

# MANIPULATING CITADEL: PROFITING AT THE EXPENSE OF RETAIL STOCK TRADERS' MARKET MAKERS<sup>Ψ</sup>

MERRITT B. FOX,<sup>†</sup> LAWRENCE R. GLOSTEN<sup>‡</sup> & SUE S. GUAN<sup>\*</sup>

*This Article considers whether securities market strategies designed to profit at the expense of so-called “internalizers” should properly be considered illegal manipulation. An internalizer acquires from a brokerage firm the right to be the market maker for the broker’s full order flow from its retail customers, promising in return to execute each order at a price slightly better than the best price available on any exchange (“price improvement”) as well as to pay the broker a fee for each executed order (“payment for order flow”). Almost all retail trading—about 29% of the country’s total share volume—is executed in this fashion, amounting in 2021 to about \$41 trillion in transactions, a figure almost twice the nation’s GDP that year.*

*The internalizer can run a viable business while promising both price improvement and payment for order flow because retail traders rarely possess information not already reflected in price. This makes the buy and sell orders internalizers receive less dangerous to fill than the more varied order flow going to exchanges. The internalizer’s business model, though, has a vulnerability: a trader can influence what is the best price available on the exchanges and then profit by sending an order to an internalizer that, as a result, executes at a price more favorable to her.*

*Using a framework that derives its key results from microstructure and financial economics, this Article seeks answers to four questions: (1) Exactly what actions in the market can traders take that would allow them to profit in this fashion? (2) What are the consequences to the various players in the market from traders undertaking such actions? (3) Would it be socially desirable to use legal prohibitions to try to prevent traders from profiting in this fashion? (4) How are such practices treated under existing law, and what reforms, if any, are desirable?*

*The usual rhetoric concerning the evils of manipulation stresses its unfairness and its distortion of prices. This Article, however, concludes that strategies aimed at profiting off internalizers raise no serious fairness issues. Equally surprisingly, it concludes that if these strategies were freely occurring, they would probably indirectly marginally improve price accuracy. It is unlikely, however, that this effect would be more socially valuable than the practices’ socially negative impact on liquidity. This negative social welfare assessment becomes that much bigger when one adds in the resources consumed by traders engaging in these strategies and by internalizers to protect against them, resources that otherwise would have been available to produce valuable goods and services for society.*

*The status of these strategies under current case law is uncertain. If they are ultimately adjudicated to be legal, their use would expand greatly. The language of Sections 9(a)(2) and 10(b) of the Securities Exchange Act of 1934 and SEC Rule 10b-5 leave room, however, for the development of a coherent doctrine that definitively extends the Act’s prohibitions against manipulation to cover these strategies. The analysis in this Article gives the courts good reasons to do so.*

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<sup>†</sup> Arthur Levitt Professor of Law, Columbia Law School.

<sup>‡</sup> S. Sloan Colt Professor of Banking and International Finance, Columbia Business School.

<sup>\*</sup> Assistant Professor of Law, Santa Clara University School of Law.

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## INTRODUCTION

Of all the areas of securities regulation, manipulation is probably the least well understood, both from a legal and economics perspective. The Securities Exchange Act of 1934 (the “Exchange Act”) expressly prohibits manipulation pursuant to Section 9 and authorizes the Securities and Exchange Commission (the “SEC”) to promulgate rules against it under Section 10(b).<sup>1</sup> After 88 years, however, there continues to be sharp disagreement among commentators as to what behaviors, if any, should be made illegal as manipulation, and the minimal case law interpreting these statutory provisions has been fraught with confusion.<sup>2</sup>

Part of the reason for this shortfall in understanding is that the market strategies potentially labeled as manipulation vary so much from one another in form and ultimate consequences. This Article is the third in a series in which we have attempted to shed light on manipulation, each Article being devoted to a particular set of trading strategies.<sup>3</sup> In this piece, we examine strategies designed to profit at the expense of so-called “internalizers,” sometimes also referred to as “auto-quoters,” “automatics,” “OTC market makers,” or “wholesalers.”<sup>4</sup> Examining these strategies is important: 29% of all trades

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<sup>1</sup> See 15 U.S.C. § 78i(a)(2); 15 U.S.C. § 78j(b).

<sup>2</sup> See, e.g., Daniel R. Fischel & David J. Ross, *Should the Law Prohibit “Manipulation” in Financial Markets?*, 105 HARV. L. REV. 503, 506–07 (1991) (“[N]o satisfactory definition of [manipulation] exists. . . . [T]he concept of manipulation should be abandoned.”); Robert C. Lower, *Disruptions of the Futures Market: A Comment on Dealing with Market Manipulation*, 8 YALE J. ON REG. 391, 392 (1991) (“Manipulation is difficult to define. . . . [D]rawing a line between healthy economic behavior and that which is offensive has proved to be too subjective and imprecise to produce an effective regulatory tool.”). The Supreme Court has even on occasion apparently done away with any distinction between a “manipulative” device and a “deceptive” one by determining that any violation of Section 10(b) must involve a misrepresentation. See *Schreiber v. Burlington N., Inc.*, 472 U.S. 1, 7–8 (1985) (“Congress used the phrase ‘manipulative or deceptive’ in § 10(b) as well, and we have interpreted ‘manipulative’ in that context to require misrepresentation.” *Id.* (citing *Santa Fe Indus., Inc. v. Green*, 430 U.S. 462, 476–77 (1977); *Piper v. Chris-Craft Indus., Inc.*, 430 U.S. 1, 43 (1977); *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 199 (1976)).); see also Steve Thel, *Regulation of Manipulation Under Section 10(b): Security Prices and the Text of the Securities Exchange Act of 1934*, 1988 COLUM. BUS. L. REV. 359, 378–79 (1988) (describing the difficulties of defining manipulation under federal securities law).

<sup>3</sup> See Merritt B. Fox, Lawrence R. Glosten & Gabriel V. Rauterberg, *Stock Market Manipulation and Its Regulation*, 35 YALE J. ON REG. 67 (2018) [hereinafter Fox et al., *Manipulation*] (relating to trade-based manipulation); Merritt B. Fox, Lawrence R. Glosten & Sue S. Guan, *Spoofing and Its Regulation*, 2021 COLUM. BUS. L. REV. 1244, 1292–1310 (2022) [hereinafter Fox et al., *Spoofing*] (relating to certain types of quote-based manipulation commonly called “spoofing”).

<sup>4</sup> See, e.g., Application of Terrance Yoshikawa for Review of Disciplinary Action Taken by NASD, Exchange Act Release No. 53731, 87 SEC Docket 2580 ¶ 5 (Apr. 26, 2006); RHODRI PREECE ET AL., DARK POOLS, INTERNALIZATION, AND EQUITY MARKET QUALITY, CFA INST. 16–17 (Oct. 2012), <https://www.cfainstitute.org/-/media/documents/article/position-paper/dark-pools-internalization-equity-market-quality.ashx>; U.S. Sec. & Exch. Comm’n, *Proposed Order Competition Rule 18* (Dec. 14, 2022), <https://www.sec.gov/rules/proposed/2022/34-96495.pdf> (“The term ‘wholesaler’ is not defined in Regulation NMS, but commonly refers to an OTC

in the country are internalized, representing about \$41 trillion in transactions in 2021.<sup>5</sup> In the first quarter of 2022, six major internalizers executed 23.9% of share volume in NMS stocks.<sup>6</sup> These are mostly executions of orders from retail traders and the bulk of all retail orders—more than 90% of marketable orders in NMS stocks—are sent to internalizers rather than to the exchanges.<sup>7</sup>

An internalizer acquires from a brokerage firm the right to be the market maker for the broker's full flow of buy and sell marketable orders submitted by the broker's retail customers.<sup>8</sup> The internalizer utilizes what is at the moment a given stock's best bid and offer available on any of the nation's stock exchanges (the national bid (NBB) and national best offer (NBO)) as its benchmarks for determining the price at which it will execute these retail orders.<sup>9</sup> The internalizer promises that each sell order that it executes will be at a price some amount above the NBB, and each buy order at a price some amount below the NBO.<sup>10</sup> In addition to this promised "price improvement," the internalizer also typically pays the broker a fee for each order that it executes, often referred to as "payment for order flow."<sup>11</sup> The retail trader thus not only benefits from her order executing at a better price than is available on the exchanges, she potentially gains as well from the fee paid to the broker, which can act as a subsidy to lower what the trader needs to pay in brokerage commissions.<sup>12</sup> Indeed, most online brokers provide their services to retail customers for no charge at all, with payment for order flow constituting a substantial source of the brokers' revenue from their brokerage activity.<sup>13</sup>

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market maker that seeks to attract orders from broker-dealers that service the accounts of individual investors, referred to in this release as 'retail brokers.'").

<sup>5</sup> According to publicly available data from the Chicago Board Options Exchange, about 40% of all share transactions occurred off exchanges, which means they were internalized or executed on dark pools. *Historical Market Volume Data*, CHI. BD. OPTIONS EXCH., [https://www.cboe.com/us/equities/market\\_statistics/historical\\_market\\_volume/](https://www.cboe.com/us/equities/market_statistics/historical_market_volume/). FINRA data for the same month shows that 73% of transactions that occurred off exchanges were internalized. *OTC Transparency Data*, FINRA, <https://otctransparency.finra.org/otctransparency>. This means that about 29% (.40 x .73) of all share transactions are internalized. In 2021, notional volume totaled \$142 trillion, meaning that internalized order flow was about \$41 trillion (.29 x \$142 trillion).

<sup>6</sup> U.S. Sec. & Exch. Comm'n, *supra* note 4, at 19 n.39, Table 1 (more than 90% of retail investors' marketable orders are routed to internalizers).

<sup>7</sup> *Id.* at 6 n.5, 201 Table 3 (more than 90% of retail investors' marketable orders are routed to internalizers). See Phil Mackintosh, *Who Counts as a Retail Investor*, NASDAQ (Dec. 17, 2020), <https://www.nasdaq.com/articles/who-counts-as-a-retail-investor-2020-12-17>. Mackintosh is the Chief Economist at Nasdaq.

<sup>8</sup> See Merritt B. Fox, Lawrence R. Glosten & Gabriel V. Rauterberg, *The New Stock Market: Law, Economics, and Policy* 289 (2019) [hereinafter FOX ET AL., *THE NEW STOCK MARKET*].

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> *Id.* at 290–91.

<sup>13</sup> See, e.g., CHARLES SCHWAB, *HELD NMS STOCKS AND OPTIONS ORDER ROUTING PUBLIC REPORT* (Jan. 2022), [https://content.schwab.com/drupal\\_dependencies/psr/606/2022-Q1-Schwab-Quarterly-Report.pdf](https://content.schwab.com/drupal_dependencies/psr/606/2022-Q1-Schwab-Quarterly-Report.pdf); *Historical 606 Disclosures*, TD AMERITRADE, <https://www.tdameritrade.com/disclosure/historical-606-disclosure.html#:~:text=Rule%20606%20exempts%20broker%2Ddealers,totals%20may%20not%20equal%20100%25>.

The willingness of an internalizer to both improve price and pay a fee stems from the fact that retail traders—its primary source of orders—generally possess no information not already reflected in price, i.e., they are “uninformed.”<sup>14</sup> In contrast, liquidity suppliers to exchanges—the ones that set the bids and offers used as benchmarks by the internalizers—face an order flow from an anonymous mix of uninformed and informed traders.<sup>15</sup> At any moment in time for any given stock, the internalizer and the liquidity supplier on the exchange will each sell shares to a trader submitting a buy order at a price higher than the price at which it will buy such shares from a trader submitting a sell order.<sup>16</sup> Each will on average make a profit buying and selling this way when it is dealing with an uninformed trader.<sup>17</sup> In contrast to the internalizer, however, the liquidity supplier on the exchange faces a significantly greater possibility that the trader it is buying from, or selling to, will be informed.<sup>18</sup> On average, the liquidity supplier will be losing when, at its bid price, it buys from an informed investor or, at its offer price, sells to an informed investor.<sup>19</sup> To break even, therefore, the exchange liquidity supplier must set its bid and offer wide enough apart that the money it makes from buying from and selling to uninformed traders covers these losses from dealing with informed traders.<sup>20</sup> The internalizer does not have this worry because very few of its orders come from informed traders.<sup>21</sup> Thus, buying and selling the orders from retail traders at prices somewhat more favorable to these traders than the exchange liquidity suppliers’ NBB and NBO can still yield a profit.<sup>22</sup>

The internalizer’s business model has a vulnerability, however, and this vulnerability gives rise to the possibility of trading practices that might properly be branded as illegal manipulation. Consider a trader with a retail account who plans to request his broker to buy or sell a certain amount of stock and who knows that the broker will send that order to an internalizer. Suppose that, immediately in advance of placing this order with the broker, the trader, without fear of legal sanction, can take an action in the market that moves the NBB or NBO. By doing so, he can favorably influence the price at which the order sent to the internalizer is executed because the NBB or NBO is the benchmark

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<sup>14</sup> See Fox et al., *The New Stock Market*, *supra* note 8, at 289–92.

<sup>15</sup> *Id.*

<sup>16</sup> See *infra* Part III.C.

<sup>17</sup> *Id.*

<sup>18</sup> See Fox et al., *The New Stock Market*, *supra* note 8, at 239.

<sup>19</sup> The economics of liquidity supply is discussed in Part III.C. The basic idea here, though, is that the trader in possession of non-public information indicative of the value of a share will not buy unless that information suggests that the share is worth more than the liquidity supplier’s offer and will not sell unless it suggests that the share is worth less than the liquidity supplier’s bid. See *id.* at 239.

<sup>20</sup> *Id.*

<sup>21</sup> See, e.g., *id.* at 221.

<sup>22</sup> See U.S. Sec. & Exch. Comm’n, *supra* note 4, at 8 n.7, Table 7 (based on price impact, calculating adverse-selection costs of marketable orders of individual investors in all NMS stocks to be 71% lower at wholesalers than on exchanges).

for that price. Should the cost, if any, of this quote-moving action be less than the action's favorable influence on the price at which the order being sent to the internalizer will execute, the trader will be made better off by undertaking this action. Because trading is a zero-sum game, the internalizer would be commensurately worse off than if the action had not been undertaken.

This Article seeks answers to four questions: (1) Exactly what actions in the market can traders take that would allow them to profit in this fashion? (2) What are the consequences to the various players in the market from traders undertaking such actions? (3) Would it be socially desirable to use legal prohibitions to try to prevent traders from profiting in this fashion? (4) How are such practices treated under existing law, and what reforms, if any, are desirable?

In answering these four questions, we take internalization as a given. We recognize there is a debate as to whether internalization, and in particular payment for order flow, is socially desirable. That, though, is not the focus of this Article, which is about whether and how to limit strategies that enable traders to profit at the expense of internalizers. One might argue that the two subjects are inextricably linked because allowing traders to freely use these strategies would likely shrink the internalization industry substantially. To the extent the problems raised by the industry's critics are valid, our view is that they should be confronted directly. As will be seen, trying instead to deal with them by allowing free use of these strategies would lead to a needless waste of resources as traders and internalizers seek to outsmart each other. And it would siphon off to private actors—the sophisticated users of these strategies—gains that otherwise would have been enjoyed in part or in whole by retail investors.<sup>23</sup>

Getting answers to these four questions is important. The vast majority of retail trades in the United States is executed by internalizers. More than 90% of retail investors' marketable orders in NMS stocks is sent to internalizers rather than to exchanges.<sup>24</sup> As noted, these internalized retail trades represented roughly 29% of all equity share volume in the U.S., or about \$41 trillion for the year 2021, and roughly a quarter of share volume in NMS stocks was sent to internalizers in the first quarter of 2022.<sup>25</sup> Wide use of these strategies could have a significant impact. Consider one example, a successful government enforcement action against an individual trader who sought to take advantage of this vulnerability. The government alleges that this one trader accrued tens of millions of dollars per year in trading profits, with the

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<sup>23</sup> See *infra* Part IV.C for a brief discussion of the debate on internalization and an analysis of why, to the extent that its critics have validly identified problems, trying to deal with them is a poor reason on its own for allowing traders free use of these strategies.

<sup>24</sup> U.S. Sec. & Exch. Comm'n, *supra* note 4, at 6 n.5, 201 Table 3.

<sup>25</sup> *Id.* at 19 n.39, 191 Table 1 (more than 90% of retail investors' marketable orders are routed to internalizers); see *supra* note 5.

internalizer suffering losses comparable in amount.<sup>26</sup> To the extent that the markets for providing internalizing services and brokerage services are competitive, the costs to internalizers from such activities will get passed on in part or in whole to ordinary retail traders. One way for the internalizers to cover these costs would be to provide less price improvement relative to the NBB and NBO. Another way would be to pay less for brokers' order flows, with brokers in turn potentially raising their commissions to compensate for the reduction in payment for order flow that they receive.

In terms of the social welfare implications of strategies allowing traders to profit in this way, it may at first glance seem obvious that a trading strategy leading to an increase in the cost of retail trading is undesirable. A serious examination of the issue, though, requires digging deeper. It needs an exploration of the impact of these strategies on the full range of market participants, and of how the presence of traders engaging in these strategies affects the key social goods provided by a well-functioning securities market: liquidity and relatively accurate share prices.

The normative and analytical building blocks of our framework derive from key results in microstructure and financial economics. Normatively, we posit that the primary social functions of trading markets pertain to directing the efficient allocation of capital across firms and between households and enterprises over time, allocating risk efficiently, and providing signals to help various mechanisms of corporate governance work better. Price accuracy of shares and the liquidity of the market they trade in act as useful proxies for these broad social functions.<sup>27</sup>

In terms of determining what strategies are appropriately considered illegal as manipulation, the Exchange Act's statutory framework provides remarkably little guidance. Section 9(a)(2) prohibits effecting "a series of transactions" in a security (i) that "creat[e] actual or apparent active trading" or affect its price (ii) "for the purpose of inducing the purchase or sale of such security by others."<sup>28</sup> When applied to engaging in *trades* that move the NBO or NBB, the first half of the proscription captures conduct that will be part of nearly *every* trading strategy, no matter how innocuous: buying or selling a security inherently entails the creation of an actual trade and often affects its price. The force of the prohibition is thus found in the second half of the proscription, the vague clause relating to purpose. When applied to submitting *quotes* that change the NBB or NBO, there is an additional question: whether the first half of the proscription is even triggered. Placing into the market an offer to sell, or an offer to buy, at a given price is clearly an "action," but with

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<sup>26</sup> See Complaint, SEC v. Taub et. al., No. 16-cv-09130 (D.N.J. Dec. 12, 2016), 2016 WL 7209936.

<sup>27</sup> See *infra* Part II.C. For a more in-depth discussion on how price accuracy and liquidity act as such proxies, see FOX ET AL., THE NEW STOCK MARKET, *supra* note 8, at 33–47.

<sup>28</sup> 15 U.S.C. § 78i(a)(2).



no counterparty involved, it is hard to call it a “transaction.” If it is not a transaction, Section 9(a)(2) does not apply—whatever the purpose of submitting the quotes.

As for Section 10(b), it starkly prohibits the use, in violation of an SEC rule, of “any manipulative or deceptive device” in connection with trading a security.<sup>29</sup> The term “manipulative” on its face is capacious enough to potentially capture any market strategy that changes the NBB or NBO in order to obtain a more favorable price from an internalizer. But the statute fails to define what the reach of the term “manipulative” in fact is, and the only SEC attempt to do so through rulemaking merely refers back to Section 9.<sup>30</sup> Moreover, the rule promulgated under Section 10(b) that has been used to impose liability for certain kinds of allegedly manipulative behavior is Rule 10b-5, which does not even contain the word “manipulation.”<sup>31</sup>

Currently, there is no court-adjudicated decision that finds a strategy to profit at the expense of an internalizer to be illegal under either of these Exchange Act provisions. Case law dealing with trading strategies unrelated to internalizers is mixed in terms of its implications as to the legality of internalizer-burdening strategies. We will see that such strategies can be profitable, and so, should the courts find them to be legal, their use can be expected to grow substantially.

In seeking to find a way out of this legal quagmire, this Article employs a similar approach to that of our earlier work. So as to not pre-judge the outcome of either our normative social welfare analysis or legal analysis, we use the somewhat awkward term “internalizer-burdening” to describe the trading strategies that are the subject of our inquiry. We start by describing two kinds of trading strategies that are designed to profit at the expense of an internalizer: “quote-based” and “trade-based.” We suggest that, for it to be socially desirable for the strategy to be considered manipulation prohibited by the Exchange Act, a four-part litmus test must be satisfied. First, is the strategy, exclusively as a conceptual matter, distinguishable from other, plainly acceptable market strategies, and does the strategy cause social harm? Second, does the strategy plausibly fit under the general dictionary meaning of the term “manipulation,” and is its illegality not otherwise ruled out by the language of existing applicable statutory provisions on SEC rules? Third, are there circumstances under which the strategy can yield positive expected profits, and do they occur often enough to raise concern? Fourth, are there practical

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<sup>29</sup> 15 U.S.C. § 78j(b).

<sup>30</sup> *See* 17 C.F.R. § 240.10b-1 (“The term manipulative . . . is hereby defined to include any act or omission to act with respect to any security exempted from the operation of section 12(a) . . . pursuant to any section in this part which specifically provides that this section shall be applicable to such security if such act or omission to act would have been unlawful under section 9(a).”).

<sup>31</sup> 17 C.F.R. § 240.10b-5.

methods for prohibiting the strategy whereby the social gains from its reduction or elimination exceed the social costs of doing so, including deterring socially beneficial activity that might be erroneously classified as instances of the practice?<sup>32</sup> In sum, this four-part test starts with an approach to statutory interpretation that identifies the outer borders of the plausible reach of the prohibitions of internalizer-burdening manipulation under Sections 9 and 10(b), and then seeks to determine on policy grounds what activities within these outer borders ought actually to be prohibited.

The usual rhetoric concerning the evils of manipulation is that it is unfair and distorts prices. This Article, however, concludes that these trading strategies raise no serious fairness issues. Surprisingly, it also concludes that, if these strategies were freely occurring, they would in fact probably marginally improve price accuracy. It is unlikely, however, that this positive effect would be more socially valuable than the sum of each of the strategies' negative impacts on liquidity. This is especially so when one adds to this accounting the resources consumed by the traders to engage in these strategies and by internalizers to protect against them, resources that otherwise would have been available to produce valuable goods and services for society. This conclusion that it would be socially desirable to minimize the use of such strategies is implemental using the current securities law framework. Although the language of the Exchange Act Sections 9(a)(2) and 10(b) and of SEC Rule 10b-5 is ambiguous and the applicable case law not fully coherent, there is room to definitively extend the Act's prohibitions against manipulation to cover these strategies.

The remainder of this Article proceeds as follows: Part I provides a more detailed description of the two types of internalizer-burdening trading. Part II establishes the normative framework for evaluating whether a trading practice that might be labeled illegal manipulation is genuinely socially undesirable and whether the social benefits of prohibiting the strategy outweigh the costs. There we identify the ways in which a trading practice can affect the efficiency with which the economy functions. We also explain how we assess the fairness of a given practice. Part III briefly describes the basic institutional and economic features of the stock market to provide the tools for understanding the operations and the effects of the complex quoting and trading strategies under study here. For those familiar with our recent work on various aspects of regulating stock markets, Parts II and III will be unnecessary.<sup>33</sup> Part IV

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<sup>32</sup> A practice or regulation can generate social harm if it lowers economic efficiency in a specific way or systematically leads to unfair outcomes. It can generate a social gain if it improves economic efficiency or reduces unfairness. See *infra* Part II. Thus, the desirability of a regulation that prohibits a specific practice turns on whether the world with the regulation is superior to the world without it, when evaluating on a net basis all the social harms and benefits arising in a comparison between a world with and a world without the regulation.

<sup>33</sup> Portions of Parts II and III draw significantly from more detailed treatments in our prior work. See Merritt B. Fox, Lawrence R. Glosten & Gabriel V. Rauterberg, *The New Stock Market:*

assesses the efficiency and fairness implications of each type of internalizer-burdening trading. Parts V and VI deploy the analysis that precedes them to illuminate and evaluate the existing statutory framework and case law relating to internalizer-burdening trading. We then conclude.

## I. UNDERSTANDING INTERNALIZER-BURDENING TRADING

Internalizer-burdening trading involves the use of a market strategy that allows a trader to profit at the expense of an internalizer. Below, we discuss the two types of market strategies that we have identified as working in this fashion: “quote-based” and “trade-based.” In advance of describing each of these strategies, a very short introduction to the way modern equity markets work and to the vocabulary associated with its study is in order.

### A. *The Basics of Market Mechanics*

Equities trade on a variety of trading venues. Almost all of them, however, are *electronic limit order books*, in which a person can post a *limit order*, which is a firm commitment (until canceled) to buy or sell up to a specified number of shares at a quoted price.<sup>34</sup> For a sell limit order that is posted, this stated limit price is an “offer” or an “ask.”<sup>35</sup> For a buy limit order that is posted, this stated limit price is a “bid.”<sup>36</sup> Bids and offers are also often referred to as “quotes.”<sup>37</sup> A computer (the venue’s “*matching engine*”) matches these posted limit orders with incoming buy and sell “*marketable orders*,” which are orders that have terms allowing them to execute at what is then the nationally best available price in the market.<sup>38</sup> As already ruled, the best offer available is referred to as the “national best bid” or NBB, the best offer is referred to as the “nationally best offer” or NBO.<sup>39</sup> The limit orders that are

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*Sense and Nonsense*, 65 Duke L.J. 191, 217–26 (2015) [hereinafter Fox et al., *Sense and Nonsense*]; see also Merritt B. Fox, Lawrence R. Glosten & Gabriel V. Rauterberg, *Informed Trading and Its Regulation*, 43 J. Corp. L. 817 (2018) [hereinafter Fox et al., *Informed Trading*]; Fox et al., *Manipulation*, *supra* note 3.

<sup>34</sup> FOX ET AL., THE NEW STOCK MARKET, *supra* note 8, at 13.

<sup>35</sup> *Id.* at 300 n.4.

<sup>36</sup> *Id.*

<sup>37</sup> *Id.* at 13.

<sup>38</sup> Marketable orders include both “market orders” and “marketable limit orders.” A “market order” is where the person submitting the order commits to trading at whatever is the best available price in the market. The computer will also match the limit orders posted on the venue with “marketable limit orders.” A buy limit order is “marketable” when it has a limit price greater than or equal to the lowest offer in the market, and a sell limit order is “marketable” when it has a limit price less than or equal to the highest bid. It is “non-marketable” if it is at a price equal to or inferior to the best offer or bid in the market. See *id.* at 21–22; Fox et al., *Manipulation*, *supra* note 3, at 90.

<sup>39</sup> FOX ET AL., THE NEW STOCK MARKET, *supra* note 8, at 30.

posted do so because their terms are not attractive enough to execute against what is currently available in the market, i.e., they are sell orders with a limit price above the NBB or sell orders with a limit price below the NBO. Because of this they referred as “*non-marketable*” limit orders.

Today, entities that make a business out of posting quotes and then buying when their bids are executed against and selling when their offers are – i.e., professional liquidity suppliers – post the quotes that generate a significant portion of all market volume. They are typically high-frequency traders (HFTs).<sup>40</sup> “An HFT uses high-speed communications to constantly update its information concerning transactions occurring in each stock that it regularly trades, as well as changes in the buy and sell limit orders posted by others on every major trading venue.”<sup>41</sup> The HFT automatically feeds this information into a computer that uses algorithms to change the prices and quantities of its own quotes posted on each of the various trading venues.<sup>42</sup> Ordinary traders are free to submit non-marketable orders, as well, and these too become quotes.

Against this background, we can define the two strategies that we have identified as forms of internalizer-burdening trading.

### B. Quote-Based Internalizer-Burdening Trading

Quote-based internalizer-burdening trading is typically aimed at allowing an already planned purchase or sale of a security to transact at a more favorable price than it otherwise would have, doing so at the expense of an internalizer. The strategy involves the trader submitting to an exchange a quote that she hopes will not execute.

#### 1. The Overall Concept

Quote-based internalizer-burdening trading starts with the trader submitting to an exchange a non-marketable limit order that is inside the spread between the preexisting NBB and NBO. The quote is an improvement on what had been the best quote in the market before, and so it becomes the market’s

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<sup>40</sup> See Jonathan A. Brogaard, Terrence Hendershott & Ryan Riordan, *High Frequency Trading and Price Discovery*, 27 REV. FIN. STUD. 2267 (2014) (from NASDAQ data set, finding that HFTs supply liquidity for 51 percent of all trades and provide the market quotes 50 percent of the time). See Allen Carrion, *Very Fast Money: High-Frequency Trading on the NASDAQ*, 16 J. FIN. MKTS. 680 (2013); see generally Albert J. Menkveld, *High Frequency Trading and The New-Market Makers*, 16 J. FIN. MKTS. 712 (2013) (discussing HFTs’ role as market makers in today’s markets).

<sup>41</sup> FOX ET AL., THE NEW STOCK MARKET, *supra* note 8, at 95.

<sup>42</sup> See Charles R. Korsmo, *High-Frequency Trading: A Regulatory Strategy*, 48 U. RICH. L. REV. 523, 540 (2014) (identifying characteristics of HFTs).

new NBB or NBO, depending on whether it is a purchase or sale order. This quote, by changing an internalizer's benchmark, alters the price at which the internalizer executes transactions. Recall that an internalizer purchases order flow from retail brokers for a fee and promises to execute these orders at prices slightly better than the NBO for purchases and better than the NBB for sales.<sup>43</sup>

As noted, typically the ultimate goal of this internalizer-burdening trader is to engage in an already-planned sale or purchase of a security at a more favorable price than would otherwise be available in the market. If the planned transaction is a *sale*, the trader first sends a small non-marketable limit *buy* order to an exchange with a limit price that is above the pre-existing NBB.<sup>44</sup> This is an improvement over the preexisting best quote and so it establishes a new, higher NBB. The trader almost immediately thereafter sends a larger marketable sell order to a broker that she knows uses an internalizer. Her sale order executes with the internalizer at a price equal to the new higher NBB plus the internalizer's usual promised price improvement over this new NBB. So, the trader is able to sell her shares for a higher price than if she had not sent the non-marketable buy limit order to the exchange. As a last step, the trader then cancels the non-marketable buy order unless it has already been executed against.

If the planned transaction is instead a purchase, the trader's moves are just a mirror image of what was just described, with a small non-marketable sell order sent to the exchange at a price below the pre-existing NBO.

## 2. An Example

As an example, consider a trader named Autumn, who wants to sell 1,500 shares of Grindrod Shipping Holdings, LTD ("GRIN"). The current NBB is \$2.50 and NBO is \$2.62. She is holding her GRIN shares in a brokerage account with TD Ameritrade ("TDA"). She knows that TDA typically sends marketable orders to an internalizer,<sup>45</sup> which will execute any sell order at a slight improvement over the NBB prevailing at the time the order is received.

Autumn also has a brokerage account at Interactive Brokers ("IB"), which she knows, unlike most brokers for retail traders, typically sends all its retail orders to an exchange.<sup>46</sup> She authorizes IB to submit a GRIN buy limit order for 100

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<sup>43</sup> See *supra* Introduction.

<sup>44</sup> Note that, by definition, because the order is non-marketable, the price will also be below the pre-existing NBO. See FOX ET AL., *THE NEW STOCK MARKET*, *supra* note 8, at 22.

<sup>45</sup> The SEC's Regulation NMS Rule 606 requires a broker to report periodically to which venues it is sending its customers' orders. See 17 C.F.R. § 242.606. TD Ameritrade's Rule 606 reports indicate that it sends most marketable orders to internalizers such as Virtu Americas and Citadel. See, e.g., *TD Ameritrade Clearing, Inc. - Held NMS Stocks and Options Order Routing Public Report 3rd Quarter 2020*, TD AMERITRADE (2020), <https://www.tdameritrade.com/content/dam/tda/retail/marketing/en/pdf/cftc/tdac-TDA2054-q3-2020.pdf>.

<sup>46</sup> Interactive Brokers's Rule 606 reports indicate that, at least in recent quarters, it sends all customer orders for S&P 500 stocks to exchanges, not to internalizers. See *Interactive Brokers*

shares priced at \$2.54. IB routes the order to an exchange, such as New York Stock Exchange Arca (“ARCA”). When Autumn’s order arrives, it is now the best bid in the market, and so the NBB moves up to \$2.54. Almost immediately thereafter, Autumn instructs TDA to submit a GRIN marketable sell limit order for 1,500 shares. TDA promptly sends her sell order to Citadel, which acts as an internalizer. This sell order executes with Citadel for a price equal to \$2.54 (the new NBB as a result of the buy order Autumn had sent via IB to ARCA) plus Citadel’s promised price improvement, which we will assume is \$.01.<sup>47</sup> Autumn then quickly cancels the 100-share buy limit order on ARCA. Autumn has now received \$60.00 more for her shares (1,500 x (\$2.55 - \$2.51)) than she would have absent having sent the non-marketable limit order to ARCA.<sup>48</sup>

### 3. Additional Considerations

Most of the prosecutions targeting quote-based internalizer-burdening trading occurred in the early 2000s.<sup>49</sup> It is possible that some combination of the cautionary message carried by these prosecutions, broker training, and better detection abilities by regulatory authorities and internalizers themselves have created sufficient deterrence that traders rarely now try to undertake the practice. However, an industry insider has indicated that this behavior is something that internalizers still watch for.<sup>50</sup> Also, as will be discussed in Part V, these prosecutions ultimately were not subject to serious judicial scrutiny.<sup>51</sup>

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*Rule 606a Quarterly Broker-Dealer Order Routing Report*, INTERACTIVE BROKERS, <https://www.interactivebrokers.com/en/general/about/brokerDealerReports.php>. Even without knowing a broker’s patterns, Autumn could have specified that her order be sent to a particular exchange, and the broker would be required to follow this direction. Doing so might have raised suspicions that she was undertaking internalizer-burdening trading, however, and, if she were investigated, certainly would have added to the evidence that this was her intent.

<sup>47</sup> The amount of price improvement that an internalizer offers on a given stock varies considerably from internalizer to internalizer and stock to stock. See, e.g., *Retail Execution Quality Statistics*, CHARLES SCHWAB (Q1 2022), <https://www.schwab.com/execution-quality/quality-statistics>. A spread of \$.01 per share on stock that typically has a \$.12 spread is relatively generous and is chosen because it keeps the example simpler.

<sup>48</sup> Autumn’s speed in submitting the sell order to TDA is important to minimize the chance that the buy order sent to IB does not execute in advance of the sell order reaching TDA. If that were to happen, the NBB would shift back to its old level, which would totally frustrate the point of Autumn’s strategy. Notice, though, the strategy still largely works if the buy order executes after the sell order but before the buy order can be canceled. In that case, Autumn would still have managed on net to sell 900 shares at \$2.54, yielding \$56.00 more than she otherwise would have received. She would have repurchased the other 100 shares at \$2.54, a penny less than the price for which she sold them. The higher the buy order’s price, the more she can get for her sell order. But the higher it is, the more likely it will be executed against before she has a chance to cancel it, whether that execution occurs before her sell order executes, wiping out all of what she hoped to gain, or after, with a partial loss of this gain.

<sup>49</sup> See *infra* Part V.

<sup>50</sup> Private conversation with Jamil Nazarali, Global Head of Business Development, Citadel Securities.

<sup>51</sup> See *infra* Part V.

If in a future prosecution a court did rule on whether the practice was legal, it is by no means clear that the practice would be found to violate either Section 9(a)(2) or Rule 10b-5. Should a court find the practice not in violation of these provisions, the prevalence of the practice would, absent legal reform, grow very significantly. Indeed, every savvy retail trader plausibly might utilize it regularly, and it might become standard in smart trading apps.

Most of these cases appear to involve traders seeking to execute an already planned purchase or sale of a security at a more favorable price.<sup>52</sup> One case, though, did involve roundtrip transactions that left the trader back with exactly the same portfolio as where he began plus some profits from the purchase being at a lower price than the sale.<sup>53</sup> The conditions necessary for the strategy to work in this way today, however, are probably rare.<sup>54</sup>

### *C. Trade-Based Internalizer-Burdening Trading*

Trade-based internalizer-burdening trading, in contrast, constitutes an effort to profit from a fast roundtrip of purchases and sales (or vice versa). The trade-based strategy includes actual purchases and sales made on the exchange.

#### 1. The Overall Concept

The first step involves submitting a series of either buy or sell orders to a broker that will send those orders to an exchange, where they execute. Other market participants logically, but in this case incorrectly, infer from the extra trades going in one direction an increased likelihood that informed trading going on.<sup>55</sup> As a result, if it is buy orders that were submitted, both the NBO

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<sup>52</sup> See *infra* Part V.

<sup>53</sup> See *In re* Ian Fishman & Lawrence Fishman, Securities Act Release No. 7547, Exchange Act Release No. 40115, 67 SEC Docket 783 (June 24, 1998). The tick at this time was 1/8th of a dollar. To see how this works, assume the roundtrip starts with a purchase. For the roundtrip version of the strategy to be profitable, the non-marketable sell order sent to the exchange would need to lower the NBO down to close to the NBB. The trader then buys a substantial number of shares at this lower price from the internalizer. After the NBO returns to its original level, the trader sends a non-marketable buy order to an exchange that raises the NBB to close to the NBO and then sells back to the internalizer the shares just purchased from it at this increased price. If on each of these two legs, the trader is able to move, respectively, the NBO and NBB by more than an amount equaling half the spread less the internalizer's price improvement, the shares will on average be purchased from the internalizer for less than they are sold back.

<sup>54</sup> Under the SEC's Rule NMS 612, the minimum pricing increment for quotes (the minimum "tick") is one penny. 17 C.F.R. § 242.612. For a profitable roundtrip to be possible, the initial spread between the NBB and NBO will need to be at least \$.02, which for many stocks is not the case most of the time. Also, the trader would need to act with great speed. The more aggressive the trader is in moving the NBO and NBB, the sooner someone is likely to execute against the modified quote. If this happens before the transaction intended for the internalizer reaches it, the gambit will fail because the NBB or NBO will have already returned to its original level.

<sup>55</sup> See *infra* Part III.C.

and NBB move up. If it is sell orders that were submitted, both the NBO and NBB move down.<sup>56</sup>

The trader then goes to a broker that uses internalizers for its retail customer accounts. He submits a series of marketable orders going in the opposite direction for a significantly larger number of shares. These orders push the NBO and NBB in the opposite direction from the direction pushed by the orders that had just been sent to the exchange, but the price impact per share traded is not as great. *This difference* in per-share price impact is because the experience of liquidity suppliers suggests that, as a general matter, orders sent to an exchange are much more likely to be informed than those sent to an internalizer.<sup>57</sup> Thus, the liquidity suppliers on the exchanges do not adjust their quotes as much per share in reaction to seeing a transaction of a given size occurring with an internalizer.

After this first leg is completed, the trader reverses the steps. He sends in a mirror-image set of orders, first through the broker that sends orders to the exchange and then to the one that sends them to an internalizer. The set of orders sent to each of these two kinds of venues impacts price in the opposite direction from the orders sent on the first leg. But again, and for the same reason, the price impact per share traded from the executed orders sent to the exchange is greater than that from the executed orders sent to the internalizer. As a result, the trader would usually lose money on the round trip related to the orders sent to the exchange. Because of the significantly smaller price impact from the orders sent to the internalizer, however, the trader will likely much more than make up for these exchange-based losses through his profitable round-trip transactions with the internalizer.

## 2. An Example

As an example, consider Ari, who wants to perform trade-based internalizer-burdening trading using shares of the Zeta corporation. Assume that Zeta is a fairly illiquid stock trading at around \$50.00 with a bid-ask spread of \$.05.

For the reasons just discussed, we will assume for this example that fifteen marketable 100-share sell orders (for a total of 1,500 shares) will move the quotes \$.50, or on average 1/30th of a penny per share traded. In contrast, marketable orders sent to the internalizer consisting of ten orders of 1,500 shares each (for a much larger total of 15,000 shares) move the quotes by

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<sup>56</sup> As discussed in more detail in Part III.C, liquidity suppliers tend to move their bids and offers up if the pattern of recent transactions or quotes suggests that there are traders in possession of positive non-public information, and their bids and offers down if the pattern suggests traders have negative non-public information. *See infra* Part III.C. An imbalance of buy orders over sell orders, for example, suggest these are traders in possession of positive non-public information. *See infra* Part III.C.

<sup>57</sup> *See* FOX ET AL., THE NEW STOCK MARKET, *supra* note 8, at 221, 291–92.



the same total amount, \$.50. Per share traded, this represents a much smaller 1/300th-of-a-penny impact. In this example, we will assume for simplicity that during the full period of Ari's trading, nothing happens in the market during that period to influence Zeta's prices other than Ari's orders.<sup>58</sup>

We start with the NBB at \$50.70 and the NBO at \$50.75. Ari has no shares of Zeta, but he has an account with a broker that will send orders to an exchange, again say Interactive Brokers. Ari directs IB to sell Zeta shares short by sequentially sending to the BATS exchange 15 marketable sell orders of 100 shares each. Each order is to be sent immediately after the preceding order is filled. IB follows these instructions, and all the orders execute.

As a result of Ari's executed sell orders sent to BATS, the NBB drops from \$50.70 to \$50.20 and the NBO from \$50.75 to \$50.25.<sup>59</sup> Ari started selling at \$50.70 and ended selling at \$50.20, for an average sale price of \$50.45  $((\$50.70 + \$50.20) / 2)$ . Ari is left in a short position of 1,500 shares with IB.

Ari has an account with another broker, say again TDA, that TDA regards as a retail account. TDA typically sends all orders from retail accounts to an internalizer. As the next step in the strategy, Ari places an order with TDA for ten 1,500-share marketable buy orders, which he knows will very likely be sent to an internalizer. They in fact are, to Citadel. We will assume that Citadel also provides \$.01-per-share price improvement for Zeta shares. Ari says he would like all the orders to be executed relatively rapidly, over perhaps a one-minute interval. As a result, he buys 15,000 shares at prices that rise from \$50.24 to \$50.74 (reflecting the price improvement of \$.01 relative to the NBO),<sup>60</sup> for an average price of \$50.49. When this is done, the quotes on the exchanges are back to an NBB of \$50.70 and an NBO of \$50.75 (each having moved an average of 1/300th of a cent for each share executed). Ari is left in a long position of 15,000 shares with TDA.

Now comes the second leg: unwinding both the short and long positions. First, Ari directs IB to buy Zeta shares by sequentially sending to the BATS exchange 15 marketable buy orders of 100 shares each. Each order is to be sent immediately after the preceding order is filled. IB follows these instructions, and all the orders execute.

As a result of Ari's executed buy orders sent to BATS, the NBB increases from \$50.70 to \$51.20 and the NBO from \$50.75 to \$51.25.<sup>61</sup> Ari started

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<sup>58</sup> This simplifying assumption is without loss of generality in terms of expected profits from the manipulation. The other factors that might influence price, such as the arrival of new information in the hands of some or all traders, are as likely to increase prices as they are to decrease them, and so have an unbiased effect.

<sup>59</sup> In accordance with our assumptions, for each share sold on an exchange the NBO and NBB each goes down on average 1/30th of a cent.

<sup>60</sup> In accordance with our assumptions, each share purchased from an internalizer moves the NBO up on average 1/300th of a cent.

<sup>61</sup> In accordance with our assumptions, each share purchased on an exchange moves the NBB up on average 1/30th of a cent.

buying at \$50.75 and ended buying at \$51.25 for an average purchase price of \$51.00 ( $(\$50.75 + \$51.25) / 2$ ). Ari uses the 1,500 shares so acquired to close his short position with IB and now is neither short nor long in that account. Given his average sale price of \$50.45 and his average purchase price of \$51.00, his losses associated with his exchange trading through IB equal \$825.00 ( $1,500 \times (\$50.45 - \$51.00)$ ).

Immediately after the last of the orders sent to BATS executes, Ari places with his retail account broker, TDA, ten 1,500-share marketable sell orders, which he knows will very likely be sent to an internalizer and in fact are, again to Citadel. Ari again says he would like all the orders to be executed relatively rapidly, over perhaps a one-minute interval. As a result, he sells 15,000 shares at prices that fall from \$51.21 to \$50.71 (Citadel again provides the assumed price improvement of \$.01),<sup>62</sup> for an average price of \$50.96. When this is done, the quotes on the exchanges are back to an NBB of \$50.70 and an NBO of \$50.75. Ari has now sold his long position of 15,000 Zeta shares in his TDA account and is now neither long nor short in either his TDA or his IB account. Given his average sale price of \$50.96 and his average purchase price of \$50.49, his gains associated with his internalizer trading through TDA equal \$7,050.00 ( $15,000 \times (\$50.96 - \$50.49)$ ).

Ari's net profits from the whole trade-based internalizer-burdening trading strategy are thus \$6,225.00 ( $\$7,050.00 - \$825.00$ ).

### 3. Additional Considerations

We have constructed this example with Ari sending to the exchange, BATS, marketable sell and buy orders. He could instead have sent to the exchange modestly aggressive non-marketable orders, say for example two cents below the NBO for sales and two cents above the NBB for purchases, a tactic we have seen in at least one of the trade-based internalizer-burdening enforcement cases discussed in Part V.<sup>63</sup> Relative to sending marketable orders, the advantage of sending the non-marketable orders is that the sales and purchases on the exchange, if they execute, occur at better prices, in this example \$.03 per share better relative to the NBB and NBO, the prices at which the marketable orders executed, which aggregates to \$90.00 ( $3,000 \times \$.03$ ). The disadvantage is that Ari would probably have needed to send more than 1,500 shares in sell orders and buy orders to the exchange to achieve the same \$.50 price impact, possibly enough more that the roundtrip would be more costly in aggregate. This is because the price impact of a marketable order is, per share, greater than that of a non-marketable order: the marketable order

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<sup>62</sup> In accordance with our assumptions, each share sold to an internalizer moves the NBB down on average 1/300th of a cent.

<sup>63</sup> See *infra* Part V.

suggests that the trader is more anxious to trade and thus indicates a greater likelihood that he is informed.

Whether the strategy is conducted with non-marketable or marketable orders sent to the exchange, the Ari example raises potentially serious issues for the way our markets currently operate. Although Ari's profit of \$6,225.00 is not a huge amount of money by itself, this profit was generated in probably less than five minutes of trading. This practice can be repeated over many stocks and at many times in the year. If the practice were deemed to be legal, it could, to the extent it goes undetected by the internalizers, produce very significant revenues. Indeed, even in the current world, where the practice has not been definitively determined to be illegal but is under a legal cloud, a trader in a case discussed in Part V employed this practice and made over \$26 million in profits in two years according to the SEC.<sup>64</sup> At the same time, it should be recognized that detection by an internalizer is in fact a serious issue for a would-be trader of this kind. For example, Ari was responsible for 33,000 shares traded in this five-minute period, which, for a stock like Zeta, might well be much of the total volume.<sup>65</sup> If the bulk of the trading occurring in a given five-minute period had the pattern that Ari's trading would generate, it might well be flagged as suspicious.

## II. THE NORMATIVE FRAMEWORK

The two market strategies outlined in Part I—quote-based internalizer-burdening trading and trade-based internalizer-burdening trading—clearly on average leave internalizers worse off and traders engaging in them on average better off. It is in the nature of a market trade, however, that, between the two parties, the transaction is a zero-sum game in terms of trading profits. Yet we do not find most market trades to be socially harmful and in need of legal prohibition. In order to assess the social consequences of a market strategy and whether it should be banned as an illegal manipulation, the core functions served by the equity trading market and the role that quoting and transacting play in it must be understood.<sup>66</sup> It also requires recognizing that if a specific strategy regularly occurs and its extent is generally understood, other actors in the system will account for its existence in determining their own behavior. Thus, the normative question is how the occurrence of a given trading

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<sup>64</sup> See Complaint at 2, SEC v. Taub et al., No. 16-cv-09130 (D.N.J. Dec. 12, 2016), 2016 WL 7209936.

<sup>65</sup> Indeed, in *Taub*, the defendants' share of the trading volume in the various stocks traded allegedly ranged from roughly 57% to 87%. *Id.* at 8.

<sup>66</sup> Parts II and III provide a brief overview of the normative framework for assessing whether a given market strategy is socially undesirable and the basic institutional and economic features of the stock market. More detailed analysis is found in previous work referenced throughout by Fox, Glosten & Rauterberg. See generally Fox et al., *Manipulation*, *supra* note 3; Fox et al., *Sense and Nonsense*, *supra* note 33, at 207–61; Fox et al., *Informed Trading*, *supra* note 33.

strategy—and any attempts to regulate it—affect the system’s ultimate ability to advance the various social goals that equity trading markets are supposed to help achieve and that justify regulation when these markets fall short.

### A. *Social Goals*

Five key social goals animate most discussion of secondary equity markets<sup>67</sup> and their regulation: (i) advancing the efficient allocation of capital to the most promising real investment projects; (ii) furthering the efficient use of the economy’s existing productive capacity; (iii) promoting the efficient allocation of resources between current and future periods; (iv) furthering the efficient allocation of the risks associated with volatility of each issuers’ cash flows so that they rest with those investors who, though risk-averse like most people, are nonetheless the ones experiencing the least disutility from exposure to them; and (v) operating fairly and promoting a sense of fairness throughout.<sup>68</sup> In addition, any cogent analysis of internalizer-burdening trading strategies and regulation must assess their impact on the real resources that society devotes to trading in, and operating, the stock market. It must also consider enforcement and compliance costs accompanying its regulation, including any socially beneficial transactions that any regulation might chill.

### B. *The Use of Ex Post and Ex Ante Analysis*

Analyzing the impact on these five core social goals of a regularly occurring trading strategy is best understood by starting with a single instance of the trading strategy and evaluating its ex post effect. The impact of the trading strategy on participants’ wealth positions can then be determined, which in turn reveals the incentives that the availability of the practice generates. Then we can evaluate, from an ex ante perspective, the impact of the activity as a known ongoing phenomenon taking place over the long run within a competitive environment. This ex ante analysis enables us to evaluate the efficiency and fairness implications of the activity. As is relatively standard in law and economics literature, we consider efficiency in

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<sup>67</sup> Primary markets are those where stocks are purchased from the company issuing those stocks, while traders buy and sell stocks from each other in the secondary market. Stock exchanges are secondary markets. FOX ET AL., *THE NEW STOCK MARKET*, *supra* note 8, at 11.

<sup>68</sup> Fox et al., *Manipulation*, *supra* note 3, at 80.

Kaldor-Hicks terms<sup>69</sup> and evaluate fairness by assessing a practice's effects on the wealth positions of various participants from an ex ante perspective.<sup>70</sup>

### C. Market Characteristics that Impact These Goals

A given trading strategy may interact with these five social goals in dynamic ways that pertain to the stock market's two most critical characteristics: the price accuracy and the liquidity of the stocks trading in it.<sup>71</sup> A two-step process allows us to evaluate the social impact of any kind of trading strategy: first assessing the impact of the practice on these two market characteristics and then determining the two characteristics' respective impact on the five social goals.

#### 1. Price Accuracy

Price accuracy refers to the accuracy with which the market price of an issuer's shares predicts the issuer's future cash flows.<sup>72</sup> More accurate stock market prices will promote more efficient allocation of capital, by directing new capital toward the issuers with the most promising real investment projects, the first basic social goal.<sup>73</sup> More accurate share prices also help reveal poorly performing managers and improve incentives that encourage managerial decision-making that furthers both the first and second basic social goals.<sup>74</sup> Over time, more accurate share prices also likely enhance investors'

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<sup>69</sup> See John R. Hicks, *The Foundations of Welfare Economics*, 49 *ECON. J.* 696 (1939); Nicholas Kaldor, *Welfare Propositions of Economics and Interpersonal Comparisons of Utility*, 49 *ECON. J.* 549 (1939) (together establishing the Kaldor-Hicks conception of efficiency). The Kaldor-Hicks conception of efficiency is still the standard welfare criterion in law-and-economics analyses of corporate and securities law. Cf. REINIER KRAAKMAN ET AL., *THE ANATOMY OF CORPORATE LAW: A COMPARATIVE AND FUNCTIONAL APPROACH* 23 n.87 (3d ed. 2017).

<sup>70</sup> As developed in our previous work, many of the concerns around fairness are best evaluated within an ex ante framework. Using an ex ante perspective to evaluate fairness means that a practice is not unfair if it does not affect a market participant's *expected* outcomes, i.e., if a participant is not worse off on average entering into trades in a world where the practice is occurring relative to one where it is not. See Fox et al., *Informed Trading*, *supra* note 33, at 841–42.

<sup>71</sup> See THIERRY FOUCAULT, MARCO PAGANO & AILSA RÖELL, *MARKET LIQUIDITY: THEORY, EVIDENCE, AND POLICY* 31 (2013) (“The two main roles of a securities market are to provide trading services for investors who wish to alter their portfolios, and to determine prices that can guide the allocation of capital by investors and firms. . . . [A] market is efficient if it enables investors to trade quickly and cheaply (i.e., if it is liquid) and if it incorporates new information quickly and accurately into prices.”).

<sup>72</sup> See FOX ET AL., *THE NEW STOCK MARKET*, *supra* note 8, at 34.

<sup>73</sup> For further detail, see Fox et al., *Informed Trading*, *supra* note 33. See also Merritt B. Fox, *Civil Liability and Mandatory Disclosure*, 109 *COLUM. L. REV.* 237, 260–64 (2009); Marcel Kahan, *Securities Laws and the Social Costs of “Inaccurate” Stock Prices*, 41 *DUKE L.J.* 977 (1992); Qi Chen, Itay Goldstein & Wei Jiang, *Price Informativeness and Investment Sensitivity to Stock Price*, 20 *Rev. Fin. Stud.* 619 (2007).

<sup>74</sup> See Fox, *Civil Liability and Mandatory Disclosure*, *supra* note 73, at 258–60. There is plentiful empirical evidence to indicate that accurate price signals do in fact enhance the efficiency of managerial decisions. See FOUCAULT ET AL., *supra* note 71, at 361–68 (collecting

sense of fairness, part of the fifth basic social goal, because fewer negative surprises following purchases or sales will be sustained.<sup>75</sup>

## 2. Liquidity

Liquidity is a multi-dimensional concept that relates to the size of a trade, the price at which it occurs, and the time it takes to execute the trade. Generally, the larger the size of the trade and the more quickly one wishes to accomplish it, the worse the price will be. However, the more liquid the market is, the less severe these tradeoffs will be.<sup>76</sup> Liquidity affects a number of social goals.<sup>77</sup> Greater liquidity promotes more efficient allocation of social resources over time, the third social goal.<sup>78</sup> Because more liquidity lowers transaction costs associated with the purchase and sale of securities, more efficient allocation of risk is also fostered, the fourth basic social goal.<sup>79</sup> Greater liquidity also increases share price accuracy by lowering the transaction costs associated with fundamental informed trading and stimulating such activity, with the associated benefits discussed above of advancing efficient allocation of capital and use of existing productive capacity—the first two social goals.<sup>80</sup>

### III. THE WORKINGS OF THE EQUITY MARKET

Analyzing the impact of any specific trading strategy on price accuracy and liquidity requires a basic understanding of how the equity market functions. This Part therefore provides a brief description that will supply a baseline understanding of how the market would work in the absence of internalizer-burdening trading, which will in turn establish the tools to understand the

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relevant empirical studies); *see, e.g.*, Philip Bond, Alex Edmans & Itay Goldstein, *The Real Effects of Financial Markets*, 4 ANN. REV. FIN. ECON. 339 (2012).

<sup>75</sup> When a negative surprise occurs, it leads to grievance even though a positive surprise was equally probable *ex ante*. *See, e.g.*, DONALD C. LANGEVOORT, SELLING HOPE, SELLING RISK 11 (2016).

<sup>76</sup> For a small retail trade, the “bid-ask spread” is a useful measure of liquidity because the trader can buy or sell instantly at those respective prices and will basically be paying half the spread to do so. For larger orders, the volume of shares available at prices not too inferior to the best bid or offer (the “depth of the book”) is also relevant. *See* Fox et al., *Informed Trading*, *supra* note 33.

<sup>77</sup> For further detail, *see id.* at 884–86.

<sup>78</sup> *See id.* For shares with a given level of expected cash flow, the less liquid that investors believe they will be in the future, the less valuable they will be to hold, and hence the lower the price at which the issuer can sell its shares in the primary market, and thus the higher the issuer’s cost of capital. In essence, because of this discounting, illiquidity is like a tax on new real investment, blocking implementation of projects that both firms and savers would otherwise find mutually beneficial.

<sup>79</sup> *See id.*

<sup>80</sup> *See* Fox et al., *Manipulation*, *supra* note 3, at 86.

discussion in Part IV as to the impact of each type of internalizer-burdening trading if it instead is freely occurring in the market.

### A. *Market Participants and Their Reasons for Trading*

In the simplest, most straightforward story, market participants can be separated into three categories: informed traders, uninformed traders, and professional liquidity suppliers.<sup>81</sup> This baseline depiction of the market that follows assumes that no type of internalizer-burdening trading is occurring, a factor introduced in Part IV.

#### 1. Informed Traders

Informed traders transact based on information that supplies them with a more accurate assessment of the stock's value than its current market price implies.<sup>82</sup> This information can be in several forms. Fundamental-value information estimates an issuer's future cash flows discounted to present value and is generated by gathering bits of publicly available information about the world and analyzing that information, leading to a superior assessment of those cash flows.<sup>83</sup> Announcement information appears in an announcement by an issuer or other institution with clear implications for the issuer's future cash flows, and is only profitable during the very brief limited period of time between the announcement and when the price fully reflects the information.<sup>84</sup> Inside information is non-public information held within an issuer or another institution that is not yet reflected in price but is pertinent to its future cash flows.<sup>85</sup>

Two of us have discussed elsewhere how informed trading on average increases the accuracy of share prices while, on the other hand, it reduces liquidity.<sup>86</sup> Thus, it is necessary to net out the tradeoff between the positive social impact resulting from greater share price accuracy and the negative social impact resulting from reduced liquidity. In considering this tradeoff, we concluded that fundamental value-informed trading is socially desirable, while trading based on announcement information, issuer inside information and non-issuer inside information (unless permitted by the non-issuer institution that developed the information) is socially undesirable.<sup>87</sup>

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<sup>81</sup> While dividing traders into informed and uninformed is a basic tool of microstructure economics, our taxonomy is much indebted to Larry Harris's work. See Larry Harris, *Trading and Electronic Markets: What Investment Professionals Need to Know* (2015).

<sup>82</sup> See FOX ET AL., *THE NEW STOCK MARKET*, *supra* note 8, at 60.

<sup>83</sup> *Id.* at 60–61.

<sup>84</sup> *Id.* at 61.

<sup>85</sup> *Id.* at 61–62.

<sup>86</sup> See *id.* at 131–59; Fox et al., *Manipulation*, *supra* note 3, at 87; *infra* Part III.C.

<sup>87</sup> See Fox et al., *Informed Trading*, *supra* note 33, at 834–36.

## 2. Uninformed Traders

Uninformed traders buy and sell shares without possessing information that provides a more accurate estimate of the stock's value than currently implied by market prices.<sup>88</sup> A number of reasons can motivate an uninformed trade, including deferral of consumption until a later period, rebalancing portfolios, or even gambling.<sup>89</sup>

## 3. Professional Liquidity Suppliers

Professional liquidity suppliers both regularly purchase and regularly sell an issuer's shares, generating a business from being willing to buy and sell these shares up to stated amounts at quoted prices.<sup>90</sup> Today, this is usually a proprietary high-frequency trader.<sup>91</sup> An HFT uses high-speed communications to continuously update its information regarding others' transactions and quotes occurring in each stock that it regularly trades and adjusts its own quotes accordingly, rather than relying on information about the issuer itself to set these quotes.<sup>92</sup> In order to minimize risk, professional liquidity suppliers typically avoid being long or short in any given security for more than a brief period.

### B. Trading Venues and Orders

Any given stock is potentially traded in each of several competing venues. Recall from Part I.A that nearly all these venues are electronic limit order books, where a liquidity supplier or a trader can post, as a limit order, its firm commitment to buy or sell up to a specified number of shares at a quoted price.<sup>93</sup> This limit order remains posted on an exchange until it is executed against or canceled.<sup>94</sup> When it is a sell order, it posts and becomes an offer rather than executing because it is priced higher than the NBB. When it is a buy order, it posts and becomes a bid because it is priced lower than the NBO. This feature of posting rather than executing makes the limit order a non-marketable one. Non-marketable orders are also called quotes. In contrast, marketable orders are orders with terms that will result in their execution at

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<sup>88</sup> See FOX ET AL., *THE NEW STOCK MARKET*, *supra* note 8, at 62; HARRIS, *supra* note 81, at 194, 197.

<sup>89</sup> FOX ET AL., *THE NEW STOCK MARKET*, *supra* note 8, at 62.

<sup>90</sup> *Id.* at 64.

<sup>91</sup> *Id.*

<sup>92</sup> See *id.* The professional liquidity supplier is not "informed" in the sense used here. Because of its unique intermediary market-making role, in contrast to all other buyers and sellers of securities in the market, we will not refer to it as a "trader."

<sup>93</sup> Fox et al., *Informed Trading*, *supra* note 33, at 828; FOX ET AL., *THE NEW STOCK MARKET*, *supra* note 8, at 13.

<sup>94</sup> *Id.*



the NBB or NBO when submitted to an exchange. The law mandates as a general matter that a venue not allow a marketable order to execute on it if that venue's own best offer is above the NBO or its own best bid is below the NBB,<sup>95</sup> and instead the venue will usually send the order on to an exchange with orders at the NBO or NBB.<sup>96</sup>

HFTs, acting as professional liquidity suppliers, post a substantial portion of the non-marketable limit orders that constitute the quotes in the market,<sup>97</sup> but any trader can also submit a non-marketable limit order, which also becomes a quote.

### C. *The Economics of Liquidity Provision*

A liquidity supplier faces a classic adverse-selection situation, on average losing money when it buys at the bid from informed sellers or sells at the offer to informed buyers.<sup>98</sup> This is because the informed trader has information indicating that there are expected profits from entering into a transaction at the liquidity supplier's price.<sup>99</sup> Because trading is a zero-sum game, if the informed trader has expected profits from the trade, the liquidity supplier will have expected losses. The liquidity supplier can still break even, however, as long as it enters into enough transactions with uninformed traders, which are on average profitable.<sup>100</sup> This is because the offer—the price at which shares are sold by the liquidity supplier—is higher than the bid—the price at which they are bought, and the uninformed trader does not have any information suggesting expected profits from buying or selling the shares at the offer and

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<sup>95</sup> See 17 C.F.R. § 242.611(a)(1) (establishing the rule); 17 C.F.R. § 242.600(b) (defining relevant terms).

<sup>96</sup> See MEMORANDUM FROM THE SEC DIV. OF TRADING AND MKTS. TO THE SEC MKT. STRUCTURE ADVISORY COMM. 6 (Apr. 30, 2015), <https://www.sec.gov/spotlight/emsac/memo-rule-611-regulation-nms.pdf> (“If a broker-dealer routes an order to a trading venue that cannot execute the order at the best price, the venue cannot simply execute the order at an inferior price. It can either cancel the order back to the broker-dealer or route the order to another venue that will execute the order at the best price or better.”).

<sup>97</sup> See Jonathan A. Brogaard, Terrence Hendershott & Ryan Riordan, *High Frequency Trading and Price Discovery*, 27 REV. FIN. STUD. 2267, 2273–74 (2014) (finding that HFTs provide liquidity for forty-two percent of all trades involving the forty largest stocks by market capitalization and supply the market quotes for the forty largest stocks by market capitalization forty-two percent of the time).

<sup>98</sup> See generally George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488, 488–92 (1970) (the seminal article examining how informational asymmetries can spur declines in the quality of market goods until the market unravels and only low quality “lemons” remain). For a parallel application in the securities markets, see Stewart C. Myers & Nicholas S. Majluf, *Corporate Financing and Investment Decisions When Firms Have Information that Investors Do Not Have*, 13 J. FIN. ECON. 187, 187 (1984). See also Fox et al., *The New Stock Market*, *supra* note 8, at 65–66.

<sup>99</sup> See Fox et al., *The New Stock Market*, *supra* note 8, at 65–66.

<sup>100</sup> See Fox et al., *Informed Trading*, *supra* note 33, at 829.

bid respectively.<sup>101</sup> For the liquidity supplier to break even, it simply needs a wide-enough spread between the bid and offer such that the losses from transacting against informed traders are offset by the profits from transacting against uninformed traders.

In a competitive market for supplying liquidity on the exchanges, the spread between a supplier's best bid and best offer will be just wide enough for the money made from dealing with uninformed traders to cover the losses from dealing with the informed. This means that the *width* of the spread between the NBB and NBO is determined by liquidity suppliers' overall expectations concerning the ongoing percentage of informed trades in a given stock out of the total amount of trading in it.<sup>102</sup> As for *movement* in both the bid and the offer—i.e., the spread moving up or down—the critical factor is that traders using exchanges are anonymous. This means it is impossible to know for certain whether any given order is from an informed or an uninformed trader. Each executed buy order could come from either an uninformed trader or an informed investor with positive non-public information, but not from one with negative non-public information. Each executed sell order could come from either an uninformed trader or an informed trader with negative non-public information, but not from one with positive non-public information. So, at any given moment, when share purchases exceed share sales on the exchanges, the NBB and NBO adjust upward because this indicates the possibility of positive information; when the reverse is the case, the NBB and NBO adjust downward for parallel reasons.<sup>103</sup> Thus, the actions of rational liquidity providers act as a kind of “invisible hand.” As a result of their work to avoid losses to informed traders, liquidity providers are constantly revising their quotes so that those quotes fully reflect the information in informed trades over time.<sup>104</sup> Empirical evidence strongly supports these theoretical results.<sup>105</sup>

This Part provided a brief baseline of how securities markets would work if no internalizer-burdening trading were occurring. Against this baseline, Part IV will evaluate the impact if internalizer-burdening trading does occur in

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<sup>101</sup> See *id.*

<sup>102</sup> For a more in-depth model of how the bid-ask spread is set, see *id.* at 890–93; Fox et al., *The New Stock Market*, *supra* note 8, at 64–75.

<sup>103</sup> For more detailed treatment, see Fox et al., *Informed Trading*, *supra* note 33, at 890–93; Fox et al., *The New Stock Market*, *supra* note 8, at 64–75; Lawrence R. Glosten & Paul R. Milgrom, *Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders*, 14 J. Fin. Econ. 71 (1985) (setting forth a model of trading behavior under information asymmetries in securities markets).

<sup>104</sup> See Fox et al., *Informed Trading*, *supra* note 33, at 890–92.

<sup>105</sup> See Kalok Chan, Y. Peter Chung & Herb Johnson, *The Intraday Behavior of Bid-Ask Spreads for NYSE Stocks and CBOE Options*, 30 J. FIN. & QUANTITATIVE ANALYSIS 329 (1995) (indicating that adverse selection provides an important determinant of the intraday behavior of bid-ask spreads); Lawrence R. Glosten & Lawrence E. Harris, *Estimating the Components of the Bid/Ask Spread*, 21 J. FIN. ECON. 123 (1988) (developing a model in which the bid-ask spread is separated into an adverse-selection component and a transitory component due to inventory costs, clearing costs, and other factors).

the market. In the discussion in Part III, we have assumed that all the non-marketable limit orders posted on trading venues are submitted by HFT professional liquidity suppliers. In fact, many traders also use non-marketable limit orders, but, in the absence of internalizer-burdening trading, the introduction of this complication does not by itself alter the conclusions in any important way. Part IV explores how the story in Part III changes when, among other ways, some of the traders who use non-marketable limit orders—i.e., submit quotes—are using quote-based or trade-based internalizer-burdening strategies, and what the social implications are in each case.

#### IV. SOCIAL WELFARE ANALYSIS OF INTERNALIZER-BURDENING TRADING

Recall that internalizer-burdening trading involves the use of a market strategy that allows a trader to profit at the expense of an internalizer by altering the NBB or NBO, the benchmark that the internalizer uses to determine the price at which it transacts with the trader. In the quote-based version, the trader submits a quote that changes the NBB or NBO. In the trade-based version, the trader submits orders that, when executed, lead liquidity suppliers to move the NBB or NBO.

The analysis below suggests that both versions of internalizer-burdening trading meet the four-part litmus test (proposed in the Introduction) for being appropriately labeled as illegal manipulation under the Exchange Act. Each is socially harmful in a way that makes it distinguishable as a conceptual matter from other trading strategies. Each fits under a broad dictionary meaning of the word “manipulation,” and its illegality is not ruled out by the language of the existing, applicable Exchange Act provisions and rules. In each case, the practice can yield positive expected profits. And, in each case, there are identified, objectively observable factors that can serve as a condition for imposing legal sanctions on the undesirable quotes or trades constituting the practice while minimizing prosecution of socially desirable quotes or trades that do not represent instances of the practice.

To come to these conclusions, we start by recalling the Autumn and Ari examples from Part I in summary form. With these examples in mind, we assess the wealth transfer implications of the two types of internalizer-burdening trading. This entails examining the ex post effects of what Autumn and Ari did. Making trading profits is a zero-sum game: Autumn and Ari made positive trading profits and so, in each case, one or more other market participants lost in aggregate a comparable amount of money. Using this ex post analysis to ascertain the incentives created by the availability of the practice, we then consider, from an ex ante perspective, what the impact of the practice is as a generally known, ongoing phenomenon occurring over the longer run within a competitive environment. From this, we can make conclusions both about the efficiency implications of the practice in terms of liquidity and share price

accuracy and the fairness of its impact on the wealth positions of different members of society. Finally, we consider whether there are practical ways to deter this practice without at the same time chilling a significant amount of socially useful activity and whether, instead of relying on a legal prohibition, there is a self-protective mechanism in the market upon which it would be better to rely.

### A. *Recalling the Autumn and Ari Examples*

In Part I, we used the stories of Autumn and Ari to illustrate, respectively, quote-based and trade-based internalizer-burdening trading. The analysis that follows builds on these examples. For reference, they will be recalled here in summary form. Note that Autumn and Ari each has a brokerage account at IB, which sends orders to an exchange, and at TDA, which sends them to an internalizer. In each example, without loss of generality, we make the simplifying assumption that nothing other than the trader's actions changes the price of the stock involved during the period that the trader is implementing his or her trading strategy.

#### 1. The Autumn Example of Quote-Based Internalizer-Burdening Trading

Autumn wishes to sell 1,500 shares of GRIN. At the starting point, the NBB and NBO are, respectively, \$2.50 and \$2.62. Autumn authorizes IB to submit a buy limit order for 100 GRIN shares priced at \$2.54, which IB routes to the ARCA exchange. Upon arrival, it posts and becomes by its terms the best bid available on any exchange, and so the NBB moves up by four cents to \$2.54. Immediately thereafter, Autumn instructs TDA to submit a marketable sell limit order for 1,500 GRIN shares. TDA promptly sends her sell order to Citadel, an internalizer, and the order executes there for an amount per share equal to \$2.54 plus Citadel's promised one-cent price improvement. The sale to the internalizer happens fast enough that Autumn's 100-share quote on ARCA, which at this point Autumn cancels, has yet to be executed against.

Autumn has received from Citadel \$60.00 more for her shares (1,500 x (\$2.55 - \$2.51)) than she would have absent having sent the non-marketable limit order to an exchange.

#### 2. The Ari Example of Trade-Based Internalizer-Burdening Trading

Initially the NBB and NBO for Zeta shares are, respectively, \$50.70 and \$50.75. Ari starts with no shares of Zeta. He directs IB to sell Zeta shares short by sequentially sending to the BATS exchange 15 marketable sell orders

of 100 shares each. IB submits these orders to BATS, and they all execute. Liquidity suppliers, suspecting informed trading, respond to these executed orders with the NBB steadily dropping from \$50.70 to \$50.20 and the NBO from \$50.75 to \$50.25, meaning that Ari started selling at \$50.70 and ended selling at \$50.20. The average sale price was equal to \$50.45 ( $(\$50.70 + \$50.20) / 2$ ).

Ari then instructs TDA to submit in fairly rapid succession ten 1,500-share marketable buy orders, which TDA sends to an internalizer, again Citadel. As a result, Ari buys 15,000 shares at prices that rise from \$50.24 to \$50.74 (reflecting Citadel's assumed one-cent price improvement), with an average price of \$50.49. When this is done, the quotes on the exchanges are back to an NBB of \$50.70 and an NBO of \$50.75. Remember that this difference in per-share price impact between the buy orders that were sent to BATS and the sell orders that were sent to Citadel is because the experience of liquidity suppliers suggests that, as a general matter, orders sent to an exchange are much more likely to be informed than those sent to an internalizer.

After completion of the first leg of this round trip, Ari is left in a short position of 1,500 shares in his IB account and a long position of 15,000 shares in his TDA account.

For the second leg, Ari in essence engages in a mirror image of what he did in the first leg. First, he directs IB to buy Zeta shares by sequentially sending to the BATS exchange 15 marketable buy orders of 100 shares. IB submits the orders to BATS, and they all execute. The NBB increases from \$50.70 to \$51.20 and the NBO from \$50.75 to \$51.25. This means that Ari started buying at \$50.75 and ended buying at \$51.25, and his average purchase price equals \$51.00 ( $(\$50.75 + \$51.25) / 2$ ). Ari then instructs TDA to submit in fairly rapid succession 1,500-share marketable sell orders, which TDA sends to Citadel. As a result, he sells 15,000 shares at prices that fall from \$51.21 to \$50.71 (reflecting the internalizer's one-cent price improvement) for an average price of \$50.96. When this is done, the quotes on the exchanges are back to an NBB of \$50.70 and an NBO of \$50.75.

After both legs of the trading strategy have been completed, Ari is back where he started, with no Zeta shares long or short in either account. His losses associated with his exchange trading through IB equal \$825.00 ( $1500 \times (\$50.45 - \$51.00)$ ), and his gains associated with his internalizer trading through TDA equal \$7,050.00 ( $15,000 \times (\$50.96 - \$50.49)$ ). So, his net profits from this trade-based internalizer-burdening trading are \$6,225.00 ( $\$7,050.00 - \$825.00$ ).

### *B. Wealth Transfers: Fairness and Efficiency*

Considering the fairness and efficiency effects of the two kinds of internalizer-burdening trading starts with examining the ex post effects of what

Autumn and Ari each did. This is followed by a look at the practice from an ex ante perspective, considering what the impact of the practice is as a generally known, ongoing phenomenon occurring over the longer run within a competitive environment. We can then draw conclusions about both the efficiency implications of the practice in terms of liquidity and share price accuracy and the fairness of its impact on different members of society.

### 1. Assessing the Impact of the Practices from an Ex Post Perspective

The distributive question is who has benefited from this activity and who has been harmed. Because secondary market trading is a zero-sum game from a trading profits point of view,<sup>106</sup> gains and losses by different market participants are mirror images of each other and must sum to zero.

#### a. Autumn's Quote-Based Internalizer-Burdening Trading

Autumn receives \$60 more for her sale of GRIN shares than if she had not engaged in the trading strategy and hence is the winner. The loser is Citadel, the internalizer that purchased the shares, which otherwise would have paid \$60.00 less for them. Since Autumn's ephemeral \$2.54 bid was canceled before it was executed against, no other market participant was affected.<sup>107</sup>

#### b. Ari's Trade-Based Internalizer-Burdening Trading

Ari is ahead by his net profits of \$6,225 (his \$7,050 profits from his internalizer-based purchases and sales minus his \$825 losses from his exchange-based sales and purchases). Citadel, the internalizer, is \$7,050 worse off than if Ari had not undertaken his trading strategy.<sup>108</sup>

As for third parties (i.e., persons other than Ari and Citadel), first consider persons who submit marketable buy and sell orders during the whole period spanning Ari's trading that do *not* execute against the orders that Ari sends to the exchanges. The buy orders execute at the NBO at the time that they are submitted and the sell orders at the NBB. During the first leg, Ari's sell orders leave both the NBO and NBB depressed relative to what each would have been if Ari had not engaged in the strategy. Thus, the sellers in this group lose and the buyers gain, with the gains and losses netting to zero. The second leg

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<sup>106</sup> See Harris, *supra* note 81, at 22 ("Trading is a zero-sum game when gains and losses are measured relative to the market index.").

<sup>107</sup> Should a third party's order instead execute against Autumn's bid on ARCA before it is canceled, see *supra* note 49.

<sup>108</sup> If the internalizer's expenses for operating its enterprise have a marginal cost greater than zero, these would be added to the losses.

is the mirror image of the first: Ari's buy orders leave both the NBO and NBB elevated relative to what each would have been if Ari had not engaged in the strategy. So, now it is the buyers who lose and the sellers who gain, with the gains and losses again netting out to zero.

Second, consider the third parties who submitted the non-marketable orders to the exchanges during this period and execute. Assume for a moment that these non-marketable orders are all submitted by professional liquidity suppliers. The transactions that result are above and beyond what would have been these suppliers' aggregate volume if Ari had not engaged in the strategy. During the first leg, when the liquidity suppliers are purchasing Ari's shares, they pay less for them than they otherwise would have because they have lowered their bids in reaction to the fact that Ari's orders lead to an excess of sell orders over buy orders. These liquidity suppliers will be lowering their offers in tandem and so the NBO is going down similarly. Therefore, these liquidity suppliers are both buying and selling shares at comparably depressed prices. Because these suppliers try to keep the amounts they purchase and sell roughly equivalent, these two effects cancel each other out. During the second leg, all the same things are true for the mirror-image sale transactions that these professional liquidity suppliers engage in with Ari.

During both legs, the liquidity suppliers' advantage comes from the fact that they can earn the spread in price between their sales and purchases, in our example \$.05, without adverse-selection risk in their transactions with Ari. This is because Ari is an uninformed trader who will in the second leg buy as many shares as he sells in the first. The professional liquidity suppliers, through this \$.05 spread, thus enjoy as a gain the full \$825.00 that Ari loses on the roundtrips by buying at the offer and selling at the bid.

What if, contrary to our initial simplifying assumption, some of the non-marketable limit orders that execute during this period are submitted by ordinary traders? These are persons who were willing to risk non-execution so that they have the chance to get a better purchase price than the NBO or better sale price than the NBB. These ordinary traders are, subject to one qualification, in the same position as traders whose orders do not interact with Ari's. They are able to buy at a price lower than the NBO or sell at a price higher than the NBB just as they could have without Ari's orders, but, because of Ari's orders sent to the exchange, the NBO and NBB are depressed during the first leg and elevated in the second leg, leaving sellers worse off and buyers better off in the first leg (and the reverse in the second leg). The qualification is that the extra transactions generated by Ari's orders mean that more of the non-marketable orders submitted by ordinary traders in fact execute than otherwise would have, and the persons who submitted them enjoy the improvement over the NBB or NBO implicit in their orders. As a group, these ordinary traders would thus enjoy a portion of the \$825.00 gain that would have otherwise

been entirely enjoyed by the professional liquidity suppliers if they were the only persons submitting non-marketable orders.

## 2. Ex Ante Perspective

With regard to each of these two internalizer-burdening trading strategies, what would the longer-run equilibrium look like in a world where the strategy is occurring freely, compared to a world without it? The object of this exercise is to see how the availability of the practice impacts the longer-run wealth positions of the various participants and the implications of these impacts in terms of fairness and, through the incentives they create, efficiency. In our analysis below, we will assume, reasonably realistically, that through experience all the relevant players have unbiased (though not necessarily accurate) expectations concerning the prevalence of each of these two trading strategies and that all the players operate within a competitive environment.

### a. Internalizer-Burdening Traders

The traders engaging in each of the two practices will generate positive expected trading profits. One can think of regularly engaging in the practice as a business, which it might be if it were freely occurring. The resources necessary to conduct such a business are a combination of ordinary and specialized inputs. The ordinary inputs are the physical, organizational, and financial assets that could equally usefully be deployed elsewhere in the economy. The specialized inputs are the efforts of persons who possess abilities and skills especially helpful for undertaking the strategy, which may include programming skills combined with a knowledge of the workings of equity markets and the mechanics of their operation. If the practice were freely occurring, both kinds of inputs would be drawn into supporting this activity up to the point where, at the margin, the expected profits from engaging in the practice equal the costs of paying for the inputs or the returns on their next best use.

If this practice were freely occurring, it would be doing so in an openly competitive environment. So, the suppliers of the ordinary inputs will be paid a market return comparable to what they would earn if the resources they supplied were instead deployed another way. Thus, whether the practice occurs freely or not, it has no effect on the wealth positions of these input suppliers. In the long run, it is only the persons with especially useful abilities and skills who will be paid greater rents than they would be paid if they were to spend the time devoted to the practice doing something else. Thus, their wealth positions will be enhanced if the practice is allowed to occur freely.



b. Internalizers

The internalizers are counterparties to the traders utilizing these two strategies and will incur trading losses. The ultimate incidence of these losses is a bit complicated, however. The internalizer's expenditures on efforts to avoid dealing with such traders using each of these strategies, plus the trading losses that nonetheless occur, are part of its costs of doing business. At least in long-run equilibrium, much of these costs will be passed on through less price improvement or a lower rate of payment to brokers for order flow. Retail investors would ultimately bear the increased costs of trading associated with the reduction in price improvement. To the extent that the brokerage business is competitive, the same is true of the reduction in payment for order flow, just indirectly, as brokers pass on to their retail customers in the form of higher brokerage fees the consequences to them of these reduced payments.

Each of these trading strategies will still have a negative effect on the wealth positions of certain persons associated with the internalizer business. As we have just seen, much of the trading losses and the costs of efforts to reduce such losses will ultimately be passed on in ways that make it more expensive for a retail trader to utilize an internalizer as her market maker. This increased cost of trading using an internalizer means that less such trading occurs. Less trading means less of both their ordinary and their specialized inputs will be pulled into the internalizer business. Suppliers of the ordinary inputs will earn the same ordinary market return whatever the level of internalizer activity. For persons with abilities and skills uniquely useful for the internalizer business, however, a lower volume of business means they will be paid less in rents and so their wealth positions would be negatively affected by the prospect of successful trading of this type.

c. Professional Liquidity Suppliers

When someone undertakes a quote-based internalizer-burdening strategy, we see from the Autumn example that professional liquidity suppliers, who operate on the exchanges, would likely be totally unaffected. The order sent to the exchange is typically canceled before it can be executed against. Thus, no transaction occurs that would not have occurred anyway. With no change in the transactions to which professional liquidity suppliers look to set their quotes, their quotes would not change.<sup>109</sup>

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<sup>109</sup> The order sent to the exchange is, of course, itself a quote, and professional liquidity suppliers, in setting their own quotes, in addition to looking at transactions that are occurring, look at changes in the quotes of others. However, the quote resulting from the order sent to the exchange is so ephemeral and small that it should not have a significant impact on the market.

The story is more complicated when someone like Ari undertakes a trade-based internalizer-burdening strategy. As we saw, the marketable orders that he sends to the exchanges in order to move price result in a roundtrip where he is selling at the NBB and buying at the NBO. Because the NBO is above the NBB at all times, the liquidity suppliers on the exchanges who posted the quotes that Ari's orders executed against will on average make the spread between the two with no adverse-selection risk. In essence, when the trades of those using this strategy are added to all the other trades that would have occurred in any event, it is like increasing uninformed traders as a proportion of all traders on the exchanges. The higher the proportion of traders on the exchanges that are expected to be uninformed, the narrower the spread.<sup>110</sup> So, the higher the expected level of trade-based internalizer-burdening trading, the narrower will be the spread all else equal.

What then is the impact of narrower spreads on the liquidity supply business? A reduction in the proportion of informed trades as a percentage of all trades (informed or uninformed) means that the liquidity suppliers' costs of doing business is reduced because there is a smaller chance that any given transaction is informed and hence involves an expected loss. Because liquidity supply is a competitive business, the expectation of lower adverse-selection costs translates to lower prices for the service rendered, i.e., a narrower spread between the bid and the offer. A narrower spread in essence decreases the price that needs to be paid to trade. This means more trading occurs. More trading means more of both ordinary and specialized inputs will be pulled into the liquidity supply business. Suppliers of the ordinary inputs will earn the same ordinary market return whatever the level of liquidity supply activity. For persons with abilities and skills uniquely useful for liquidity supply, however, they will be paid more in rents, and so their wealth positions will be positively affected by the prospect of this type of trading strategy succeeding.

#### d. Uninformed Traders

The effects of each of the two kinds of internalizer-burdening trading strategies on uninformed traders need to be analyzed separately.

##### i. *Quote-Based Internalizer-Burdening Trading*

From the Autumn example of quote-based internalizer-burdening trading, we can see that uninformed traders would not be directly involved when someone engages in this strategy. Uninformed traders are not counterparties

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<sup>110</sup> See *supra* Part III.C.

to the trader utilizing the strategy, and the quote sent to the exchange is typically canceled before it can be executed against.

Nevertheless, freely occurring quote-based internalizer-burdening trading will increase the cost of trading for uninformed retail traders. This is because, as noted above, the costs of trades utilizing an internalizer will rise, and, relative to using exchanges, internalizers would still often be the less expensive way to trade.

Calculating the ultimate incidence of this cost on uninformed retail traders is a bit more complicated, however. When an issuer's entrepreneurs and initial investors engage in an initial public offering, the shares they are offering will be discounted to reflect the prospect that there will be a cost of trading associated with each subsequent sale and purchase in the secondary market, as well as the prospect that any future equity offerings by the issuer over time will be similarly discounted.<sup>111</sup> So, for stock with a given expected cash flow, the entrepreneurs and early investors receive less for their contributions to the firm if the stock is expected to be more costly to trade in the secondary market. On average, this discount compensates traders in advance for the cost of the trades they will make.<sup>112</sup> Because, as noted above, freely occurring quote-based internalizer-burdening trading will increase the cost of trading for the uninformed retail investor, it will increase the overall expected cost of trading the stock and hence, in expectation, increase this discount. The increase in the discount will likely not fully compensate the average uninformed retail trader, meaning that freely occurring quote-based internalizer-burdening trading leaves this retail trader worse off.<sup>113</sup> However, this average uninformed retail investor is still overcompensated by the discount, just by less.<sup>114</sup>

## ii. *Trade-Based Internalizer-Burdening Trading*

All of the effects of freely-occurring quote-based internalizer-burdening trading occur with the trade-based kind as well, but there are some additional effects. These additional effects are due to two factors. One is that,

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<sup>111</sup> See FOX ET AL., *THE NEW STOCK MARKET*, *supra* note 8, at 44–45, 138.

<sup>112</sup> Those uninformed traders who buy and sell more frequently than average are hurt by repeatedly paying the spread more than they are helped by the discount, and so they are losers from the practice. The opposite is the case for those who trade less frequently than average.

<sup>113</sup> It is reasonable to assume that the discount is based on some kind of a weighted average of the expected costs associated with the two ways of trading, internalizer versus exchange, weighted by the expected proportion of each kind of trade. If the costs associated with internalized trades go up, the weighted average goes up, but not by as much. So, percentage wise, the discount will not go up by as much as the cost of internalized trading does.

<sup>114</sup> Again, make the reasonable assumption that the discount is based on some kind of average of the expected costs associated with internalizer- versus exchange-based trading, weighted by the expected proportion of each kind of trade. The weighted average of trading, the basis of the discount, is greater than the cost of internalized trading. This is because the cost of internalized trading is less than exchange trading. So, traders using internalizers who buy and sell at the average overall rate of trading are overcompensated by the discount.

unlike the quote-based version, the actions of a trader engaging in the trade-based version not only affect the prices at which the transactions between the trader and the internalizer occur, they affect as well the prices of transactions involving third parties. The second factor is that, to the extent that uninformed traders use exchanges, this form of internalizer-burdening trading actually reduces the uninformed trader's cost of trading.

In our analysis of the first factor—the effect of the changes in prices—first consider uninformed buyers and sellers who use marketable orders. For orders sent to the exchanges, the buy orders will execute at the NBO and the sell orders at the NBB. For orders sent to internalizers, they will execute at a price equaling the NBO or NBB, adjusted to reflect whatever price improvement the internalizer offers. The orders sent to the exchange by this internalizer-burdening trader in the first leg of his strategy depress both the NBB and NBO relative to where they otherwise would have been, and the orders associated with his second leg likewise elevate both the NBB and NBO. As we saw from the *ex post* analysis above, the effect of this on each leg is a wash when buyers and sellers are considered as a group. A buyer is as likely to be buying during the first leg of a person engaging in the strategy as during this person's second leg. The reverse is true for a seller. In sum, if trade-based internalizer-burdening trading was freely occurring, its elevation or depression of the NBB and NBO would not affect the uninformed ordinary trader *ex ante*. Whether a buyer or a seller, she would be as likely to gain as to lose from the practice when engaging in any given trade.

To the extent that uninformed investors use non-marketable orders, the conclusion is the same. The advantage of using such an order is that, if it executes, it will do so at a better price than the NBB (for a sale) or than the NBO (for a purchase). The disadvantage is that the order may not execute, and the likelihood of not executing, all else equal, is a function of how far above the NBB or below the NBO the order's limit price is. As the internalizer-burdening trader moves the NBB and NBO down and up, the effects on buyers and sellers using non-marketable orders of any given distance from the NBO or NBB are the same as for ones using marketable orders. As the NBB or NBO move up or down, the limit price with any given chance of execution moves commensurately in the same direction.

Now consider the second factor: the reduction in the cost of trading on the exchanges. To the extent that liquidity on the exchanges is provided by professional liquidity suppliers, this conclusion follows directly from our discussion above concerning these suppliers and how the prospect of these internalizer-burdening trades narrows the spread. To the extent that liquidity is instead supplied by ordinary traders submitting non-marketable orders, this prospect makes submitting such orders more attractive because it increases the chance that an order of any given distance from the NBB or NBO will be executed against without adverse selection. If submitting such orders is more attractive,

more of them will be submitted, which, like the reaction of professional liquidity suppliers, reduces the cost of trading for uninformed traders.

e. Informed Traders

Fundamental value-informed traders such as managed mutual funds, pension funds, hedge funds, and university and other non-profit endowments are usually easily identified as such by their brokers, and so most brokers do not want to send orders from such traders to an internalizer. This is because maintaining a good relationship with an internalizer and the payment for order flow that comes with it require a broker to seek to minimize the number of informed orders it sends the internalizer. Over time, it is possible for the internalizer to assess whether the broker in fact is keeping low the proportion of informed orders it is sending the internalizer.

Announcement-informed traders, to accomplish their goal of trading before any other market participant learns of the public announcement and trades on it, depend on great speed. Thus, they need to trade on exchanges, which are faster venues for gaining execution than are internalizers.<sup>115</sup>

These dynamics mean that fundamental value- and announcement-informed traders are largely confined to trading on the exchanges.<sup>116</sup> Informed trading of these kinds will be less costly with the narrowing of spreads resulting from the free occurrence of trade-based internalizer-burdening trading.<sup>117</sup> This will increase the volume of such informed trading, with long-run wealth effects mainly being an increase in the rents accruing to persons with special skills and talents related to these activities.

Insider-informed traders, in contrast, are not easily identified by brokers and thus can seek to take advantage of the lower costs of trading associated with using an internalizer as the market maker. They face the higher costs of using internalizers if quote-based and trade-based internalizer-burdening trading is freely occurring.

### 3. Fairness Considerations

Based on the survey above, we can see that the free occurrence of the two internalizer-burdening trading strategies would, relative to their absence, have a variety of effects—some favorable and some unfavorable—on the

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<sup>115</sup> See *supra* section III.A.1.

<sup>116</sup> Operators of dark pools also know who is sending them orders and have similar motivations to avoid informed traders.

<sup>117</sup> Freely occurring quote-based internalizer-burdening trading would also narrow spreads to the extent that, by making internalized trades costlier, it results in a bigger portion of uninformed retail trade being sent to the exchanges.

rents accruing to the various individuals whose welfare in one respect or another depends on what happens in the equities markets. A prospective flow of rents is not an entitlement, however. In a market economy, the offer of rents to prompt the suppliers of specialized inputs to come forward is simply the mechanism by which these resources get directed to the activity for which they are most particularly suited.<sup>118</sup> The effects on the rents being paid in the case of the businesses being considered here do not raise any greater fairness issues than do the rents paid to persons with special abilities and skills across the whole market-based part of our economy.

As we will see in Part V, both internalizer-burdening practices are under a legal cloud: it is unclear whether they ultimately will be determined to be illegal or legal. If either or both were clearly determined to be legal, this resolution of the uncertainty concerning the strategy's legality would lead to a significant increase in the amount of trading utilizing the strategy above the level currently expected.<sup>119</sup> This could have more dramatic and widespread wealth effects than what we have talked about so far, hurting the owners of physical and intellectual property and human capital specialized for the internalizing business. But these sorts of effects are true of any legal change. Fairness arguments against such a legal change based on these effects are out of place unless there is some special reason for protecting the expectation that the strategy's use would continue at its current level.

The bottom line is that the more serious normative question concerning whether either type of internalizer-burdening trading should be legal or illegal is whether it enhances or decreases efficiency in the overall economy.

#### 4. Efficiency Considerations

From an efficiency point of view, internalizer-burdening trading has, as analyzed below, few redeeming virtues. Although, as we will see, it may marginally indirectly improve price accuracy, it is unlikely that this effect is more socially valuable than the practice's negative impact on liquidity. Moreover, the practice itself and internalizer efforts at protecting against it consume resources that could be usefully employed elsewhere in the economy.

##### a. Price Accuracy

As our discussion of the workings of the market in Part III shows, market prices have the remarkable quality of reflecting a large amount of information

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<sup>118</sup> See FOX ET AL., *THE NEW STOCK MARKET*, *supra* note 8, at 54.

<sup>119</sup> The current expectation would be a probabilistically weighted average of the level expected if it were determined to be illegal and the level if it were determined to be legal.

relevant to predicting an issuer's future cash flows. So, one key efficiency question is whether either kind of internalizer-burdening trading has any meaningful effects on the ability of market prices to do this.

Quote-based internalizer-burdening trading has no direct effects on the prices of executed transactions in the market beyond those between the trader and the internalizer. Trade-based internalizer-burdening trading does have a direct effect on prices, moving them temporarily away from where they otherwise would be, first in one direction and then in the other. But it does so for such a brief time, typically just minutes, as to have no real economic efficiency implications. Recall that the ways that accurate prices benefit the economy is by helping to allocate the economy's scarce capital to the most promising potential real investment projects and by improving the utilization of the economy's existing productive capacity through optimizing the signals provided to management about investment decisions and the signals given to boards and shareholders about the quality of management decisions.<sup>120</sup> Very short-run distortions in price do not seriously undermine the role that share prices play in guiding the real economy in these ways. So, although most commentators and jurists focus on the price distortion effects of manipulation of all kinds,<sup>121</sup> reduced price accuracy is not, from a social point of view, an important direct consequence of the two kinds of internalizer-burdening trading strategies under study here.

However, and maybe even more counterintuitively, each of these kinds of internalizer-burdening strategies actually has at least a slightly positive indirect effect on longer-run price accuracy, the kind of price accuracy that does play an important role in the real economy. They do so through their effects on the liquidity of exchange-based trading.

Quote-based internalizer-burdening trading increases the liquidity of exchange-based trading solely by making internalized-based trading more expensive for uninformed retail traders, thus steering more of their orders to the exchanges instead. As we have seen, when a larger portion of all exchange-based trading is uninformed, the bid-ask spread narrows. Trade-based internalizer-burdening trading increases the liquidity of exchange-based trading a second way as well. As we have seen above, the prospect of the marketable orders that this kind of trader submits to the exchange in order to move the NBO or NBB narrows the bid-ask spread and hence benefits other traders on

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<sup>120</sup> See *supra* section II.C.1.

<sup>121</sup> See, e.g., THOMAS LEE HAZEN, *THE LAW OF SECURITIES REGULATION* 471 (6th ed. 2009) ("The purpose of the various statutes and rules prohibiting market manipulation is to prevent activities that rig the market and to thereby facilitate operation of the 'natural law' of supply and demand. . . . [M]anipulation consists of any intentional interference with supply and demand."). Another articulation identifies the core of manipulation "as *exercising unsupported price pressure* because this creates societal costs." Matthijs Nelemans, *Redefining Trade-Based Market Manipulation*, 42 VAL. U. L. REV. 1169, 1176 (2008).

the exchange.<sup>122</sup> And if the trader uses non-marketable orders, they permit others to transact against these orders at more favorable prices than otherwise would have been available.

These various effects lower the cost of trading on exchanges and in so doing stimulate the long-run price accuracy-enhancing activities of fundamental value-informed traders. Fundamental value-informed traders create, at a cost to them, the information on which they trade.<sup>123</sup> A lower cost of trading means their trading will be more profitable, and so they have more incentive to create information.<sup>124</sup> This increase in the level of fundamental value-informed trading would be socially positive because the social gain from its contribution to long-run price accuracy exceeds the social costs of the activity.<sup>125</sup>

#### b. Liquidity

Freely occurring internalizer-burdening trading, as we have seen, increases the cost of internalizer-based trading and decreases the cost of exchange-based trading. However, the net effect on the overall cost of trading—the average cost of each of these two kinds of trading weighted by the proportion of total trading that each represents—will increase.

This is true even though the proportion of trades occurring on the exchanges would increase in response to the higher cost of internalized trading, which would push down the cost of trading on the exchanges. Absent internalizer-burdening trading, the average cost of trading overall should be the same whatever the proportion of trading of internalizer-based versus exchange-based is. This is because the savings with internalizers just come at the expense of increased adverse-selection costs on the exchanges. Putting it another way, the profits of internalizer-burdening traders simply add to the aggregate cost of trading across the two kinds of trading venues. Although, as discussed in Part V, it is not clear whether either internalizer-burdening strategy is illegal under existing statutes, SEC rules, and arguably analogous case law, the SEC's Division of Enforcement proceeds as if it is. So, it is safe to say that, at a minimum, each strategy is under a legal cloud.<sup>126</sup> If, when fully adjudicated by the judicial system, either or both were found to be legal, the fact that each is profitable suggests there would be much more of it.

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<sup>122</sup> See *supra* Part III.C.

<sup>123</sup> See *supra* section III.A.1; FOX ET AL., NEW STOCK MARKET, *supra* note 8, at 134–35.

<sup>124</sup> See generally Fox et al., *Informed Trading*, *supra* note 33.

<sup>125</sup> See generally *id.* In contrast, the level of issuer and non-issuer insider informed trading and trading based on the tips of such insiders depends mostly on the opportunities that the insiders encounter in their employment. Thus, the social advantage from a higher level of fundamental value-informed trading is likely to dominate the disadvantage from the likely smaller increase in the other, socially undesirable, forms of informed trading.

<sup>126</sup> See *infra* Part V.



In that case, we would expect this addition to the aggregate cost of trading to be substantial.

As discussed in Part II, higher costs of trading reduce social welfare because of the resulting misallocation of resources over time and misallocation of risk: socially beneficial transactions fail to occur, leaving investors with suboptimal, riskier portfolios and driving up the cost of capital for firms.<sup>127</sup>

### c. Wasted Resources

The free occurrence of either of these two types of internalizer-burdening trading would result in the persons adopting the practice to consume scarce resources that would otherwise be used productively to produce valued goods and services elsewhere in the economy. It also would promote a resource costly arms race between those adopting the practice and the internalizers, with the internalizers seeking to use ever more sophisticated methods to detect such trading and internalizer-burdening traders reacting with yet greater effort to avoid detection.

Could this use of real resources be justified, however, by an argument that the modest positive impact that freely occurring internalizer-burdening trading would have on long-run price accuracy is more socially valuable than the socially costly increase in the cost of trading? Even if the premise of this argument is correct, which we doubt, we think the answer is no because there are less resource costly ways of accomplishing this putative net social gain. To the extent that the grounds for expecting this gain arise from more uninformed trades going to the exchanges, this could be accomplished by simply requiring all trades go to exchanges. To the extent that it is from the favorable effects on other traders on the exchanges from the orders sent to the exchanges by trade-based internalizer-burdening traders, some kind of subsidy given to fundamental value-informed traders would be more resource efficient.

### d. Market Confidence

There is one additional, more nebulous efficiency consideration: market confidence. This relates to a sense among investors as to how fair the market is, part of the fifth basic social goal discussed in Part II. Public awareness that there is frequent use of these internalizer-burdening strategies may hurt everyday investors' confidence in the stock market. Although we have minimized the fairness implications of internalizer-burdening trading, such trading practices may still be viewed by the public as unfair and improper in some way that is harmful to them. As a result, to the detriment of both them and others,

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<sup>127</sup> See *supra* section II.C.2.

they may participate in the stock market to a lesser degree.<sup>128</sup> Typically, the best response to public misunderstanding is to resolve it through education, but where a perception may be especially difficult to eradicate and it is causing damage, then that perception may provide an independent policy ground for prohibiting the relevant conduct.

e. Summary

In sum, although the free occurrence of each of the two types of internalizer-burdening strategies might slightly improve price accuracy, their negative effects on the overall cost of trading, market confidence, and resource use strongly suggest that, on balance, each is socially negative.

C. *The Appropriateness of Legal Sanctions*

The conclusion that the two strategies are socially negative does not automatically mean that they should be subject to legal sanction. As noted in the Introduction, some commentators oppose regulation of any type of trading strategy that might be labeled manipulation, at least beyond such obvious abuses as wash or matched sales.<sup>129</sup> Their concern is that no easily observable conduct separates the market activity associated with these putatively manipulative trading strategies from market activity that serves socially useful purposes, and so manipulation regulation would chill this other useful activity.<sup>130</sup> Determining the purpose of a transaction, they argue, is highly speculative. The question then is, would making quote-based and trade-based internalizer-burdening trading illegal as manipulation deter much socially worthwhile market activity, as well? Will persons contemplating making a socially worthwhile market action fear that it might be mistaken for a manipulative one?

Where a trader engages in a repeated pattern of orders sent to exchanges followed immediately by one or more transactions with an internalizer going in the opposite direction, and this represents a meaningful portion of all the trader's activities, we think that the intent to use the orders to profit at the expense of the internalizer is clear. A sudden change in the information obtained

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<sup>128</sup> See Lydia Saad, *U.S. Stock Ownership Stays at Record Low*, GALLUP (May 8, 2013), <http://news.gallup.com/poll/162353/stock-ownership-stays-record-low.aspx>. Michael Lewis attributed this drop, which has occurred in the face of a sharply rising market, to a sense that the market is unfair. See MICHAEL LEWIS, *FLASH BOYS: A WALL STREET REVOLT 200–01* (2014); see also *The Hidden Cost of Trading Stocks*, N.Y. TIMES (June 22, 2014), <http://www.nytimes.com/2014/06/23/opinion/best-execution-and-rebates-for-brokers.html>. The recent meme stock craze and Robinhood-inspired gamification of stock trading seem to have reversed this trend, but we doubt these will provide a boost long term.

<sup>129</sup> See *supra* note 2 and accompanying text.

<sup>130</sup> See *supra* note 2 and accompanying text.

by the trader could explain an occasional incidence of such quick reversing behavior, but an established pattern of such sequences cannot plausibly be caused by sudden information changes. Thus, punishing such a trader is not likely to chill socially worthwhile market activity.

A more interesting objection to including the two types of internalizer-burdening trading within the reach of prohibitions on manipulation is the idea that the market itself can take care of the problem. Such a private solution, though, may be a very difficult task. The trader using either of these strategies will use multiple brokers in even a single implementation of the strategy and, from one implementation to the next, can use yet other brokers. And in the case of the trade-based version of the strategy, the trader might even use a different internalizer for the roundtrip. A sanction-wielding centralized authority able to look at all the quotes and order flow over time and able to inquire of brokers beyond the one that an internalizer dealt with would appear to be a much more efficient and effective monitor. Indeed, the existence of this centralized authority and internalizer efforts at detection can complement each other. The internalizer can report suspicious activity that then triggers the centralized authority to open an investigation utilizing its access to its broader range of available information.

We recognize also that the very idea of internalization has been subject to criticism, as has payment for order flow.<sup>131</sup> Based upon such criticism, some might argue that internalizers should receive no protection. The crux of the case against internalization is that, by providing terms attractive enough to divert retail orders from going to the exchanges, it reduces the proportion of orders going to the exchanges that are uninformed. That widens bid-ask spreads on the exchanges. These wider spreads in turn increase fundamental value-informed traders' costs of doing business which, as explained above, reduces their generation of new information and hence leads to less accurate prices.<sup>132</sup> Payment for order flow is in turn subject to two related critiques. One is that because it goes to the broker, not the person submitting the order, it can distort the broker's incentives in a way that undermines its duty of best execution. The second is that because of arguably inadequate competition and other market failures, by no means all of the broker's cost savings by receiving payment for order flow may get passed on to the persons submitting the

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<sup>131</sup> See, e.g., Paul Kiernan & Alexander Osipovich, *SEC Closes In on Rules That Could Reshape How Stock Market Operates*, Wall St. J. (June 6, 2022), [https://www.wsj.com/articles/sec-closes-in-on-rules-that-could-reshape-how-stock-market-operates-11654544799?mod=article\\_inline](https://www.wsj.com/articles/sec-closes-in-on-rules-that-could-reshape-how-stock-market-operates-11654544799?mod=article_inline); Alexander Osipovich, *Do You Get the Best Prices Trading Stocks?*, Wall St. J. (Dec. 13, 2022), <https://www.wsj.com/articles/sec-ken-griffin-citadel-securities-payment-for-order-flow-trading-11670946812>; U.S. Sec. & Exch. Comm'n, *supra* note 4 (proposing new order competition rules).

<sup>132</sup> For an example of this critique of internalization, see Kevin S. Haeberle, *Stock-Market Law and the Accuracy of Public Companies' Stock Prices*, 2015 COLUM. BUS. L. REV. 121 (2015).

orders.<sup>133</sup> Indeed, it is possible that this problem is sufficiently great such that the combination of price improvement and reduced commissions that the retail trader actually receives with an internalized order is less than the amount by which the bid-ask spreads would shrink if all retail orders were sent to the exchanges.

Based on these criticisms, it might be argued that the free occurrence of quote-based and trade-based internalizer-burdening trading is a good thing. It would decrease the portion of the orders in the market that are internalized and the payment for order flow that would otherwise have been paid, thereby reducing the evils that give rise to the criticisms. Although there may well be at least some merit in each of these criticisms, weighing them and the possible responses is outside of the scope of this Article. In any event, we do not think their resolution is necessary for us to reject this argument for allowing the free occurrence of these two strategies. To the extent that these critiques have validity, they call for confronting directly the problems with internalization that they raise. Doing so would be superior to allowing the free occurrence of trading strategies that, with significant consumption of productive resources, permit just certain sophisticated private players to siphon off some of the gains otherwise enjoyed in part or in whole by retail investors.

#### V. AMBIGUITIES IN EXISTING LAW CONCERNING INTERNALIZER-BURDENING TRADING

Interestingly, there are no court-adjudicated cases with opinions specifically addressing the legality of internalizer-burdening trading of either kind. There are adjudications of internalizer-burdening trading that have occurred in the context of SEC administrative proceedings, but just a handful.<sup>134</sup> Beyond that, all we have are cases where civil or criminal charges have been brought on the theory that such trading was illegal manipulation, followed by consent orders that include the enforcer's view of the law.<sup>135</sup> Thus, we will have to reason our way as to what the judicial system, when finally faced with an internalizer-burdening case of either kind, would likely rule as to its legality. At the moment, it is far from clear that the courts, when squarely faced with the issue, will find either practice to be illegal, although we are seeking through this Article to provide a pathway and persuasive reasons for it to do. When such an adjudication finally occurs, the courts will have as guidance only the existing, rather sparse, and not wholly coherent case law relating to manipulation occurring in other contexts. In reviewing here that existing body

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<sup>133</sup> See Fox et al., *The New Stock Market*, *supra* note 8, at 291–92.

<sup>134</sup> See *infra* sections V.A.4, V.B.4–5.

<sup>135</sup> See *infra* sections V.A.4, V.B.4–5.

of case law, we will rely to some extent on analysis from our previous work concerning other types of manipulation.<sup>136</sup>

Compounding the problem of the need to reason by analogy to a sparse and not fully coherent body of law is the fact that quote-based internalizer-burdening trading involves only the use of quotes, not trades, to move the price of the stock involved. Although there are some federal court and SEC opinions that have considered the legality of using quotes to move prices to a trader's advantage in various contexts not involving internalizers, these opinions themselves rely primarily on precedent that was developed to consider trade-based manipulation, often without fully recognizing how quote-based manipulation is different.<sup>137</sup>

Exchange Act Sections 9(a)(2) and 10(b) are the government enforcers' primary tools for policing manipulative trading generally and the two types of internalizer-burdening trading in particular. As will become clear from our review of the relevant cases under both these provisions, the most fundamental challenge is defining how an action which is perfectly legal when viewed in isolation—respectively, submitting a quote and entering into a purchase or sale—can become illegal when repeated in some particular pattern or under particular circumstances.

#### A. *Section 9(a)(2)*

Section 9(a)(2) prohibits effecting (1) “a series of transactions” in a security that “creat[e] actual or apparent active trading” or affect its price (2) “for the purpose of inducing the purchase or sale of such security by others.”<sup>138</sup> As already discussed, entering into any transaction induces another person to buy or sell and quite possibly affects price. This means that Section 9(a)(2)'s legal force must stem from finding that the purpose of inducing these transactions is illegitimate.<sup>139</sup> This comes down to the issue of determining what constitutes sufficient evidence that the motivation of at least some portion of a person's trading activity is solely to move the price.

As noted, there are no opinions in court-adjudicated cases directly addressing the application of Section 9(a)(2) to either type of internalizer-burdening trading. So, we will need to review the case law applying Section 9(a)(2) in other contexts to get a sense of how a court might apply it to each internalizer-burdening trading. We will start by considering whether Section 9(a)(2) by its own terms even applies to efforts to move price through quoting activity. If not, Section 9(a)(2) has no applicability to quote-based

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<sup>136</sup> See Fox et al., *Manipulation*, *supra* note 3; Fox et al., *Spoofing*, *supra* note 3.

<sup>137</sup> See Fox et al., *Spoofing*, *supra* note 3, at 1292–1310 (collecting cases).

<sup>138</sup> See 15 U.S.C. § 78i(a)(2).

<sup>139</sup> See *supra* Introduction.

internalizer-burdening trading, though it still may to the trade-based variety. Then we will discuss Section 9(a)(2)'s respective applicability to trade-based and quote-based strategies in contexts not involving internalizers. Finally, we will consider the few SEC opinions applying Section 9(a)(2) to internalizer-burdening trading.

### 1. Does Section 9(a)(2) Ever Even Cover Bids and Offers?

A bid or offer—the tools used in quote-based internalizer-burdening trading to move the internalizer's price—is clearly an “action,” but it is the action of a single person. Until and unless the quote is executed against, its submission does not involve a counterparty. The aim of quote-based internalizer-burdening trading and its damage to others only occurs if the order is *not* executed against, at least prior to execution of the order sent to the internalizer. So, in such a situation, it is fair to ask: where is the “trans” that makes the action of submitting a bid or offer a “transaction,” something that is needed for the strategy to fit within the literal reading of the first prong of Section 9(a)(2)?

As this question implies, the most literal reading of the term “transaction” would seemingly put all quote-based strategies, including quote-based internalizer-burdening trading, outside of Section 9(a)(2)'s reach. There are, however, a few judicial decisions, unrelated to internalizer-burdening trading, that have confronted this issue, and they have all interpreted the term “transaction” more liberally than the literal meaning of the term. In doing so, however, these courts have relied on strained reasoning or failed to confront the literal meaning altogether and simply summarily declared that quotes constitute transactions.<sup>140</sup>

For example, in *SEC v. Resch-Cassin & Co., Inc.*, the court concluded that bids used to drive up the price of an over-the-counter stock were included under Section 9(a)(2)'s term “transaction.”<sup>141</sup> This conclusion was based on the fact that the then-existing Exchange Act Rule 10b-7 defined “transaction” to include “a bid or a purchase.”<sup>142</sup> However, Rule 10b-7's definition of “transaction” was, by its terms, intended just for purposes of this rule rather than for the purposes of the Exchange Act as a whole.<sup>143</sup> Rule 10b-7 related to the rather narrow question of the appropriateness of certain stabilization activities associated with a securities offering and was promulgated under Section

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<sup>140</sup> See Fox et al., *Spoofing*, *supra* note 3, at 1294–99 and accompanying notes.

<sup>141</sup> *SEC v. Resch-Cassin & Co.*, 362 F. Supp. 964, 976–79 (S.D.N.Y. 1973).

<sup>142</sup> *Id.* at 975–76.

<sup>143</sup> The rule that the court relied on was reserved by Congress in January 1997. That statute stated that “for the purposes of this section . . . [t]he term transaction shall mean a bid or a purchase.” 17 C.F.R. § 240.10b-7(b) (emphasis added) (as existent in 1973). Moreover, the definition only covered bids, not offers, because only bids at the time of an offering, not offers, were the concern of the rule.

10(b), not 9(a)(2). The court's seemingly real reason for including bids and offers within the reach of Section 9(a)(2) was more results-oriented: it stated that quotes can be used to create the same type of evils as completed purchases and sales can, and so quotes should be considered "transactions" as well.<sup>144</sup>

Other cases have subsequently directly or indirectly relied on *Resch-Cassin* for the proposition that bids and offers are "transactions" under Section 9(a)(2). A recent case involving spoofing, *SEC v. Lek Securities Corp.*, relied on *SEC v. Malenfant*,<sup>145</sup> which in turn relied on *Resch-Cassin*,<sup>146</sup> for its assertion that "a 'series of transactions' that create 'actual or apparent' active trading encompasses not only executed trades but also bids and orders to purchase or sell securities"<sup>147</sup>. Other than the poorly reasoned opinion in *Resch-Cassin*, we have found no other court opinions directly addressing why the term "transaction" should be interpreted more broadly than the literal reading of the term.<sup>148</sup>

We have serious doubts whether a federal court of appeals or the Supreme Court would, if it took a serious look at the issue, conclude that quotes are "transactions" for purposes of Section 9(a)(2). If quotes are authoritatively ruled not to be "transactions," quote-based internalizer-burdening trading could not be considered a Section 9(a)(2) violation.

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<sup>144</sup> *Resch-Cassin*, 362 F. Supp. at 976 ("The insertion of increasingly higher bids for a stock in the sheets is an obvious device to create a false appearance of activity in the over-the-counter market and tends to support the price at an inflated level."). The outcome from such activity, the court concluded, "was to artificially stimulate the so-called market price of the stock while making it appear to be the product of the independent forces of supply and demand when, in reality, it was completely a creature of defendants' subterfuge." *Id.* at 978.

<sup>145</sup> *SEC v. Lek Sec. Corp.*, 276 F. Supp. 3d 49, 62 (S.D.N.Y. 2017) (citing *SEC v. Malenfant*, 784 F. Supp. 141, 145 (S.D.N.Y. 1992)). For a discussion of "spoofing," see *infra* section V.A.3.

<sup>146</sup> *Malenfant*, 784 F. Supp. at 145 (S.D.N.Y. 1992) (citing *Resch-Cassin*, 362 F. Supp. at 978). The *Malenfant* court also noted that "[i]t was not necessary for the matched buy and sell orders to have been executed" in a case concerning alleged violations of Sections 9(a)(1) and 9(a)(2). *Id.*

<sup>147</sup> *Lek Sec. Corp.*, 276 F. Supp. 3d at 62. See also *Spicer v. Chi. Bd. Options Exch., Inc.*, No. 88-C-2139, 1990 WL 172712, at \*2 (N.D. Ill. Oct. 30, 1990) (noting in dicta that, for purposes of Section 9(a)(2), "plac[ing] bids . . . would also qualify" as "means of effecting a transaction").

<sup>148</sup> See *Fox et al.*, *Spoofing*, *supra* note 3, at 1296. There is, however, an opinion that attempts to do so in a case adjudicated by the relevant administrative agency, the SEC. *In re Kidder, Peabody & Co.* was a 1945 disciplinary action against a broker-dealer. *Kidder, Peabody & Co.*, Exchange Act Release No. 3673, *amended* Exchange Act Release No. 3679, 1945 WL 26140 (1945). The Commission found that because the broker-dealer's agents had engaged in a number of bids, it violated Section 9(a)(2) despite the fact that only one bond was purchased for its account, not a series of purchases or sales. The Commission justified this broader interpretation of "transaction" based on an expansive dictionary definition of the term, a claim that the terms "transactions" and "purchases and sales" are used elsewhere in different contexts, and even on Section 9(a)(2)'s legislative history. As we have discussed in previous work, we are not fully convinced by this reasoning. See *Fox et al.*, *Spoofing*, *supra* note 3, at 1296-99 and accompanying notes.

## 2. Court Cases Applying Section 9(a)(2) to Use of Trades to Move Price

Although the case law related to trade-based manipulation is littered with references to Section 9(a)(2),<sup>149</sup> there has been a persistent failure to substantively analyze, clearly identify, or even define which purposes qualify as improper under the second prong of the prohibition under Section 9(a)(2) relating to effecting “for the purpose of inducing the purchase or sale of such security by others.” Rather, the typical case either merely reiterates the language of the statute and then baldly asserts that the trading behavior in question is covered,<sup>150</sup> or provides such question-begging statements as the Seventh Circuit has made:

[T]he essence of the offense is creating “a false impression of supply or demand,” for example through wash sales, where parties fictitiously trade the same shares back and forth at higher and higher prices to fool the market into thinking that there is a lot of buying interest in the stock.<sup>151</sup>

This is not very helpful, in part because wash sales are already prohibited outright in Section 9(a)(1), and so the real issue is what is additionally prohibited by Section 9(a)(2).

There are two trade-based Section 9(a)(2) cases, unrelated to internalizer-burdening, that do provide a bit more reasoning as to improper purpose. Each involves what we have referred to in earlier work as “open market manipulation with an external interest,” i.e., the situation where a person engaging in trading that affects a security’s price has a pre-existing economic interest in the price *independent* of making a profit from the price-affecting trades themselves.<sup>152</sup> The first, *Resch-Cassin*, discussed above, involved trades that the

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<sup>149</sup> See, e.g., *Markowski v. SEC*, 274 F.3d 525, 529 (D.C. Cir. 2001); *Nanopierce Techs., Inc. v. Southridge Cap. Mgmt. LLC*, No. 02-cv-0767, 2002 WL 31819207, at \*20 (S.D.N.Y. Oct. 10, 2002).

<sup>150</sup> See *AnchorBank, FSB v. Hofer*, 649 F.3d 610, 616–17 (7th Cir. 2011); *Sharette v. Credit Suisse Int’l*, 127 F. Supp. 3d 60, 78 (S.D.N.Y. 2015); *Malenfant*, 784 F. Supp. at 144–45. A private suit under Section 9(a)(2) would also require proof that the relevant transactions were relied on by the plaintiff and affected the price of the plaintiff’s transaction. *Chemtron Corp. v. Bus. Funds, Inc.*, 682 F.2d 1149, 1165 (5th Cir. 1982), *vacated on other grounds*, 460 U.S. 1007 (1983).

<sup>151</sup> *Sullivan & Long, Inc. v. Scattered Corp.*, 47 F.3d 857, 864 (7th Cir. 1995) (citing *Santa Fe Indus., Inc. v. Green*, 430 U.S. 462, 476 (1977)).

<sup>152</sup> *Fox et al., Manipulation*, *supra* note 3, at 74–75. The SEC and at least one court have articulated the notion that an external interest creates an evidentiary presumption, i.e., that “it appears to us that a prima facie case exists when it is shown that a person who has a substantial direct pecuniary interest in the success of a proposed offering takes active steps to effect a rise in the market for outstanding securities of the same issuer.” Federal Corp., Exchange Act Release No. 3909, 25 S.E.C. 227, 230 (Jan. 29, 1947); see also *Wright et al., Exchange Act Release No. 467*, 1938 WL 34042, at \*13 (Feb. 28, 1938), *reversed* *Wright v. SEC*, 12 F.2d 89 (2d Cir. 1940) (“The very existence of an option when coupled with buying on the market by those having an



court determined were a violation of Section 9(a)(2) because the defendants, who were participants in the public offering of the stock of the Africa company, “had an obvious incentive to artificially influence the market price of the security in order to facilitate its distribution or increase its profitability . . . us[ing] the manipulated aftermarket to sell the Africa stock to the public.”<sup>153</sup> The second is *Crane Co. v. Westinghouse Air Brake Co.*, where the court held that trading solely to change an issuer’s share price in order to obtain an advantage pursuant to an external interest—in this case, to defeat a rival potential acquirer’s tender offer—involved a manipulative purpose that rendered the trades violative of Section 9(a)(2).<sup>154</sup> The underlying idea in these cases is that being in a position to benefit from a stock price change, combined just at the moment of being in this position with a trade that moves price, creates a strong presumption that the only purpose of the price-moving trade was to allow the trader to gain a greater profit from being in this position.

With trade-based internalizer-burdening trading, the trader also clearly has an external interest: the planned subsequent trade, going in the other direction, that is sent to the internalizer. The problem is establishing that the plan existed at the time of the market-moving trade. In the cases discussed just above, the interest in question unambiguously already existed. The problem for the enforcer seeking to apply Section 9(a)(2) to an instance of trade-based internalizer-burdening trading is to show that the order going to the internalizer was planned in advance of the preceding opposite-direction order going to the exchange, rather than representing a change in mind as to the trader’s desired portfolio and to the trading venue used to achieve this aim. Some kinds of traders, after all, often quickly change their direction of trade. As will be discussed in Part VI, this depends on the timing of the second order versus the first and whether it fits into a larger pattern. If quote-based price-moving strategies are found to involve “transactions” and hence potentially covered by Section 9(a)(2), then all the immediately preceding comments apply to quote-based internalizer-burdening trading as well.

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interest in its exercise is an indication of a purpose to raise the market price, to increase market activity and thus to distribute profitably the stock covered by the option.”)

<sup>153</sup> *SEC v. Resch-Cassin & Co.*, 362 F. Supp. 964, 977 (S.D.N.Y. 1973). Interestingly, the finding that Section 9(a)(2) was violated in this case seems to be dicta as it was conducted to show that, by analogy, Section 10(b) must also have been violated. *Id.* at 975.

<sup>154</sup> *Crane Co. v. Westinghouse Air Brake Co.*, 419 F.2d 787, 795 (2d Cir. 1969) (“In furtherance of its interest in defeating the Crane tender offer and consummating its own merger with Air Brake, Standard took affirmative steps to conceal from the public its own secret sales off the market at the same time it was dominating trading in Air Brake shares at a price level calculated to deter Air Brake shareholders from tendering to Crane.”).

### 3. Court Cases Applying Section 9(a)(2) to the Use of Quotes to Move Price

As noted in the discussion as to whether Section 9(a)(2) ever even applies to quote-based strategies, there are decisions not involving internalizer-burdening where a court, having answered that question in the positive, goes on to find that Section 9(a)(2) is violated by the strategy under study. Each of these cases involved alleged spoofing. “Spoofing” involves three steps. First, the trader submits to an exchange either a bid at the current NBB or an offer at the current NBO. Second, the trader submits to an exchange one or more quotes going in the opposite direction, each for a large number of shares at a price equal to, or less favorable than, the pre-existing best quote in the market. The motivation for this second step is to influence the quoting and transacting behavior of other market participants in order to allow the orders submitted in the trader’s first step to execute, something that without the second step might well have not occurred and that thereby results in an actual purchase or sale at a more favorable price than was otherwise likely to occur. Third, the trader cancels the quotes submitted in the second step (assuming they have not already been executed against).

In these cases, the courts often simply summarize the case law relating to trade-based manipulation and then, without further critical analysis, declare a violation of Section 9(a)(2). In *SEC v. Lek Sec. Corp.*, for example, after reviewing cases involving open-market trade-based manipulation, the court summarily concluded that a violation of Section 9(a)(2) was adequately pled, as “[e]ach of the[] [manipulation] schemes was designed to create a false impression of supply or demand for securities and to induce other market participants to purchase or sell securities.”<sup>155</sup>

Another recent case, *Harrington Glob. Opportunity Fund, Ltd. v. CIBC World Markets Corp.*, involved, along with naked short selling, spoofing activity for the purpose of driving the share price of Concordia International down so that its shares could be purchased for a lower price.<sup>156</sup> The spoofing allegedly occurred by placing “baiting orders,” with an exchange which “had no legitimate [economic] purpose and were not intended to be executed,” but which drove down the share price of Concordia International.<sup>157</sup> The defendants then sent to the exchanges buy orders for Concordia’s shares that executed at the depressed prices caused by the “baiting” orders.<sup>158</sup> The baiting orders were then canceled.<sup>159</sup> The court, in denying the defendant’s motion to

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<sup>155</sup> *SEC v. Lek Sec. Corp.*, 276 F. Supp. 3d 49, 62 (S.D.N.Y. 2017).

<sup>156</sup> *Harrington Glob. Opportunity Fund, Ltd. v. CIBC World Markets Corp.*, 585 F. Supp. 3d 405, 415–16 (S.D.N.Y. 2022).

<sup>157</sup> *Id.* at 415.

<sup>158</sup> *Id.* at 415–16.

<sup>159</sup> *Id.*

dismiss, determined that violations of Section 9(a)(2) and Rule 10b-5 (without distinction) were adequately pled based on this alleged quote activity.<sup>160</sup> In determining that plaintiffs adequately alleged scienter with regard to the Rule 10b-5-based claim with regard to spoofing, the court cited a number of quote-manipulation cases in equities and non-equities contexts, as well as one trade-based manipulation case, for its assertion that in “distinguish[ing] spoofing from legitimate market activity, courts tend to examine (1) the passage of time between placement and canceling of orders (usually in milliseconds), (2) cancellation of orders when large baiting orders are partially filled or legitimate small orders are completely filled, (3) parking baiting orders behind smaller legitimate orders placed by other traders, and (4) large disparities in the volume of baiting orders on one side of the market and legitimate orders placed by the spoofer.”<sup>161</sup> The court then concluded that plaintiffs pled “particularized facts constituting circumstantial evidence of conscious misbehavior” pertaining to the above in their complaint.<sup>162</sup> Presumably this roadmap for finding scienter under Rule 10b-5 was also in the court’s view a roadmap for finding improper purpose under Section 9(a)(2).

Quote-based internalizer-burdening trading is similar in important regards to the spoofing described in *Harrington*—quotes are also placed and canceled extremely quickly, and repeated sequences of quotes on one side of the market are followed almost immediately by marketable orders on the other side. Once the marketable orders execute, the initial quotes are canceled. This pattern could similarly provide, to quote the court in *Harrington*, sufficient “circumstantial evidence of conscious misbehavior.” This would lead to the conclusion that, at least in some of the instances establishing this pattern, the sole intent was to use the first quote to obtain a more advantageous price for the transaction with the internalizer on the other side of the market. The main difference from the allegations in the *Harrington* case arises from the mechanics of quote-based internalizer-burdening trading: the “legitimate” orders that occur through an internalizer are usually larger than the initial “illegitimate” orders, because the initial order sent to the exchange does not need to be large in order to influence the NBB or NBO. It simply needs to set a new NBB or NBO that improves the price at which the internalizer will execute the larger marketable order on the other side.

Beyond this, the court-adjudicated case law provides little guidance as to how to define illegitimate purpose in quote-based cases. However, in

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<sup>160</sup> *Id.*

<sup>161</sup> *Id.* at 417.

<sup>162</sup> *Id.* Interestingly, the court noted: “Defendants also argue that the large volume of placed and canceled orders does not support an inference of scienter because more than 95% of all placed orders are canceled before execution. Even if it were permissible to consider that fact on a motion to dismiss, it does nothing to explain the frequent pattern of spoofing alleged in the Complaint. That 95% of placed orders are canceled in the market does not mean spoofing was absent here.” *Id.* at 418.

one release addressing the settlement of a quote-based manipulation charge brought by the SEC under Section 9(a)(2), the SEC offered the following somewhat helpful description of what in its view made the quoting activity in question in that case illegitimate:

[The trader's] intent to induce others to trade at disadvantaged prices is evident from his repeated submission of orders at rising (or declining) prices, his opportunistic executions on the opposite side of the market after these non-*bona fide* orders had altered the stock's price to his advantage, and his prompt cancellation of the non-*bona fide* orders before they could be executed. The trader's intent to induce market participants using algorithmic platforms is also evident in his usage of 100-share orders interspersed with pressure orders for much higher share quantities at prices several cents away from the inside bid or inside ask in order to induce the purchase or sale of securities by others who used trading algorithms that focus on changes to the NBBO or liquidity imbalances.<sup>163</sup>

Here, the SEC is apparently focused on the repeated *pattern* of submitting orders that induce a price change, followed by "opportunistic executions on the opposite side of the market" and "prompt cancellation" of the initial "non-*bona fide*" orders that had not already been executed against.<sup>164</sup> While that case involved a different kind of use of quotes—to move the price at which the manipulator executes her transactions on an exchange—and did not involve an internalizer as the counterparty, much of what the SEC said would be true of quote-based internalizer-burdening trading.

#### 4. SEC Section 9(a)(2) Enforcement Actions for Internalizer-Burdening Trading

With respect to internalizer-burdening trading specifically, the SEC has recently begun to bring enforcement actions to be tried in court for trade-based internalizer-burdening trading based on the theory that it violates Section 9(a)(2). However, as discussed in the next section, violations of Section 10(b) and Rule 10b-5 are usually concurrently charged, with the complaints

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<sup>163</sup> Biremis Corp., Peter Beck & Charles Kim, Exchange Act Release No. 68456 at 11 (Dec. 18, 2012). The scheme is described as follows: "[L]ayering occurs when a trader creates a false appearance of market activity by entering multiple non-*bona fide* orders on one side of the market, at generally increasing (or decreasing) prices, in order to move that stock's price in a direction where the trader intends to induce others to buy (or sell) at a price altered by the non-*bona fide* orders. . . . This trading by the Overseas Traders violated Exchange Act Section 9(a)(2)." *Id.* at 3.

<sup>164</sup> *Id.* at 11.

containing little factual distinction as to the particular facts that make up the claim under each section of the statute.

In one such trade-based internalizer-burdening trading case, Joseph Taub was alleged to have engaged in a manipulation that made over \$26 million.<sup>165</sup> The alleged scheme perfectly fits our description of a trade-based internalizer-burdening strategy. As with our description, the scheme involved accounts with two different brokers, termed “helper” and “winner” accounts by the SEC.<sup>166</sup> Taub, using a “helper” account, would submit to an exchange a series of smaller sell orders that executed. This was followed by much larger purchase orders through a “winner” account sent to an internalizer that would execute at the lowered, more favorable NBO. The scheme would be reversed (smaller buy orders through the “helper” account, increasing the NBB, followed by much larger sell orders through the “winner” account that executed through internalizers). According to the SEC’s complaint, “[t]he design and intent of Defendants’ scheme was to create the false appearance of trading interest and activity in particular stocks, thereby enabling them to purchase stocks at artificially low prices and then quickly sell them at artificially high prices for substantial profits.”<sup>167</sup> While the SEC acknowledges the fact that the initial orders could (and did) execute, such executions were simply assumed to be a necessary part of the scheme: “the helper accounts almost always accrued small losses solely for the purpose of artificially lowering the price at which the winner accounts were able to purchase stock and raising the price at which the winner accounts[] were able to sell stock. . . . [S]uch losses were a necessary component of their manipulation scheme.”<sup>168</sup>

In *SEC v. Aleksandr Milrud*, the defendant similarly funneled his orders through what the SEC termed “dirty” and “clean” accounts.<sup>169</sup> Specifically, the complaint alleged that Milrud repeatedly placed multiple small orders sent to exchanges to affect the NBB and NBO through the “dirty” account, at which point Milrud sent orders going in the opposite direction to an internalizer through his “clean” account that executed at more favorable prices.<sup>170</sup> And in *SEC v. Shuang Chen, et al.*, the SEC brought suit against a group of eighteen traders alleged to have engaged in trade-based internalizer-burdening trading.<sup>171</sup> There, the defendants used orders sent to exchanges through “helper” accounts to affect the NBB or NBO, followed by orders on the opposite side sent to internalizers through “winner” accounts that executed at the resulting

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<sup>165</sup> Complaint ¶ 2, *SEC v. Taub*, No. 16-cv-09130 (D.N.J. Dec. 12, 2016), 2016 WL 7209936.

<sup>166</sup> *Id.* ¶ 3.

<sup>167</sup> *Id.* ¶ 1.

<sup>168</sup> *Id.* ¶ 23.

<sup>169</sup> Complaint ¶ 18, *SEC v. Milrud*, No. 15-cv-00237 (D.N.J. Jan. 13, 2015), 2015 WL 154556.

<sup>170</sup> *Id.* ¶ 17–19.

<sup>171</sup> Amended Complaint, *SEC v. Shuang Chen et al.*, No. 19-cv-12127 (D. Mass. Dec. 23, 2019).

more favorable prices. The defendants were characterized in the complaint as having “engaged in a market manipulation scheme, using dozens of accounts at several different brokerage firms to artificially influence the prices of many publicly traded securities.”<sup>172</sup> According to the complaint, “[t]he design and intent of the Defendants’ scheme was to create the false appearance of trading interest and activity in particular stocks, thereby enabling them to reap illicit profits by artificially boosting or depressing stock prices.”<sup>173</sup> Most recently, in late 2021, the SEC brought suit against James O’Brien for the same type of internalizer-burdening trading.<sup>174</sup>

The SEC’s allegations in these actions give us some idea of how trade-based internalizer-burdening trading can work and the SEC’s theories of what constitutes a Section 9(a)(2) violation. None of these cases, however, has resulted in a court-adjudicated decision as to whether the alleged behavior is in fact a violation.

### B. Section 10(b)

Section 10(b) of the Exchange Act prohibits the use in a securities transaction of “any manipulative or deceptive device” in contravention of an SEC rule promulgated thereunder.<sup>175</sup> Rule 10b-5 is such a rule and is the primary vehicle of regulation under Section 10(b). Rule 10b-5 makes it unlawful, “in connection with the purchase or sale of any security”:

(a) To employ any device, scheme, or artifice to defraud, (b) [t]o make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading, or (c) [t]o engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person.<sup>176</sup>

As noted earlier, as with Section 9(a)(2), there are no opinions in court-adjudicated cases directly addressing the application of Section 10(b) and Rule 10b-5 to either type of internalizer-burdening trading. Thus, again, we will discuss Section 10(b) and Rule 10b-5’s applicability to trade-based and quote-based strategies based on what courts have said in other contexts about the reach of these provisions. We will try to see what this analysis implies about what a court might do if it faced the question as to whether either type

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<sup>172</sup> *Id.* ¶ 1.

<sup>173</sup> *Id.*

<sup>174</sup> Complaint, SEC v. O’Brien, No. 21-cv-09575 (S.D.N.Y. Nov. 18, 2021).

<sup>175</sup> 15 U.S.C. § 78j(b).

<sup>176</sup> 17 C.F.R. § 240.10b-5.

of internalizer-burdening trading represents a Section 10(b) and Rule 10b-5 violation. After this, the few SEC opinions applying Section 10(b) and Rule 10b-5 to internalizer-burdening trading will be considered.

Two preliminary observations are in order. On the one hand, unlike with Section 9(a)(2), there is not the same threshold question of whether Section 10(b) and Rule 10b-5 by their own terms could ever apply to efforts to move price through quoting activity. It is much easier than with Section 9(a)(2) to contemplate that Rule 10b-5 prohibits quoting activity as well as trading activity. Quoting and trading each involve an action “in connection with the purchase and sale of a security,” and courts have very broadly interpreted the “in connection with” clause.<sup>177</sup>

On the other hand, our focus is on manipulation. Rule 10b-5, despite its broad language, reads much more as a provision targeting fraud than as a provision targeting manipulation. Indeed, unlike Section 10(b), Rule 10b-5, although promulgated by the SEC by authority granted it by Section 10(b), does not even include the term “manipulation.”<sup>178</sup> As discussed below, there is a split of authority as to whether trading behavior, even when the sole purpose is to move price to the trader’s advantage, can on its own ever constitute a Rule 10b-5 violation, or whether some additional unlawful act is always required. If something more is required, as some courts maintain, Rule 10b-5 would not only not prohibit most trading strategies commonly thought of as manipulation—what we have referred to in earlier work as “open market manipulation”<sup>179</sup>—but it would also not prohibit either form of internalizer-burdening trading. This is important because most of the case law relating to trading and quoting activity intended to move prices in a way that allows the actor to profit addresses whether the activity violates Rule 10b-5, not Section 9(a)(2).<sup>180</sup>

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<sup>177</sup> See Fox et al., *Manipulation*, *supra* note 3, at 123 (citing SEC v. Texas Gulf Sulphur Co., 401 F.2d 833, 859–61 (2d Cir. 1968)); see also *infra* Part VI.A.

<sup>178</sup> Compare 17 C.F.R. § 240.10b-5 with 15 U.S.C. § 78j(b).

<sup>179</sup> Open market manipulation comes in two forms. See Fox et al., *Manipulation*, *supra* note 3, at 74–75. One is “open market manipulation with an external interest,” which, as noted earlier, involves the situation where a person engaging in trading that affects a security’s price has a pre-existing economic interest in the price independent of making a profit from the price-affecting trades themselves. The other is “naked open market manipulation,” which involves the purchase of a number of shares, with an upward push on prices, and then their resale under circumstances where the corresponding downward push on prices is less severe, thereby resulting in the average sale price exceeding the average purchase price. This strategy yields positive expected profits where, at the time of the purchase, the trader has good reason to believe that the likelihood of such an asymmetric price reaction is sufficiently great that it will yield net gains from trading. See *id.*

<sup>180</sup> See *id.* at 117 (discussing the reasons for this).

### 1. Court Cases Applying Rule 10b-5 to the Use of Trades to Move Price

The existing judicial case law is inconsistent concerning whether Rule 10b-5 applies to the use of trades to move price to the trader's advantage. The confusion originates from a series of Supreme Court decisions in the 1970s and 1980s where, in cases far removed from manipulation, the Court emphasized the role of deceit and misrepresentation in a Section 10(b) claim.<sup>181</sup> In these cases, the Court almost transformed Section 10(b) into a statute that exclusively caught fraud and fraud-like claims within its ambit.<sup>182</sup> This culminated in statements by the Court such as "Section 10(b) is aptly described as a catchall provision, but what it catches must be fraud."<sup>183</sup> The Court's language has resulted in a sharp circuit split regarding whether trading or quoting solely to move price to the actor's advantage is unlawful by itself under Section 10(b) or if some additional act is necessary as well.

Against this background, the central question in applying Section 10(b) and Rule 10b-5 to both trading and quoting for the sole purpose of moving price to one's advantage is whether doing that alone constitutes a "manipulative act." With regard to trading, on one side, there is a series of court opinions that have been read to determine that actual trading behavior on its own cannot constitute a manipulation; some additional unlawful act is necessary as well. The United States Court of Appeals for the Third Circuit, for example, has held that "the essential element of the [manipulation] claim is that *inaccurate* information is being injected into the marketplace" and that trading for the sole purpose of moving price to one's advantage is not by itself sufficient to constitute an injection of inaccurate information into the market.<sup>184</sup> Because the trades themselves were lawful, the court reasoned that those trades could not be creating inaccurate information and therefore did not constitute

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<sup>181</sup> See *id.* at 118 & n.122 ("See, e.g., *Schreiber v. Burlington N., Inc.*, 472 U.S. 1, 8 n.6 (1985) ('Congress used the phrase "manipulative or deceptive" in § 10(b) and we have interpreted "manipulative" in that context to require misrepresentation.' (citations omitted)); *Santa Fe Indus., Inc. v. Green*, 430 U.S. 462, 476 (1977) (manipulation 'refers generally to practices, such as wash sales, matched orders, or rigged prices, that are intended to mislead investors by artificially affecting market activity' (citations omitted)); *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 199 (1976) ('[T]he word "manipulative" . . . is and was virtually a term of art when used in connection with securities markets. It connotes intentional or willful conduct designed to deceive or defraud investors by controlling or artificially affecting the price of securities.' (citations omitted)).").

<sup>182</sup> These developments are discussed in Fox et al., *Manipulation*, *supra* note 3, at 118–19.

<sup>183</sup> *Chiarella v. United States*, 445 U.S. 222, 234–35 (1980).

<sup>184</sup> *GFL Advantage Fund, Ltd. v. Colkitt*, 272 F.3d 189, 205 (3d Cir. 2001) (quoting *In re Olympia Brewing Co. Sec. Litig.*, 613 F. Supp. 1286, 1292 (N.D. Ill. 1985)). In *Foss v. Bear, Stearns & Co.*, 394 F.3d 540 (7th Cir. 2005), the Seventh Circuit stated, in response to a plaintiff who wanted to "call the [alleged] conduct 'manipulation' rather than 'fraud,'" that "this is a distinction without a difference" because "[i]n securities law, manipulation is a kind of fraud; deceit remains essential." *Id.* at 542 (emphasis omitted). It should be noted, however, that this is dicta.



deceptive trading behavior.<sup>185</sup> In essence, this would mean that open market manipulation is not per se illegal under Rule 10b-5.<sup>186</sup> If this is correct, it is difficult to see how quote manipulation violates Rule 10b-5, since both quote manipulation and open market manipulation involve what are otherwise legal activities, quoting and trading respectively, without any additional illegal act. In either case, it is only the purpose for which the otherwise legal activity is undertaken—to make a profit solely from the activity’s impact on prices—that makes it a manipulation. Indeed, the case for requiring the additional illegal act may be stronger with quoting than with trading because every bid or offer risks execution and thus actually adds to liquidity. The intent to cancel prior to execution is no guarantee against execution. If this line of cases is correct, neither quote-based nor trade-based internalizer-burdening trading would be a Rule 10b-5 violation, since the only thing that would potentially make the quoting and trading behavior respectively involved in these two strategies a Rule 10b-5 violation is that it was solely undertaken to move price to the actor’s advantage.

Other circuits, however, have disagreed, at least under certain circumstances. In *Markowski v. SEC*,<sup>187</sup> a case involving open market manipulation with an external interest, the United States Court of Appeals for the D.C. Circuit held that Section 10(b) and Rule 10b-5 prohibit manipulations consisting of trades based “solely [on] the actor’s purpose” when that purpose was improper, without necessitating any further unlawful act.<sup>188</sup> And the United States Court of Appeals for the Second Circuit has stated in dictum that manipulation under Section 10(b) does *not* require “reliance by a victim on direct oral or written communications by a defendant” and that “a showing of reliance may be based on ‘market activity’ intended to mislead investors by sending ‘a false pricing signal to the market,’ upon which victims of the manipulation rely.”<sup>189</sup>

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<sup>185</sup> *Colkitt*, 272 F.3d at 204–07.

<sup>186</sup> See generally Fox et al., *Manipulation*, *supra* note 3.

<sup>187</sup> *Markowski*, 274 F.3d at 525.

<sup>188</sup> *Id.* at 529.

<sup>189</sup> *Fezzani v. Bear, Stearns & Co.*, 777 F.3d 566, 571–72 (2d Cir. 2015) (quoting *ATSI Commc’ns, Inc. v. Shaar Fund, Ltd.*, 493 F.3d 87, 100 (2d Cir. 2007)). *Fezzani* involved a broker-dealer that was accused of prompting its customers to purchase certain stocks and then later maintaining the price of these stocks by buying shares in the secondary market, presumably to increase its clients’ appetites for its next round of recommendations. The fact that this language is dictum is important because, although the Second Circuit appears to be moving in this direction, there is earlier precedent going the other way. For a review of this history, see Fox et al., *Manipulation*, *supra* note 3, at 120–21.

## 2. Court Cases Applying Rule 10b-5 to the Use of Quotes to Move Price

We have already discussed the *Lek* case in connection with Section 9(a)(2).<sup>190</sup> There, the court also determined that a violation of Section 10(b) and Rule 10b-5 had in that spoofing case been adequately pled under a theory where the bids and offers involved constituted “false” pricing information under the alleged circumstances.<sup>191</sup> In doing so, however, the court failed to provide helpful or critical analysis beyond a recitation of existing trade-based manipulation case law. The court assumed the bids and offers in question to have been non-bona fide, irrespective of whether they were executed against.<sup>192</sup>

In another spoofing case, *CP Stone Fort v. Doe(s)*,<sup>193</sup> the court concluded that all elements of Rule 10b-5 other than loss causation had been adequately pled in plaintiff’s complaint.<sup>194</sup> In adjudicating defendant’s motion to dismiss the amended complaint, the court “agrees with plaintiff that *by alleging a pattern . . . it has sufficiently alleged that defendants have both injected inaccurate information into the market, created a false impression of market activity, and had an illegal intent.*”<sup>195</sup> In the *Harrington* case previously discussed in connection with Section 9(a)(2), the court relied on *CP Stone Fort Holdings* for determining that plaintiffs adequately pled the elements of a Section 10(b)

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<sup>190</sup> See *supra* notes 164–73 and accompanying text.

<sup>191</sup> SEC v. Lek Sec. Corp., 276 F. Supp. 3d 49, 58–60 (S.D.N.Y. 2017).

<sup>192</sup> *Id.* at 55. The court in *Lek* did state the following dicta, again focused on a pattern of quoting, in response to Lek’s argument that their “orders were ‘live, real, and actionable’ orders that were subject to market risk and therefore could not create a false impression of supply and demand or send a false pricing signal”: “[t]o the extent that the Lek Defendants argue that the entry of an order in the open market may never constitute manipulative conduct, they are wrong. Moreover, this argument largely misses the mark. It ignores the thrust of the SEC’s claim, which concerns coordinated *patterns of trading*, indeed voluminous trading, designed to mislead the market.” *Id.* at 64 (emphasis added).

<sup>193</sup> CP Stone Fort Holdings v. Doe(s), No. 16-cv-4991, 2017 WL 1093166 (N.D. Ill. Mar. 22, 2017).

<sup>194</sup> *Id.* at \*6.

<sup>195</sup> *Id.* at \*4 (emphasis added). Interestingly, the court originally dismissed the case because plaintiff’s theory amounted to one equating cancellation with the intention to never execute. *Id.* at \*6. The court was of course correct to this extent: there are many reasons—many of which are perfectly legitimate—for cancelling an order prior to execution. Without “any allegation of how many orders were executed, how long the ultimately canceled orders had remained resting and available for execution prior to cancellation, or whether the platform rules required the orders to be exposed further[,]” the court originally agreed with defendant “that plaintiff’s theory boils down to an allegation that ‘if a subset of orders was ultimately canceled, those orders, in hindsight, must never have been intended to be executed.’” CP Stone Fort Holdings v. John, No. 16-cv-4991, 2016 WL 59434096 (N.D. Ill. Oct. 11, 2016). Nevertheless, the court, in its ruling on the subsequent amended complaint, seemed to endorse plaintiff’s theory of wrongdoing under Rule 10b-5, though it again dismissed the complaint but this time on the grounds that plaintiff did not adequately allege loss causation. *CP Stone Fort Holdings*, 2017 WL 1093166, at \*4, 6–7.

and Rule 10b-5 violation and did not offer much in the way of additional helpful analysis of its own.<sup>196</sup>

### 3. SEC Enforcement Actions Relating to the Use of Quotes to Move Prices

SEC administrative proceedings have generated nearly all the other authority that has developed around what happens when, even outside of the context of internalizer burdening, the use of quotes to move prices violates Section 10(b) and Rule 10b-5. The SEC has entered into multiple settlements with firms pursuant to Section 10(b) and Rule 10b-5 concerning a variety of quoting strategies.<sup>197</sup> One representative settlement determined the defendant's quoting behavior to be manipulation in violation of Rule 10b-5 because it involved the submission of "non-bona fide orders, or orders that the trader does not intend to have executed, to induce others to buy or sell the security at a price not representative of actual supply and demand."<sup>198</sup>

### 4. SEC Rule 10b-5 Administrative Proceedings Enforcement Actions Relating to Quote-Based Internalizer-Burdening Trading

With respect to quote-based internalizer-burdening trading specifically, the SEC brought a series of administrative proceedings dating from the late 1990s through the mid-2000s.<sup>199</sup> In each of these cases, the SEC alleged that

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<sup>196</sup> *Harrington Glob. Opportunity Fund*, 585 F. Supp. 3d at 417 (simply stating that "[t]he Complaint pleads particularized facts constituting circumstantial evidence of conscious misbehavior fitting each of the four indicia identified above" and summarizing complaint allegations).

<sup>197</sup> See *supra* notes 189–95 and accompanying text.

<sup>198</sup> *Hold Bros. On-Line Inv. Servs. et al.*, Exchange Act Release No. 67924, Investment Company Act Release No. 30213, 104 SEC Docket 2686 ¶ 22 (Sept. 25, 2012) (inside the spread manipulation where the SEC determined that "[l]ayering concerns the use of non-bona fide orders, or orders that the trader does not intend to have executed, to induce others to buy or sell the security at a price not representative of actual supply and demand"). There are a number of other settlements in cases brought by the SEC where it maintained that the defendants' alleged quoting behavior violated Rule 10b-5. However, the SEC releases that announce these settlements offer little in the way of specific guidance in assessing when quoting behavior, which always has the potential to move price, violates Rule 10b-5 and when it does not. See, e.g., *Behruz Afshar et al.*, Securities Act Release No. 10094, Exchange Act Release No. 78043, Investment Company Act Release No. 32144, 114 SEC Docket 1731 ¶ 78 (June 13, 2016) (inside the spread manipulation where the SEC determined that "[m]arket participants were deceived when they interpreted the small-lot orders as reflecting genuine demand or supply and joined those orders with hopes of offering liquidity and earning rebates"); *Briargate Trading, LLC & Eric Oscher*, Securities Act Release No. 9959, Exchange Act Release No. 76104, 112 SEC Docket 3263 ¶ 1 (Oct. 8, 2015) (open market manipulation where the SEC determined that "[t]he non-bona fide buy or sell orders create a false appearance of buy or sell interest in the security, which often results in a price change").

<sup>199</sup> See *Jason T. Frazee*, Securities Act Release No. 8209, Exchange Act Release No. 47522, 79 SEC Docket 2361 (Mar. 18, 2003) (in violation of Section 10(b) and Rule 10b-5, "Frazee repeatedly engaged in a pattern of conduct that affected the NBBO and permitted the execution

the defendants repeatedly placed small non-marketable limit orders in one direction that they knew likely would be sent to an exchange and that either lowered the NBO or increased the NBB, and then placed much larger marketable orders going in the opposite direction that they knew likely would be sent to an internalizer and execute at the improved NBO or NBB.<sup>200</sup> In each case, the crux of the SEC's reasoning as to why this quoting behavior violated Section 10(b) and Rule 10b-5 was essentially that it "creat[ed] the false appearance of trading interest and activity in particular stocks to enable [the manipulator] to purchase stocks at artificially low prices and then quickly sell them at artificially high prices."<sup>201</sup>

The only one of these cases that was fully adjudicated within the SEC's administrative proceedings system involved a broker named Terrance Yoshikawa. On each of a number of occasions, Yoshikawa sent small (100-share) non-marketable buy or sell limit orders to Instinet, an electronic trading venue that acted like an exchange. These orders were at prices between the NBB and NBO and thus became the new NBB or NBO.<sup>202</sup> At this point, Yoshikawa would direct much larger orders going in the opposite direction through PaineWebber, a broker which he knew would route his orders to an early internalizer that provided execution at the NBB or NBO.<sup>203</sup> After the execution of the larger order sent to the internalizer, the initial small order going the other way was canceled.<sup>204</sup> Yoshikawa acknowledged that in each case the larger order was executed at a better price than would have been possible at the original NBB or NBO, but he argued that there was nothing "inherently fraudulent" in any of his orders because each was legitimate in isolation.<sup>205</sup> The SEC disagreed: "isolated instances of seemingly innocent conduct can, when viewed as a whole, constitute circumstantial evidence of manipulative activity."<sup>206</sup>

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of orders at prices that would not otherwise have been available in the market. Frazee's actions interfered with the free forces of supply and demand and undermined the integrity of the NBBO"); Leonard Sheehan, Securities Act Release No. 8208, Exchange Act Release No. 47521, 79 SEC Docket 2359 (Mar. 18, 2003) (violating Section 10(b) and Rule 10b-5 where "Sheehan repeatedly engaged in a pattern of conduct that affected the NBBO and permitted the execution of orders at prices that would not otherwise have been available in the market. Sheehan's actions interfered with the free forces of supply and demand and undermined the integrity of the NBBO"); Joseph R. Blackwell, Securities Act Release No. 8030, Exchange Act Release No. 45018, 76 SEC Docket 502 (Nov. 5, 2001) (same); Israel M. Shenker, Securities Act Release No. 8029, Exchange Act Release No. 45017, 76 SEC Docket 501 (Nov. 5, 2001) (same); Robert J. Monski, Securities Act Release No. 7975, Exchange Act Release No. 44250, 74 SEC Docket 1815 (May 3, 2001) (same); Ian Fishman, Securities Act Release No. 7547, Exchange Act Release No. 40115, 67 SEC Docket 783 (June 24, 1998) (same).

<sup>200</sup> *Id.*

<sup>201</sup> James David O'Brien, SEC Litigation Release No. 25266 (Nov. 19, 2021).

<sup>202</sup> Terrance Yoshikawa, Exchange Act Release No. 53731, 87 SEC Docket 2580, at 2–3 (Apr. 26, 2006).

<sup>203</sup> *Id.* at 4–5. This early internalizer provided the broker payment for order flow but no price improvement.

<sup>204</sup> *Id.* at 5.

<sup>205</sup> *Id.* at 5, 10.

<sup>206</sup> *Id.* at 10–11.

The SEC took the position that manipulation is “intentional interference with the free forces of supply and demand,”<sup>207</sup> concluding that Yoshikawa had violated Rule 10b-5 through “engag[ing] in a manipulative scheme by artificially moving the NBBO in the specified securities and thereby fraudulently affect[ing] the nature of the market for these securities.”<sup>208</sup>

Nearly identical language is featured in SEC releases of this period relating to the settlements of the other enforcement actions relating alleged quote-based internalizer-burdening trading. According to these releases, this trading strategy enabled the trader “to buy or sell a security at a price that otherwise would not have been available in the market,” as “[t]he investing public and other market participants, including broker-dealers who rely on the integrity of the NBBO, were unaware that the NBBO quotes altered as result of [the manipulator’s] orders, reflected not genuine market activity, but the [manipulator’s] coordinated actions.”<sup>209</sup>

#### 5. Criminal Actions Under Rule 10b-5 Relating to Trade-Based Internalizer-Burdening Trading

More recently, a small number of criminal proceedings have been brought against traders engaging in trade-based internalizer-burdening trading. Recall the discussion of civil cases claiming Section 9(a)(2) violations based on instances of alleged trade-based internalizer-burdening strategies, specifically *Taub, Milrud, Chen et al.*, and *O’Brien*.<sup>210</sup> A number of the defendants in these civil actions have also faced parallel criminal charges for violations of Section

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<sup>207</sup> *Id.* at 8.

<sup>208</sup> *Id.* at 11.

<sup>209</sup> Ian Fishman & Lawrence Fishman, Securities Act Release No. 7547, Exchange Act Release No. 40115, 67 SEC Docket 783, at 5 (June 24, 1998). Many SEC adjudications have found violations of Section 10(b) and Rule 10b-5 according to the following reasoning reproduced verbatim: “[respondent] repeatedly engaged in a pattern of conduct that affected the NBBO and permitted the execution of orders at prices that would not otherwise have been available in the market” because “[respondent’s] actions interfered with the free forces of supply and demand and undermined the integrity of the NBBO.” *See, e.g.*, Jason T. Frazee, Securities Act Release No. 8209, Exchange Act Release No. 47522, 79 SEC Docket 2361, at 2 (Mar. 18, 2003); Leonard Sheehan, Securities Act Release No. 8208, Exchange Act Release No. 47521, 79 SEC Docket 2359, at 2 (Mar. 18, 2003); Joseph R. Blackwell, Bradford D. Blackwell & Timothy R. Blackwell, Securities Act Release No. 8030, Exchange Act Release No. 45018, 76 SEC Docket 502, at 3 (Nov. 5, 2001); Israel M. Shenker, Securities Act Release No. 8029, Exchange Act Release No. 45017, 76 SEC Docket 501, at 2 (Nov. 5, 2001); Robert J. Monski, Securities Act Release No. 7975, Exchange Act Release No. 44250, 74 SEC Docket 1815, at 2 (May 3, 2001).

<sup>210</sup> *See supra* section V.A.4.

10(b) and Rule 10b-5. This group includes Taub,<sup>211</sup> Milrud,<sup>212</sup> and two of the defendants in *SEC v. Shuang Chen, et al.*<sup>213</sup> Recall in particular the facts in *Taub*, which perfectly correspond to our definition of trade-based internalizer trading. According to the criminal complaint, “[t]hrough their coordinated trading, the Conspirators injected false information into the market about the supply and demand of these securities and thereby artificially inflated their prices.”<sup>214</sup> Similarly, the criminal complaint in *Wang* (the action against the subset of *Shuang Chen* defendants) alleged that defendants engaged in a similar pattern of trading and asserts that the orders sent to the exchange were “designed to artificially affect the prices of those securities, and to induce others to buy and sell those securities at the resulting artificially high or low prices.”<sup>215</sup> However, like the civil cases brought by the SEC, none of these criminal cases brought by the Department of Justice has resulted in court-adjudicated resolution of whether the practice violates Rule 10b-5.

## VI. ASSESSING THE LAW OF INTERNALIZER-BURDENING TRADING

In our view, both quote-based and trade-based internalizer-burdening trading should be considered illegal. In Part I, we posed a four-part litmus test for when a internalizer-burdening strategy should be prohibited. First, is the strategy, purely as a conceptual matter, distinguishable from other, clearly acceptable quoting or trading behavior, and does the strategy cause social harm? Second, does the strategy plausibly fit under the broad dictionary meaning of the term “manipulation,” and is its illegality not otherwise ruled out by the language of the applicable Exchange Act provisions and rules? Third, are there circumstances under which the strategy can yield positive expected profits, and do they occur frequently enough to cause concern? Fourth, are there practical procedures for implementing a ban on the strategy whereby the

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<sup>211</sup> Complaint, *United States v. Taub*, No. 18-cr-79 (D.N.J. Dec. 9, 2016), 2016 WL 11721687. Taub pled guilty and was sentenced to 18 months in prison. *See Securities Trader Sentenced to 18 Months in Prison for Market Manipulation Scheme that Netted More Than \$17 Million in Illicit Profits*, U.S. DEP’T JUSTICE (Dec. 22, 2020), <https://www.justice.gov/usao-nj/pr/securities-trader-sentenced-18-months-prison-market-manipulation-scheme-netted-more-17>. Taub and Shmalo also settled with the SEC. *See SEC Obtains Final Judgment Against Orchestrator of Market Manipulation Scheme*, U.S. SEC. & EXCH. COMM’N (Dec. 30, 2020), <https://www.sec.gov/litigation/litreleases/2020/lr24999.htm> (Taub); *SEC Obtains Final Judgment Against Participant in Market Manipulation Scheme*, U.S. SEC. & EXCH. COMM’N (Oct. 23, 2020), <https://www.sec.gov/litigation/litreleases/2020/lr24951.htm> (Shmalo).

<sup>212</sup> Complaint, *United States v. Milrud*, No. 15-cr-00455 (D.N.J. Sept. 10, 2015), 2015 WL 1111570. Milrud has pled guilty to the criminal charges and settled with the SEC. *See SEC Obtains Final Judgment Against Canadian Man Charged with Conducting Fraudulent Trading Scheme*, U.S. SEC. & EXCH. COMM’N (Jan. 26, 2022), <https://www.sec.gov/litigation/litreleases/2022/lr25319.htm>.

<sup>213</sup> Complaint, *United States v. Wang*, No. 22-cr-10123 (D. Mass. Oct. 14, 2019).

<sup>214</sup> Complaint ¶ 2, *United States v. Taub*.

<sup>215</sup> Complaint ¶ 17, *United States v. Wang*.

social gains from its reduction or elimination exceed the social costs of doing so, including chilling socially valuable activity that might be erroneously identified as examples of the practice? All four parts of this test are satisfied for both types of internalizer-burdening trading.

### A. *Optimal Regulation*

The first, third, and fourth questions in our four-part test can be clearly answered in the affirmative for both kinds of internalizer-burdening trading. As for the first question, we established in Part IV that each of the two strategies is distinguishable from clearly acceptable market actions and that each causes social harm. Each harms liquidity, lessens market confidence, and, on its own and through the internalizer defenses that it provokes, wastes scarce resources that could instead be used to create socially valuable goods and services. Each may slightly improve longer-run price accuracy, but its social negatives would seem to significantly outweigh this.<sup>216</sup> As for the third question, we have also seen that each practice can yield positive expected profits.<sup>217</sup> If quote-based internalizer-burdening trading were legal, it might quite sensibly become part of the standard smart-trading program useful to lower the cost of any planned purchase or sale. The instances of enforcement against trade-based internalizer-burdening traders and the sizes of their alleged profits suggest that there would be substantial incentives to engage in it as well.<sup>218</sup> As for the fourth question, we have identified objectively observable factors that can serve as a condition for imposing legal sanctions on true instances of internalizer-burdening trading, while minimizing chilling any socially desirable market actions from fear that they will prompt mistaken enforcement actions.

This leaves us with the second question. Both kinds of internalizer-burdening trading clearly fit within the dictionary definition of “manipulation.”<sup>219</sup> The issue of whether each strategy’s illegality is not otherwise ruled out by the language of the applicable statutory provisions and rules, as they currently stand, is a bit more complicated.

Section 9(a)(2) prohibits “a series of transactions” effected with the purpose of manipulation.<sup>220</sup> There is an issue as to whether making quotes that never execute involves engaging in “transactions.” The district courts that have found quoting activity to violate Section 9(a)(2) have either largely ignored

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<sup>216</sup> See *supra* section V.B.4.

<sup>217</sup> See *supra* Part V.A.

<sup>218</sup> See *supra* Part V.

<sup>219</sup> In its definition of “manipulate,” the Merriam-Webster dictionary includes “to change by artful or unfair means so as to serve one’s purpose.” *Manipulate*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/manipulate> (last visited Feb. 3, 2024).

<sup>220</sup> See 15 U.S.C. § 78i(a)(2).

this difficulty or dealt with it unconvincingly.<sup>221</sup> In our view, it is far from clear whether a federal court of appeals or the Supreme Court would, if it took a serious look at the issue, conclude that quotes are “transactions” for purposes of Section 9(a)(2). If quotes are authoritatively ruled not to be “transactions,” quote-based internalizer-burdening trading could not be considered a Section 9(a)(2) violation. Nor would it make sense to limit application of Section 9(a)(2)’s prohibition to, for example, instances of quote-based internalizer-burdening trading where, contrary to the hopes of the trader, the quotes *do* execute after the transaction with the internalizer—which would mean that the strategy had failed in part—but not where the quotes do not execute, which is what happens when the strategy fully succeeds.

As for Section 9(a)(2)’s applicability to trade-based internalizer-burdening trading, the “series of transactions” requirement is, in contrast, easily met. And the policy analysis in this Article showing the strategy’s social harm provides a strong basis for concluding that the illegitimate-purpose requirement is met, as well.

What about Section 10(b) and Rule 10b-5? Rule 10b-5 in part makes it unlawful for any person “[t]o make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading . . . in connection with the purchase or sale of any security.”<sup>222</sup> This language provides a sounder doctrinal basis than Section 9(a)(2) for outlawing quote-based internalizer-burdening trading, and as sound a basis as Section 9(a)(2) for outlawing the trade-based variety.

First consider how quote-based internalizer-burdening trading might fall under this language. In our example, when Autumn has her broker submit a quote to an exchange on her behalf, she is in essence making the following statement: “I am prepared, unless and until I cancel, to be legally bound to buy or sell X amount of securities at Y price.” This statement is communicated to the market through the posting of the quote on an exchange. Though literally true, it is at least arguably misleading. Others would reasonably assume that the submitter of the quote in fact wants the bid or offer to be executed against, when the opposite is the case. According to this plausible line of argument, Autumn would have to say she does not want anyone to execute against the quote in order to make the statement not misleading.<sup>223</sup>

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<sup>221</sup> See *supra* Part VI.A.

<sup>222</sup> 17 C.F.R. § 240.10b-5.

<sup>223</sup> At least one precedent holds that the submission of an order can, under particular circumstances, be a misleading statement in violation of Rule 10b-5. *VanCook v. SEC*, 653 F.3d 130 (2d Cir. 2011). In *VanCook*, the broker allowed hedge funds to regularly submit orders prior to 4:00 P.M. which were time-stamped as such and then, after 4:00 P.M., send in orders labeled as “corrected” (i.e., as correcting orders containing errors that were submitted prior to 4:00 P.M.) that were really represented post-4:00 p.m. purchase or redemption determinations. *Id.* at 133–35. The Second Circuit ruled that this aided a violation of Rule 10b-5(b) by his hedge fund



As for trade-based internalizer-burdening trading, consider why the orders that the trader sends to the exchange move price. The orders suggest to others in the market that someone is trading on non-public information. This is the same as with open-market manipulation, where the manipulator, by entering into trades that lead other market participants to infer someone possesses non-public information about the future prospects of the issuer, causes price to move in a way that allows the manipulator to profit. As two of us have analyzed elsewhere, this can be thought of as a kind of informed trading, where the manipulator is privately informed that transactions that lead the market to infer that someone possesses such non-public information do not in fact imply this.<sup>224</sup> It is also again, symbolically at least, a misleading statement since the order, left in long enough to execute, appears to say that the person who placed it wished to be long or short in the security (depending on whether it is a buy or sell order), which is not in fact true.

There is a well-established basis in case law for punishing misstatements related to securities trading even though the maker of the misstatement is not transacting with the person affected. As far back as 1968, the Second Circuit held in *SEC v. Texas Gulf Sulphur Co.* that whenever an issuer makes a statement that is “reasonably calculated to influence the investing public,” such a statement satisfies Rule 10b-5’s requirement that it be “in connection with the purchase or sale of a security,” even if neither the issuer nor its managers buy or sell shares themselves.<sup>225</sup> This interpretation of the “in connection with” requirement has subsequently been expanded to reach other persons, besides the issuer and its officials, to include the statements of these other persons when they would predictably affect investors’ judgments.<sup>226</sup> Moreover, these courts have made clear that, in government-based actions, there need not be a showing of reliance by the particular purchasers or sellers of shares.<sup>227</sup>

### B. Comparing Existing Case Law to Optimal Regulation

Let us now compare the existing case law to what we have just described as optimal regulation. Section 9(a)(2) does not provide a sound basis for outlawing quote-based internalizer-burdening trading in the manner we

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customers because mutual funds reasonably assumed that the submission of an order for execution at the current day’s NAV was in an amount determined prior to the setting of the day’s NAV, since Investment Company Act Rule 22c-1, 17 C.F.R. § 270.22c-1 would prohibit execution, at that day’s NAV, of post-4:00 p.m. determined orders. *Id.* at 138–41. For further analysis, see Fox et al., *Spoofing*, *supra* note 3, at 1313–14 and accompanying footnotes.

<sup>224</sup> See Fox et al., *Manipulation*, *supra* note 3, at 112.

<sup>225</sup> *SEC v. Tex. Gulf Sulphur Co.*, 401 F.2d 833, 859–62 (2d Cir. 1968).

<sup>226</sup> See Adam C. Pritchard & Robert B. Thompson, *Texas Gulf Sulphur and the Genesis of Corporate Liability Under Rule 10b-5*, 71 SMU L. REV. 927, 939–42 (2018).

<sup>227</sup> *Id.*

recommend because, by its terms, its trigger is a series of “transactions.”<sup>228</sup> Although district courts and the SEC have found quotes to be “transactions,”<sup>229</sup> their rationales for doing so are unconvincing, and it is quite possible that an appellate court would not agree with them.<sup>230</sup> Nor does the case law provide clear guidance for determining when an activity’s motivation is illegitimate.<sup>231</sup>

Section 10(b) and Rule 10b-5 provide a doctrinally sounder basis for outlawing quote-based internalizer-burdening trading and at least as good a basis as Section 9(a)(2) for outlawing the trade-based variety. Section 10(b) authorizes the SEC to promulgate rules against manipulation. Rule 10b-5 is not the obvious rule to do this, but, as we have just argued, internalizer-burdening trading can be viewed as a kind of misleading statement in violation of Rule 10b-5.<sup>232</sup> The existing case law, however, is rather confused and suggests that the statute and the rule can be interpreted both under-inclusively and over-inclusively.

If a manipulator’s submission of quotes solely to move price is considered a violation of Rule 10b-5’s prohibition against making misleading statements, how in the absence of documentary evidence can it be determined that this was the sole purpose for submitting the quotes? We have suggested that an established pattern of repeated sequences of quotes or trades on one side sent to an exchange, followed almost immediately by a larger marketable order on the other side sent to an internalizer—in both the quote-based and trade-based internalizer-burdening patterns—is sufficient circumstantial evidence to conclude that, in at least some of the instances of this pattern, the sole intent was to use the first quote to obtain a more advantageous price for the transaction with the internalizer. It is even clearer when this pattern is followed by a mirror set of actions going the other way, as typically happens with the trade-based version.

However, as we have seen, there are courts that have held that actual trading behavior on its own cannot constitute a manipulation without some additional unlawful act—in essence, that open market manipulation is not *per se* illegal under Rule 10b-5.<sup>233</sup> By misinterpreting earlier Supreme Court opinions relating to matters far-removed from manipulation, these courts are doing the wrong thing with regard to trade-based open-market manipulation. And derivatively, they would likely do the wrong thing as well if they were faced with either type of internalizer-burdening trading. Their logic in trade-based open-market manipulation cases—that trading by itself is perfectly legal and therefore something independently illegal is necessary for the manipulative

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<sup>228</sup> See 15 U.S.C. § 78i(a)(2).

<sup>229</sup> See *supra* Part VI.A.

<sup>230</sup> See *supra* Part VI.A.

<sup>231</sup> See *supra* Part VI.A.

<sup>232</sup> See *supra* Part VI.A.

<sup>233</sup> See *supra* section V.B.1.

trades to violate Rule 10b-5—would seem equally applicable with regard to quote-based internalizer-burdening trading manipulation: just substitute “quoting” for “trading.” This logic misses the point that a generally perfectly legal activity, whether it be trading or quoting, can be deployed in an anti-social way if its only purpose is to change prices to the actor’s advantage by sending a misleading signal. Repeatedly engaging in this pattern of behaviors can often be persuasive evidence that this is exactly what is going on.

One route to reform is to use the arguments set out here to seek to persuade courts to ignore the existing line of cases that require something more than a trade to constitute a Rule 10b-5 violation and follow the line of cases that does not require more. An alternative, more direct route to making both forms of internalizer-burdening trading illegal is through a new SEC rule. It is true that the cases requiring something more in turn rely on Supreme Court cases that purport to interpret the scope of Section 10(b), not just Rule 10b-5. However, the rationale that “Section 10(b) is aptly described as a catchall provision, but what it catches must be fraud,”<sup>234</sup> was clearly aimed at the scope of the rule, not the statute, and in any case dealt with what kinds of trading on inside information was illegal, not what constitutes “manipulation.” An important consideration supporting the argument that an SEC rule prohibiting internalizer-burdening trading would be authorized under Section 10(b) is that unlike Rule 10b-5, which does not even include the word “manipulation,” Section 10(b) expressly prohibits “manipulative” devices, not just “deceptive” ones, in violation of a SEC rule promulgated thereunder. It seems unlikely that Congress was adding nothing by including the term “manipulative.”

Because using quotes or trades solely to move price to the actor’s advantage has been under-theorized both economically and legally, courts can also be too quick to impose civil damages liability when they find a Rule 10b-5 violation, for example by allowing plaintiffs in private damages actions to utilize the fraud-on-the-market doctrine. This is a doctrine that has come to supplement the traditional reliance-based doctrine as the basis for Rule 10b-5 private damages actions in cases based on public misstatements of issuers whose shares trade in efficient markets.<sup>235</sup> Traditional reliance-based liability is based on the theory that the Rule 10b-5 violation (typically a misstatement) caused the plaintiff to *act* to its disadvantage.<sup>236</sup> The newer fraud-on-the-market theory is an alternative Rule 10b-5 private damages cause of action based

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<sup>234</sup> *Chiarella v. United States*, 445 U.S. 222, 234–35 (1980).

<sup>235</sup> See Merritt B. Fox, *After Dura: Causation in Fraud-on-the-Market Actions*, 31 J. CORP. L. 829, 832 (2006) (exploring the difference in the causal connection between the Rule 10b-5 violation and the plaintiff’s loss in a traditional reliance-based private damages action versus this causal connection in a fraud-on-the-market private damages action).

<sup>236</sup> *Id.* at 831–32.

on the idea that the Rule 10b-5 violation adversely *changed the price* at which the plaintiff traded.<sup>237</sup>

The problem with using the fraud-on-the-market doctrine in the context of either kind of internalizer-burdening trading is as follows. Consider first the quote-based version and recall the Autumn example. As the analysis in Part IV showed, if the order that is sent to the exchange and creates the new improved NBB or NBO is not executed against prior to the trader cancelling it after her order with the internalizer executes, no other market participant besides the internalizer is affected. If the order sent to the exchange does execute, the person or persons on the other side of the transaction actually gain, not lose.<sup>238</sup> Assuming that the order to the exchange does not execute before the order is sent to the internalizer (if it does, the whole strategy fails), the sole loser is the internalizer. The internalizer has a basis for bringing a traditional reliance-based action: the internalizer-burdening trader's misleading quote induced the internalizer to enter into a transaction it otherwise would not have. However, the trader's Rule 10b-5-violating strategy does not result in market prices changing to the disadvantage of anyone else.

The story with a trade-based violation is a bit more complex. Again, the internalizer would have a good traditional reliance-based claim against the trader utilizing the strategy. But, unlike with a quote-based violation, a trade-based violation more seriously raises the issue of whether it should give rise to fraud-on-the-market liability as well. Recall the Ari example. Here, sellers in the market during the first stage of the strategy are hurt since the executed sell orders that Ari sends to the exchange drive down the prices that these sellers receive. Thereafter, buyers in the market during the strategy's second stage are hurt because the buy orders that Ari sends to the market drive up the prices that these buyers pay. Thus, there is a group of buyers and a group of sellers that can each claim that, but for the strategy's effect on prices, they would have been better off. Each group therefore has a claim that fits within the logic of the fraud-on-the-market doctrine which, if applicable, would allow them to bring a class action.

For a number of reasons, however, it is probably unwise to extend the cause of action to cover these claimants. In contrast to the typical

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<sup>237</sup> See *id.* at 855. This is a real danger. In *CP Stone Fort Holdings v. Doe(s)*, No. 16-C-4991, 2017 WL 1093166 (N.D. Ill. Mar. 22, 2017), the court ultimately granted the defendant's motion to dismiss on the basis of an erroneous understanding of what needs to be shown to establish loss causation in a fraud-on-the-market case, rather than rejecting in the first place the application of the fraud-on-the-market theory to a spoofing case. Fox et al., *Spoofing*, *supra* note 3, at 1317 n.221 and accompanying text.

<sup>238</sup> If the order sent to the exchange executes before the order sent to the internalizer, the trader's effort to profit fails because the NBO or NBB will on average return to the same level as it would have been if the strategy had not been attempted. If the order sent to the exchange executes after that sent to the internalizer, the internalizer loses but the exchange order's counterparty gains.

fraud-on-the-market class for a corporate misstatement, which includes all the persons who engaged in the large number of purchases or sales that occur over the period of usually months or longer that the misstatement affected the issuer's price (often by many dollars), an action against someone like Ari would cover only the small number of purchases or sales occurring during the at-most-few minutes that it takes to complete each leg of the strategy and at prices only a few pennies different. The strategy works no ex ante unfairness since a trader is as likely to be benefited as hurt when someone undertakes it, which suggests that liability can only be justified based on its deterrent effect, not its compensatory one. The value of this deterrent effect would need to be worth the social costs associated with the litigation generated by allowing imposition of liability. This seems unlikely given the high social cost of private damages securities suits.<sup>239</sup>

Since a significant part of this social cost is the time and effort of the plaintiffs' bar, the relatively low damages such suits will usually generate might suggest that liability is a purely theoretical issue because no suits will be brought even if liability is allowed. The problem with allowing liability, though, is the substantial chance of judicial error in the supervision of who can be a class member and in determining the measure of damages. This chance of error is due to how difficult it has been shown to be for courts to understand the economics of this strategy. Such errors might boost deterrence, but only through generating windfalls and unpredictable judicial outcomes.

In the final analysis, the main deterrent to internalizer-burdening trading will likely need to be government enforcement, not private damages litigation.<sup>240</sup> Traditional reliance-based actions by internalizers, unless preceded by a government enforcement action, will probably be rare given the difficulty of internalizers identifying when they are being damaged by internalizer-burdening strategies and who is engaging in the strategies. Fraud-on-the-market litigation would face the same problem—plus, as just argued, it is probably simply inappropriate.

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<sup>239</sup> Total settlements for the years 2013–2022 have averaged about \$3.89 billion per year. LAARNI T. BULAN & LAURA E. SIMMONS, CORNERSTONE RSCH., SECURITIES CLASS ACTION SETTLEMENTS: 2022 REVIEW AND ANALYSIS 3 (2022). Available data suggests that fee awards to plaintiffs' lawyers in securities class action lawsuits average around 21 percent. Lynn A. Baker, Michael A. Perino & Charles Silver, *Is the Price Right? An Empirical Study of Fee-Setting in Securities Class Actions*, 115 COLUM. L. REV. 1371, 1395 (2015) (average of 25.12% for cases without an ex ante fee agreement and 17.62% for cases with evidence of an ex ante fee agreement). If we assume that defendants' lawyers are paid fees comparable to this amount, this would suggest that the total annual legal expenses in recent years for the two sides associated with securities class actions (the defense's legal fees ultimately being paid by shareholders and the plaintiff's legal fees coming out of the recovery) totaled about \$1.6 billion ((0.21 + 0.21) x \$3.89 billion). This figure on legal expenses does not include the additional social costs associated with the time consumed by the officials of all the parties to the litigation and by the judiciary.

<sup>240</sup> See Fox et al., *Spoofing*, *supra* note 3, at 1315–19.

## VII. CONCLUSION

The precise scope of federal securities manipulation law has long eluded critical and judicial consensus. Internalizer-burdening trading is no exception. This Article has sought to clarify the understanding of internalizer-burdening trading through the lens of microstructure economics. It has also sought to answer essential normative and practical questions around the scope of illegal manipulation. It has analyzed the mechanisms of internalizer-burdening trading, evaluated who is hurt and helped by the practice and its impact on social welfare, and assessed optimal legal responses. In doing so, this Article offers a new understanding that helps clarify how the precedents and reasoning found in existing case law, none of which directly addresses these strategies, should apply to them, and that can help guide future regulatory responses by both the SEC and the courts.