get too greedy, it might never be cost-effective for the latter category of investors to learn anything other than the fact that diversification is good.78

78 To get a feel for the magnitude of these agency losses, one might note that a typical expense ratio for an actively managed mutual fund is in the range of one percent, see American Ass'n of Individual Investors, The Individual Investor's Guide to Low-Load Mutual Funds 7 (15th ed. 1994) (reporting average expense ratio of 1.26% for domestic equity funds), whereas the expense ratio for an index fund that replicates the S&P 500 may be as little as 0.2%, id. at 819 (reporting 1993 expense ratio of 0.19% for Vanguard's S&P 500 index fund). In short, it seems plausible that the losses that an individual investor suffers at the hands of intermediaries, although not trivial, also are not dramatic.
Nevertheless, it is not necessary for present purposes to draw a sharp distinction between the behavioral and cognitive assumptions underlying the agency approach and those underlying either Stout's model or the noise trader model. I wish for the moment only to focus attention on the behavior of intermediaries and their contribution to excessive trading and to suggest, if that story is persuasive, that the problem of excessive trading may be tractable through less dramatic measures than trading curbs.

IV. **Making Securities Regulation More Attentive to Agency Problems**

Restricting investors' freedom in order to mitigate the consequences of their irrational choices should be a policy of last resort. There are two good, and related, reasons why such a drastic step may be unnecessary, even from the perspective of those who believe that excessive trading takes place. First, before imposing new regulatory restrictions on market participants, we ought to look carefully at the current regulatory system and ask whether it inappropriately encourages or subsidizes trading. Second, viewing trading through the lens of agency costs rather than through the lens of investor irrationality generates more narrowly tailored policy suggestions aimed specifically at reducing socially detrimental trading (again, assuming that such trading takes place). I suggest in this Part that shifting the focus of securities regulation from providing investors with firm-specific information to reducing agency costs might reduce the number of value-destroying trades without burdening value-creating trades. Such a change in focus, then, should appeal to those who believe that excessive trading results from irrationality as well as to those who believe that excessive trading results from agency costs (and should not be unappealing to those who deny that excessive trading exists at all).

A. Revisiting Mandatory Disclosure

As it now stands, securities regulation is primarily concerned with providing extensive firm-specific data to all market participants. The present mandatory disclosure system departs signifi-

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significantly from the original conception of disclosure regulation. Disclosure laws initially were designed to inform a purchaser of securities about the incentive structure facing the seller, typically a corporate promoter.\textsuperscript{80} The required information related to the financial interests of the promoter and other interested parties rather than to the characteristics of the company being floated. The notion that investors need to know everything there is to know about the company itself (and in real time) is of more recent vintage. The regulatory system now sends a very explicit message to investors that they should care about firm-specific data and that it is indeed foolhardy to invest without a detailed examination of such data. Felicitously, this is exactly the message that many intermediaries, such as full-service brokers and investment analysts, are sending, and it seems likely that the government's apparent agreement is a useful persuasive device. Securities regulation may therefore contribute to investors' perception that the key to the investment game is finding a skilled intermediary to make sense of this firm-specific data. In addition, because this data is constantly changing, investors may believe that their portfolios must change to keep pace. Thus, the mandatory disclosure system might actually exacerbate the agency problems outlined above.

If investors ought to hold broadly diversified portfolios and trade rarely, however, they have little need for firm-specific data. Although it would be overkill to prohibit firms from voluntarily disclosing firm-specific data,\textsuperscript{81} there does not seem to be any good reason to force disclosures that the market does not otherwise provide. Indeed, I have argued elsewhere that a significant reduction in the amount of mandatory disclosure would not be detrimental.\textsuperscript{82}

Although the argument need not be repeated here, I believe there are strong theoretical and, to a lesser extent, empirical reasons to believe that the mandatory disclosure system as it now exists con-

\textsuperscript{80} See Paul G. Mahoney, Mandatory Disclosure as a Solution to Agency Problems, 62 U. Chi. L. Rev. (forthcoming 1995) (manuscript at 46, on file with The Virginia Law Review Association).

\textsuperscript{81} Voluntary disclosures may reduce the cost to informed investors of gathering information and therefore incorporating it into the price of securities. See id. at 49.

\textsuperscript{82} See id.
tributes little to the informational efficiency of securities markets, and that eliminating most firm-specific disclosures would have little effect. It would also be useful to change the standard rhetoric of securities regulation to de-emphasize the importance of firm-specific data and instead emphasize the benefits of broad diversification and low turnover.

Moreover, one who believes that the problem is noise trading rather than intermediary self-interest should reach exactly the same conclusion. The essence of noise trading is that the trader erroneously believes noise to be information. But where does the noise come from? In some sense it is all around us. Yet even noise is seldom costless. If I decide that companies with low price/earnings ratios are likely to outperform companies with high price/earnings ratios, I have to go to some effort to acquire the latest earnings data for each company in which I am interested. In general, any irrational trading strategy based on firm-specific data requires the expenditure of resources to obtain data about various firms. The lower that cost, the more such traders should trade. Reducing the cost of gathering noise is precisely the effect of mandatory disclosure. Although the mandatory disclosure system may produce little or no information, it produces noise in mind-boggling quantities. Reducing the availability of this free noise should raise the cost of, and therefore deter, noise trading.

Stout recognizes that mandatory disclosure can be viewed as a subsidy to trading because it reduces the cost of gathering firm-specific data used for trading purposes. She is unconvinced, however, that scaling back the mandatory disclosure system would be beneficial, because the provision of free data might also cause investors’ expectations to converge. To the extent one believes that trading is more likely generated by self-interested advice from intermediaries than by investor disagreement, that concern is less important.

84 Stout, supra note 6, at 697.
85 Id. at 693-97.
Indeed, the behavior of intermediaries and the way in which securities regulation affects that behavior can be understood from the perspective of either agency costs or noise trading. It has been long understood that securities analysts and the securities firms that employ them are great supporters of the mandatory disclosure system. Although that seems obvious at first (who would object to free information?), viewed more carefully that support is puzzling. As noted above, the evidence suggests that by the time public disclosures are made, they contain little or no information. An analyst presumably values data only if that data can be used to induce clients to trade, and in a world with neither irrationality nor agency problems, firm-specific data will induce trading only if it constitutes information. If an analyst’s clients include noise traders, or unsophisticated traders who are susceptible to agency losses, however, the benefits that the analyst and his employer derive from the mandatory disclosure system are much more understandable. The rhetoric of mandatory disclosure provides support for the analyst’s claim to unsophisticated investors that successful investing requires the analysis of firm-specific data, and that data is available to the analyst at low cost. Noise traders also may be induced to trade based on data that is not information. Analysts would therefore want to have as much noise on hand as possible in order to accommodate the broadest possible range of irrational trading strategies. Again, the disclosure system provides this data at trivial cost, which is a significant subsidy to those in the business of serving, or encouraging, noise traders.

86 See, e.g., Joel Seligman, The Historical Need for a Mandatory Corporate Disclosure System, 9 J. Corp. L. 1, 8-9 & n.26 (1983) (noting securities industry support for mandatory disclosure system).

87 Amar Bhide has noted that the prohibition on insider trading also increases market liquidity. Amar Bhide, The hidden costs of stock market liquidity, 34 J. Fin. Econ. 34, 37 (1993). We can take the point a step further and note that the prohibition provides assistance to the securities industry in its attempts to induce trading. An integrated securities firm includes not only analysts and brokers who try to convince customers to trade but also dealers who buy and sell securities to meet the resulting demand. Those dealers profit by earning a spread between the price at which they buy and the price at which they sell. That profit would be endangered if corporate insiders or other traders were able to trade based on significant corporate developments unknown to the dealer. In that event, the dealer would find himself a consistent source of trading profits to the better informed. See David D. Haddock & Jonathan R. Macey, Regulation on Demand: A Private Interest Model, with an Application to Insider Trading Regulation, 30 J.L. & Econ.
This does not mean that all disclosure is bad. Indeed, certain types of disclosure might alleviate excessive trading caused by agency problems (and perhaps that caused by irrationality) to a modest degree. For example, mutual fund prospectuses might be required to disclose that there is no generally accepted evidence that the fund’s trading achieves anything other than increasing the brokerage and advisory fees paid to the fund’s sponsor. Brokers might be required to disclose that the evidence suggests that the client will do no better by following the broker’s advice than by throwing darts at the stock page. Requiring such disclosures would be analogous to making a casino disclose the house’s edge on games of chance. But the current mandatory disclosure system is concerned with something entirely different. It provides huge amounts of firm-specific data, which is singularly useful for constructing irrational trading strategies. The current system is more analogous to making the casino disclose which slot machines have paid off, in which order, in the last month—this does not improve the gambler’s odds at all, but it may encourage those gamblers who profess to see a “pattern” in the slot machine payoffs.

B. How Can We Attack Agency Problems?

In general, if we want to reduce the amount of trading, we should redesign the regulatory system to focus less on the provision of firm-specific data and more on the alignment of the interests of financial intermediaries with those of their customers. The latter part of this prescription, however, is easier said than done. Many obvious solutions, such as prohibiting intermediaries from engaging in particular trading strategies, or limiting the manner in which they may be compensated, have the same potential drawbacks as trading curbs. As a general matter, we should be suspicious of “a regime in which a confident law-and-economics approach is used to interfere with consumer choices by policing claims of investment advisers and brokers” because such an approach can have the perverse effect of stifling private innovations that could ameliorate agency problems.

311, 331 (1987). Insider trading prohibitions thus reduce the cost to a securities firm of facilitating its customers’ trades.

The history of securities regulation provides some cautionary tales. It was a basic assumption of the Congress that enacted the Securities Exchange Act of 1934 that the rules of the New York Stock Exchange should be subject to SEC approval or disapproval because otherwise those rules would advance the interests of member firms over those of investors. Yet the consequence of SEC oversight was to freeze in place until 1975 a system of price-fixing with respect to brokerage commissions. The system of fixed commissions predated the federal securities laws, but for many years it was thought that SEC oversight of exchange rules insulated the price-fixing from antitrust attack. It therefore seems likely that the regulatory system delayed the breakup of the cartel (although one could take the contrary view that the SEC's ultimate decision to oppose the practice hastened its end).

Mutual fund regulation has fared no better. The Investment Company Act of 1940 ("ICA") comprehensively regulates the conduct of the mutual fund business with the express purpose of preventing fund managers from advancing their own interests at the expense of investors. The statute, however, privileges the traditional mutual fund structure, in which a fund sponsor controls the management of the fund and receives compensation for providing investment advice, underwriting, brokerage, and administrative

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90 See generally 6 Louis Loss & Joel Seligman, Securities Regulation 2851-80 (3d ed. 1990) for a description of the demise of fixed commissions.


92 The cartel story is not the only possible interpretation of the fixed commission rule. It seems possible that issuers, rather than brokers, could have been the moving force behind the rule. Issuers may have wanted to raise the cost of trading in order to impede the market for corporate control. But no matter what the explanation for the rule, government oversight would have been valuable to those seeking to maintain the status quo.


94 Id. § 80a-1(b)(2) (1988).
services to the fund. Needless to say, one who controls a pool of investments and is compensated principally for investment advice and brokerage has an incentive to induce trading.

The SEC has not been hostile to innovations that better align the interests of a fund with those of its shareholders, but the regulatory structure imposes significant costs on the innovators. An excellent example is the reorganization of the Vanguard Group, which has developed a reputation for low costs. In the early 1970s, the predecessor to the Vanguard Group was organized like most fund families, with an investment advisory firm providing the funds' management and administrative personnel and services, making their investment decisions, and underwriting and distributing their securities, charging investors a sales load and charging the funds an advisory fee. In 1974, the funds' independent directors decided to make the funds more independent of the investment advisor by creating a management company that would be wholly owned by the funds themselves and would employ officers and managerial and clerical staff unaffiliated with the investment manager. The management company (to be called the Vanguard Group) would provide management and administrative services to the funds at cost. It would also negotiate the investment advisor's fee on an arms-length basis and would be able to replace the investment advisor if it so desired. Three years later, the Vanguard Group also decided to internalize the distribution of the funds' shares, also at cost, in order to eliminate the sales load charged by the investment advisor to new investors.

95 The ICA comprehensively regulates the structure and governance of mutual funds, contemplating a structure in which the persons controlling a fund obtain their compensation principally through acting as investment advisers, brokers, and/or underwriters for the fund. See id. § 80a-15 (mandatory provisions of investment advisory and underwriting contracts); id. § 80a-17 (prohibitions on self-dealing transactions); id. § 80a-18 (restrictions on capital structure).


97 Id. at 84,116.


This new structure seems artfully designed to reduce agency problems that arise between the sponsor/investment advisor and the funds (although it could create new agency problems between the new managers and the funds). Indeed, the new structure resulted in significantly lower expenses. The creation of a management company that was owned by the funds rather than by the investment advisor, however, was not contemplated by the ICA and violated a number of its "self-dealing" prohibitions. Thus the funds were required to apply to the SEC for a number of exemptions from the provisions of the ICA. These exemptions were granted, but not without substantial effort and cost. The SEC's administrative law judge, for example, initially denied Vanguard's request to internalize the distribution function. A revised application was then granted, but subject to the condition that the funds not be permitted to refer to themselves as "no-load." An appeal to the full Commission removed this restriction and granted the requested exemptions in 1981, thus finally completing the process of obtaining regulatory clearance for an innovation designed in 1974. Meanwhile, in the first year of operation under the new structure (under a provisional SEC clearance), Vanguard's combined market share of industry sales, excluding money market funds, doubled as investors responded to reduced costs.

The general, and fairly obvious, lesson of these histories is that regulatory systems can preclude or raise the cost of private innova-

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100 See id.
101 In particular, section 17(a) of the ICA prohibits any affiliated person of a registered investment company from selling any security to, or purchasing any security from, the investment company. 15 U.S.C. § 80a-17(a) (1988). The purchase by the Vanguard funds of shares in The Vanguard Group violated this provision. The proposed structure also violated some of the self-dealing prohibitions of § 80a-17(d).
102 Section 17(b) of the ICA gives the SEC the authority to grant exemptions from the provisions of section 17(a). Id. § 80a-17(b). The SEC also has exemptive authority with respect to the § 80a-17(d) prohibitions.
105 Vanguard Group, [1981 Transfer Binder] Fed. Sec. L. Rep. (CCH) at 84,129 (granting final exemptive relief with respect to proposal to internalize distribution function); see also In re Wellington Fund, 45 S.E.C. 701 (1975) (granting final exemptive relief with respect to proposal to create wholly owned management company).
tions designed to resolve the very problems that led to the regulation. Whether one believes in noise trading, heterogeneous expectations, or agency problems, it would be prudent to look carefully at all aspects of securities regulation and attempt to determine the extent to which it has rigidified traditional institutional arrangements under which intermediaries can take advantage of the gaps in information and understanding of retail investors. Securities regulation might be better designed on the model of corporate law, providing a number of “standard form” solutions to particular agency problems, but relying heavily on default rules so that market participants will retain the flexibility to devise new solutions to the inevitable conflicts between the interests of intermediaries and investors. Over time, we would expect that high-quality, low-cost intermediaries would themselves perform the function of educating investors, just as high-quality, low-cost producers in other markets learn how to send credible signals of their quality that help consumers overcome the high cost of information. Indeed, there may be some cause for optimism. Over the past decade, discount brokers have taken up a steadily rising share of the brokerage market, and passive management strategies have become more and more prominent among pension funds and mutual funds. The learning process may just take time.

It is in the self-interest of many intermediaries—brokers, dealers, investment advisors, and mutual fund sponsors, to name a few—that their clients trade heavily. It may be in the interest of many of the clients, however, not to trade so much. But before advocating regulatory responses to this problem, a policymaker concerned about “excessive” trading would do well to ask whether securities regulation helps to prolong the lives of intermediaries who do not serve their customers’ interests or puts barriers in the way of new, untried institutional arrangements that might better align the interests of intermediaries with those of investors.

108 See Securities Indus. Ass’n, supra note 11, at 36.
Financial economists have had a difficult time explaining why investors trade as much as they do. The real question is whether we should blame the economists or the investors for this state of affairs. The noise trader literature argues that the behavior of securities markets can be best explained by assuming a limited degree of investor irrationality. As I have tried to show, the investors in Stout’s model also behave irrationally. Intriguing as these models are as a positive explanation for investor behavior, it seems far too early to use them as a basis for significant policy changes, particularly if those changes involve restricting investor choice. More work needs to be done on why rational investors trade, how much they trade, and how much benefit they derive from their trading.

While this work is being done, however, it is worth considering the extent to which a more mundane set of problems might contribute to excessive trading. A good deal of trading may result from a simple set of agency problems that arise between unsophisticated and poorly informed investors on the one hand and self-interested financial intermediaries on the other. Fortuitously, thinking about this problem also provides some insights into how we might address irrational trading without unduly limiting investor freedom. Reducing the emphasis of securities regulation on firm-specific data, and introducing a greater degree of flexibility into the regulatory system in order not to discourage innovations that could resolve agency conflicts, should be an attractive solution to excessive trading regardless of whether that trading results from agency problems or investor irrationality.