

William & Mary Law School

## William & Mary Law School Scholarship Repository

---

Faculty Publications

Faculty and Deans

---

10-2021

### Marginal Benefits of the Core Securities Laws

Kevin S. Haeberle

Follow this and additional works at: <https://scholarship.law.wm.edu/facpubs>



Part of the [Law and Economics Commons](#), and the [Securities Law Commons](#)

---

Copyright c 2021 by the authors. This article is brought to you by the William & Mary Law School Scholarship Repository.

<https://scholarship.law.wm.edu/facpubs>

# Marginal Benefits of the Core Securities Laws

Kevin S. Haeberle\*

## ABSTRACT

To every thing there is a season. In the area of securities regulation in the United States, it is the season for expansion. This article shows why such expansion should not involve use of the core issuer disclosure, fraud, and insider trading laws to reduce information asymmetry in the stock market in the name of investor protection. I argue that any expansion of these laws focused on this secondary market should therefore be justified by distinct concerns (namely, efficiency ones). Moreover, any push to better serve and protect investors should be focused on other areas of securities law (such as those relating to the structure of securities markets) or other markets (such as the market for investment management).

**KEYWORDS:** US securities regulation; disclosure, fraud, and insider trading law; US stock market

## I. INTRODUCTION

A new administration came into power in Washington in January 2020, and in the area of securities regulation, an increased focus on investor protection is expected over the coming years.<sup>1</sup> Professor Spatt (former chief economist at the Securities and Exchange Commission (SEC)) summed up the view of many when he said: ‘The classic orientation is Republican regulators have tended to view investor protection issues relatively narrowly and Democratic regulators have viewed it expansively’ and ‘investors should expect a more energetic SEC that will work to broaden what public companies

\* Kevin S Haeberle, William and Mary Law School, 613 South Henry Street, Williamsburg, VA 23185, United States. Email: [kshaeberle@wm.edu](mailto:kshaeberle@wm.edu).

1 Tory Newmyer, ‘The Finance 202: Gary Gensler, Biden’s Likely Pick to Lead the SEC, Has Earned His Rep as a Wall Street Scourge’ *Washington Post* (13 January 2021) (‘Gary Gensler as chairman of the SEC is exactly what not only the SEC needs, but what investors who’ve been thrown to the wolves for the last four years need. He has the potential to return the SEC to the gold standard of investor protection.’ (quoting Dennis Kelleher, president of Better Markets)); Paul Kiernan and Scott Patterson, ‘An Old Foe of Banks Could Be Wall Street’s New Top Cop’ *The Wall St Journal* (16 January 2021) (‘Critics of the SEC in recent years have said it focused too much on helping companies raise capital and not enough on investor protections. . . . [T]he agency “engaged in numerous rule-makings of a deregulatory nature” last year that “often had the effect of diminishing investor protections.”’ (quoting Rick Fleming, the SEC’s in-house investor advocate)).

must disclose and bring a wider array of enforcement actions against financial firms and actors'.<sup>2</sup>

In this article I attempt to improve the expected regulatory focus. In particular, the article presents a close study of the reductions to stock-market<sup>3</sup> information asymmetry provided by the issuer disclosure, fraud, and insider trading laws that sit at the centre of US securities regulation. The study reveals that these reductions lead to, at best, very limited benefits on the margin for passive investors<sup>4</sup> in the stock market today. I therefore question the investor-protection value of an expansion to the core securities laws and attempt to shift the regulatory focus to other policy rationales, laws, and markets.

Securities markets, so goes the story, are especially prone to problems of information asymmetry. More precisely, it has been argued that information asymmetry among stock-market investors results in three interconnected categories of negative social effects: those relating to consumer protection, fairness, and economic efficiency.<sup>5</sup> The main consumer-protection concern is that lesser-informed investors (including even

- 2 See Chris Matthews, 'From Climate Change to Free-Trading Apps, Brace for an Aggressive SEC Under Biden, Experts Say' *MarketWatch* (23 November 2020) <[www.marketwatch.com/story/from-climate-change-to-free-trading-apps-brace-for-an-aggressive-sec-under-biden-experts-say-11606143620](http://www.marketwatch.com/story/from-climate-change-to-free-trading-apps-brace-for-an-aggressive-sec-under-biden-experts-say-11606143620)> accessed 28 July 2021 (first quoting from Professor Chester Spatt, then paraphrasing his words).
- 3 I use the term 'stock market' to refer to the market for previously issued public-company stock, as opposed to the distinct new-issuance market. In other words, my focus is on the secondary market and not the primary one.
- 4 My precise focus is on those who are engaged in trading to accumulate, rebalance, and/or liquidate pieces of diversified stock portfolios held to earn market-wide risk premiums or the like over relatively long periods. This group includes (1) individuals who invest via retail-level brokerage accounts; (2) individuals who invest through investment-fund intermediaries; and (3) institutions that invest on their own behalf. I focus on these investors because investor protection has generally been defined to mean the protection of such long-term investors (with a special focus on ordinary individuals). Eg, Concept Release on Equity Market Structure, Exchange Act Release No 34-61358, 75 Fed Reg 3593, 3603 (proposed 21 January 2010) (to be codified at 17 CFR pt 242) (hereinafter 'Market Structure Concept Release') ('In assessing the performance of the current equity market structure and whether it is meeting the relevant Exchange Act objectives, the Commission is particularly focused on the interests of long-term investors.'). See also, Yoon-Ho Alex Lee, 'The Efficiency Criterion for Securities Regulation: Investor Welfare or Total Surplus?' (2015) 57 *Ariz L Rev* 85, 111 (noting that the SEC's investor-protection approach has involved calculating costs and benefits 'from the perspective of the "representative (long-term) investor," one who has a long-term interest in the well-being of the firm'). Moreover, both social science and regulators encourage a passive approach for those investors. Eg, Burton G Malkiel, *A Random Walk Down Wall Street: The Time-Tested Strategy for Successful Investing* (11th edn, Norton, W.W. & Company, Inc. 2015) 266–67 ('Because active management generally fails to provide excess returns and also tends to generate greater tax burdens for investors as they regularly realize capital gains, the advantage of passive management holds with even greater force. '); *ibid* 407; Ian Ayres and Edward Fox, 'Alpha Duties: The Search for Excess Returns and Appropriate Fiduciary Duties' (2019) 97 *Tex L Rev* 445, 453 ('[T]he consensus among economists and financial professionals is surprisingly straightforward: Absent an alpha opportunity, one should hold a portfolio which is (1) well-diversified, (2) low-cost, and (3) exposes you to age-appropriate stock market risk.'). The judges of the chief corporate law tribunal in the United States have also supported this thinking. Eg, Leo E Strine, Jr, 'Essay, One Fundamental Corporate Governance Question We Face: Can Corporations Be Managed for the Long Term Unless Their Powerful Electorates Also Act and Think Long-Term?' (2010) 66 *Bus Law* 1, 12 (stating that '[m]any of the wisest end-user investors . . . choose investment funds that do not churn: index funds', and discussing the social science backing this view).
- 5 For a detailed overview of these effects, see Merritt B Fox and Kevin S Haerberle, 'Evaluating Stock-Trading Practices and Their Regulation' (2017) 42 *J Corp L* 887.

sophisticated ones) will be harmed—including by incurring precaution costs.<sup>6</sup> The fairness concern generally revolves around any actual unfairness along with larger perceptions of unfairness and any related lack of investor confidence in the market.<sup>7</sup> The efficiency concern centres on the extent to which the secondary market, when impeded by information asymmetry, will (1) allocate capital to its best uses;<sup>8</sup> (2) align managerial interests with those of shareholders and society;<sup>9</sup> and (3) spread risk to its lowest-cost bearers.<sup>10</sup> Accordingly, stock-market information asymmetry is thought to fray important pieces of our social and economic fabric.

To reduce the fraying, securities regulation has long been focused on compelling information sharing by firms (issuer-disclosure law), in an honest manner (fraud law), while restricting pre-disclosure trading (insider trading law).<sup>11</sup> A considerable portion of these interconnected laws is focused on the secondary market<sup>12</sup> and, to some, is desirable from an investor-protection perspective that focuses on protecting passive investors. But to others, this perspective is misguided.<sup>13</sup> To date, the main argument

6 Ibid 909–12. For an overview of the precaution-cost concern, see Paul G Mahoney, 'Precaution Costs and the Law of Fraud in Impersonal Markets' (1992) 78 Va L Rev 623, 642–43.

7 Fox and Haeberle (n 5) 909–12.

8 Eg, *ibid* 897–903.

9 Eg, *ibid* 890–95.

10 Ibid 907–08; see also, eg, Lawrence R Glosten and Talis J Putnins, 'Welfare Costs of Informed Trade' (5 November 2019) 6 (unpublished draft on file with the author).

11 See, eg, Luca Enriques and Sergio Gilotta, 'Disclosure and Financial Market Regulation' in Niamh Moloney, Eilis Ferran and Jennifer Payne (eds), *The Oxford Handbook of Financial Regulation* (2015) 515 ('Mandatory Disclosure may protect investors by enabling them not to be "exploited" by traders having superior information (insiders and professional investors).'); James C Spindler, 'We Have a Consensus on Fraud on the Market—and It's Wrong' (2017) 7 Harv Bus L Rev 67, 113 n173 ('The general economic consensus, supported by empirical findings, is that more or better [company] reporting reduces information asymmetry and increases liquidity, at least in the long run.');

Christian Leuz and Robert E Verrecchia, 'The Economic Consequences of Increased Disclosure' (2000) 38 J Acct Res 91; Enriques and Gilotta (n 11) 515 (discussing the view of 'market egalitarianism' and noting that it 'has received strong support in the past and has profoundly influenced the evolution of securities regulation on both sides of the Atlantic (for example, it gave rise to the ban on insider trading in the US and has long shaped much of the SEC policy as regards mandatory disclosure)'; Enriques and Gilotta (n 11) 516 (stating that 'market egalitarianism is still very popular among regulators and courts').

12 Public companies are required to provide ongoing, periodic disclosure, including quarterly reports (10-Qs), annual reports (10-Ks), and reports based on certain significant firm events within four days of their occurrence (8-Ks). And one of the farthest-reaching aspects of the fraud overlay on the disclosure regime (the fraud-on-the-market theory of reliance that allows for large class actions targeting corporate misrepresentations) subjects firms and their agents to liability to secondary-market investors even when those firms and agents are not buying or selling opposite those investors. Eg, Merritt B Fox, 'Why Civil Liability for Disclosure Violations When Issuers Do Not Trade?' (2009) 78 Wis L Rev 299. This theory is exclusively focused on efficient markets and the secondary market for public-company stock is generally efficient, whereas the primary market is not. Lastly, the enforcement of insider-trading law has been almost exclusively focused on trades made in the secondary market.

13 For prominent examples of this view, see Zohar Goshen and Gideon Parchomovsky, 'The Essential Role of Securities Regulation' (2006) 55 Duke LJ 711, 713 ('Any serious examination of the role and function of securities regulation must sidestep the widespread, yet misguided, belief that securities regulation aims at protecting the common investor. Securities regulation is not a consumer protection law.');

Henry Manne, 'In Defense of Insider Trading' (1966) Harv Bus Rev, Nov–Dec 113, 114; ('[T]he only stock market participants who are likely to benefit from a rule preventing insider trading are the short-term speculators and traders, not the long-term investors who are regularly stated to be the objects of the SEC's solicitude.');

Merritt B Fox and others, 'Law, Share Price Accuracy, and Economic Performance: The New Evidence' (2003) 102

for scepticism has been that investors can price protect against heightened information asymmetry.<sup>14</sup>

In recent work,<sup>15</sup> I took the focus on price discounts a step further. I theorized that discounts for stock-market information asymmetry confer a disproportionate *benefit* on buy-and-hold investors—and that the core securities laws therefore take something important away from those investors. I reasoned that the discount is set by the marginal investor, and that this investor likely has an investment time horizon that is far shorter than that of buy-and-hold investors. Because the main effects of information asymmetry are more costly to shorter-term investors and less costly to longer-term ones, the discount set by the former (the shorter-term investors) is larger than that needed to negate the effects of information asymmetry for the latter (the longer-term investors). The discount set by the marginal investor (and their shorter-term investment horizon) thus provides buy-and-hold investors with excess investment return beyond that needed to compensate those longer-term investors for the costs information asymmetry imposes on them. For this reason, the core issuer disclosure, fraud, and insider trading laws that reduce information asymmetry (and therefore reduce the extent to which the marginal investor will discount prices) take that excess return away from buy-and-hold investors.

In this article, I look at the stock market and its regulation from a different angle—one that puts the above-described discounts to the side. Section II provides background on aspects of the relevant regulatory regime that are likely to be subject to expansionary efforts today. Section III then traces the investor-protection concerns at issue back to their origin in the market, thereby identifying the initial costs of inter-investor information asymmetry for passive investors. This section focuses on these costs because any larger consumer-protection, fairness, or efficiency concern about stock-market information asymmetry relating to these investors must be traceable to those costs, if

Mich L Rev 331, 335–36 (hereinafter ‘Share Price Accuracy’) (‘[A] law requiring issuers to disclose more information than they would otherwise voluntarily disclose is unnecessary to protect ordinary investors from buying shares at prices that are unfair in the sense of being on average greater than their actual values.’); Richard A Booth, ‘The End of the Securities Fraud Class Action as We Know It’ (2007) 4 Berkeley Bus LJ 1, 11 (‘[I]nvestors are fully protected from simple securities fraud through diversification. They need no remedy.’); Frank H Easterbrook and Daniel R Fischel, ‘Mandatory Disclosure and the Protection of Investors’ (1984) 70 Va L Rev 669, 694 (stating that the investor-protection rationale ‘is as unsophisticated as the investors it is supposed to protect’).

- 14 See, eg, Stephen J Choi and Andrew T Guzman, ‘Portable Reciprocity: Rethinking the International Reach of Securities Regulation’ (1998) 71 S Cal L Rev 903, 925 (‘[T]he market will take into account the value of the securities laws . . . [I]f the laws provide opportunity for managers to extract value from the firm, this will be reflected in lower prices for the traded securities.’); Share Price Accuracy (n 13) 336 n 13 (noting the ‘broad consensus that the effect of . . . future disclosure practices on the expected future cash flow to holders of the issuer’s shares is reflected in the price’). The precise discounts in focus in the text relating to information asymmetry have been recognized in at least a broad way among legal scholars since as early as 1981. Frank H Easterbrook, ‘Insider Trading, Secret Agents, Evidentiary Privileges, and the Production of Information’ (1981) Sup Ct Rev 309, 325. Those discounts were later more formally modelled in an economics article, Yakov Amihud and Haim Mendelson, ‘Asset Pricing and the Bid-Ask Spread’ (1986) 17 J Fin Econ 223, and in the literature built on that article, see Yakov Amihud, Haim Mendelson and Lasse Heje Pedersen, *Market Liquidity: Asset Pricing, Risk, and Crises* (Cambridge University Press 2013) (providing an overview of this literature).
- 15 Kevin S. Haeberle, *Information Asymmetry and the Protection of Ordinary Investors*, 53 UC Davis L Rev 145 (2019).

not represented by them altogether. Section IV reveals strikingly low readings on key indications of the magnitude of these costs. In section V, I explain why a number of market mechanisms allow passive investors to escape these costs to a significant degree. In section VI, I step back from this close look at the stock market to formulate my main positive conclusion as to the, at best, very limited investor-protection benefits at issue. I then touch on why we should be sceptical of the investor-protection value of expansions to the core securities laws more generally (ie, beyond just their impact on information asymmetry on the margin). I therefore close by attempting to shift regulatory focus to distinct justifications for contemplated expansions (namely, efficiency-based ones) and, for those who want to do more for passive investors, distinct areas of securities law (such as those regulating the structure of securities trading) and distinct markets (such as the market for investment management).

## II. A REGULATORY REGIME THAT IS LIKELY TO BE TARGETED FOR EXPANSION

Policy debates on the appropriate scope of public-company disclosure, fraud, and insider trading laws are not new. In this section, I briefly describe recent battle lines where expansionary action is most likely to take place.

### 1. Issuer disclosure law

During the Trump Administration, the SEC instituted notable change to the public-company disclosure regime.<sup>16</sup> Much of that change was focused on primary-market disclosure, including for companies that are not yet public, but keeping investors (including secondary-market ones) informed was on regulators' minds.<sup>17</sup> Indeed, the chairman of the SEC at that time, Jay Clayton, had emphasized the importance of investor-protection concerns in this area.<sup>18</sup> Despite this, as many saw it at the close of 2020, the previous four years at the SEC had been about disclosure deregulation and the next four should be about reversing that trend.<sup>19</sup>

16 See FAST Act Modernization and Simplification of Regulation S-K, Release No 33-10618, 34-85381, IA-5206, IC-33426, 84 Fed Reg 12,674, 12,676 (2 April 2019) (to be codified at 17 CFR pts 229, 230, 232, 239, 240, 249, 270, 274, 275) (adopting rules that 'improve and modernize the disclosure requirements of Regulation S-K').

17 Ibid 12,680–81 (emphasizing the need for balance to avoid 'diminishing the quality of information available to investors'); *ibid* 23.

18 See, eg, Jay Clayton and William H Himan, 'The Importance of Disclosure for Investors, Markets and Our Fight Against COVID-19' Harv L Sch F on Corp Governance (10 April 2020), <<https://corpgov.la.w.harvard.edu/2020/04/10/the-importance-of-disclosure-for-investors-markets-and-our-fight-against-covid-19>> accessed 28 July 2021 (focusing on ongoing, periodic disclosure by public companies, and stating that '[t]he SEC's three part mission—maintain market [efficiency], facilitate capital formation and protect investors—takes on particular importance in times of economic uncertainty. Disclosure—providing the public with the information necessary to make informed investment decisions—is fundamental to furthering each aspect of our mission').

19 See n 1; see also Hester M Peirce and Elad L Roisman, 'SEC Commissioners Comment on Chair Gensler's Regulatory Agenda' *CLS Blue Sky Blog* (17 June 2021) (stating that the new chair's regulatory agenda 'makes clear that the Chair's recent directive to SEC staff to consider revisiting recent regulatory actions . . . is just the opening salvo in an effort to reverse course on a series of recently completed rulemakings').

The new SEC leadership will certainly have the power to revisit the disclosure regime in the name of investor protection.<sup>20</sup> It can also attempt to enforce disclosure law and its overlays in an expanded fashion. In early 2021, the SEC appears to have done just that, bringing a rare enforcement action under Regulation Fair Disclosure—one that read the regulation more broadly than it has traditionally been read.<sup>21</sup> To many, the timing of this action sent a signal as to what is to come under the new administration.<sup>22</sup> Like the leadership preceding it, Chair Gary Gensler and the two other Democratic-appointed commissioners can be expected to justify the Commission's actions in the disclosure area by citing, among other things, investor-protection concerns.

## 2. Securities fraud law

Securities fraud law targeting public companies has also been subject to steady change over time, albeit with that change primarily happening in the federal courts in recent years. Most prominently, the Supreme Court continues to hone the contours of the private fraud-on-the-market cause of action that targets corporate misrepresentations under Section 10(b) and Rule 10b-5.<sup>23</sup>

In the *Halliburton* litigation, the Court twice adjusted this private cause of action in meaningful ways.<sup>24</sup> In *Halliburton I*, the Court examined the extent to which plaintiffs in putative class actions under Section 10(b) and Rule 10b-5 have to prove loss causation in order to obtain class certification. The Fifth Circuit had required plaintiffs in the case to prove loss causation in order to obtain permission to proceed as a class. But the Court rejected a bar set at this high level at that stage of litigation for this element.<sup>25</sup> For that reason, up through class certification, all plaintiffs must do on that element of a 10(b) and Rule 10b-5 private cause of action today is plead it generally in their complaint.<sup>26</sup> This ruling, which resolved a circuit split on the issue, expanded the scope of private securities fraud litigation on the margin.

The Court's decision in *Halliburton II* went in the opposite direction. That decision allowed defendants to rebut the fraud-on-the-market presumption at the class-certification stage with evidence as to the lack of price impact of the alleged misstatement at issue.<sup>27</sup> The case's return to the Court on this distinct issue suggests that

20 In setting up public-company disclosure regime, the Exchange Act calls for firms to make disclosures 'in accordance with such rules and regulations as the Commission may prescribe as necessary or appropriate for the protection of investors and to insure fair dealing in the security'. Exchange Act § 13(a), 15 USC § 78m.

21 See Michelle Leder, 'The SEC's AT&T Lawsuit Is a Warning for Corporate America' *Bloomberg* (17 March 2021) ('If a new government lawsuit against AT&T is any indication, the Biden administration is wasting no time in signaling a new approach to regulating corporate disclosure. The result could be a tectonic shift in the way all public companies communicate with analysts and investors.'); Press Release, 'SEC Charges AT&T and Three Executives with Selectively Providing Information to Wall Street Analysts' SEC.gov (5 March 2021).

22 Eg, Leder (n 21).

23 Exchange Act § 10b, 15 USC § 78(j)(b); Exchange Act Rule 10b-5, 17 CFR § 240.10b-5 (2017).

24 See *Erica P John Fund v Halliburton*, 563 US 804 (2011) (hereinafter '*Halliburton I*'); *Halliburton v Erica P John Fund*, 573 US 258 (2014) (hereinafter '*Halliburton II*').

25 *Halliburton I*, 563 US at 813.

26 *ibid.*

27 *Halliburton II*.

the Court is likely to continue to refine the scope of private securities fraud litigation over time. The same principle is evidenced by other recent changes to this private cause of action. For example, the majority interpretation of Rule 10b-5(a) and (c) in a 2019 Supreme Court case expanded the scope of securities fraud actions by essentially gutting the real-world impact of a restrictive 2010 Court opinion.<sup>28</sup>

The underlying tussle between those who believe the private right of action under Section 10(b) should be construed more liberally and those who believe it should be construed more restrictively is sure to continue. Here, because it is primarily the courts and not the legislature or Commission managing the change, politics is perhaps less relevant. But the Court nevertheless has expressly acknowledged that it takes policy considerations into account when determining the contours of the 10(b) private right of action.<sup>29</sup> And while the current Court is dominated by conservative judges, the current Commission and the Office of the Solicitor General can be expected to advocate for a broadening of fraud-on-the-market litigation on at least the margin.<sup>30</sup>

### 3. Insider trading law

Congress is now perhaps closer than it ever has been to codifying insider trading law. In December 2019, the House passed a much publicized bill providing such a codification.<sup>31</sup> The bill idled in the Senate as the presidential election year began and the country began to deal with the Covid-19 pandemic. But a revised version of the bill under the same name was passed by the House on 19 May 2021.<sup>32</sup>

As things stand today, the core of insider trading law remains judicially constructed through broad interpretations of securities-specific fraud law.<sup>33</sup> In short, some types of trading on the basis of material, non-public information (including that by directors and

28 *Lorenzo v SEC*, 139 S Ct 1094, 1100–01 (2019) ('[W]e conclude that . . . disseminating of false or misleading statements with intent to defraud can fall within the scope of subsections (a) and (c) of Rule 10b-5, as well as the relevant statutory provisions. In our View, that is so even if the disseminator did not "make" the statements [under the Court's 2011 decision in *Janus Capital Group*, 131 S Ct 2296] and consequently falls outside subsection (b) of the Rule.')

29 *Blue Chip Stamps v Manor Drug Stores*, 421 US 723, 737 (1975) ('When we deal with private actions under Rule 10b-5, we deal with a judicial oak which has grown from little more than a legislative acorn . . . It is therefore proper that we consider . . . what may be described as policy considerations when we come to flesh out the portions of the law with respect to which neither the congressional enactment nor the administrative regulations offer conclusive guidance.')

30 During the Obama Administration, the Office of Solicitor General filed amicus briefs in favour of plaintiffs in both *Halliburton I* and *Halliburton II*. In *Halliburton I*, the Office was on the winning side, arguing that plaintiffs in fraud-on-the-market cases do not have to prove loss causation in order to gain class certification. Erica P John Fund, 'OSG Merits Brief for the United States as Amicus Curiae Supporting Petitioner' (1 March 2011); Erica P John Fund, 'OSG Cert Brief for the United States as Amicus Curiae' (3 December 2010). In *Halliburton II*, the Office argued (unsuccessfully) that defendants may not even rebut the fraud-on-the-market presumption at the class-certification stage by showing a lack of price impact. *Halliburton*, 'OSG Brief for the United States as Amicus Curiae Supporting Respondent' (5 February 2014).

31 Insider Trading Prohibition Act, HR 2534, 116th Cong (2019).

32 Insider Trading Prohibition Act, HR 2655, 117th Cong (2021).

33 These broad interpretations began outside of the courts, most notably with a famous SEC administrative decision. *Cady, Roberts & Co*, Exchange Act Release No 6,668, 1961 SEC LEXIS 385. But the Supreme Court later adopted this basic thinking, albeit in a much more restrictive form. See *Chiarella v United States*, 445 US 222 (1980) (interpreting Section 10(b) and Rule 10b-5 to restrict 'classical' insiders from

officers) are considered to constitute Section 10(b) securities fraud.<sup>34</sup> But the courts have made clear that Section 10(b) and Rule 10b-5 require ‘deceit’ (including deceitful misappropriations in misappropriation insider-trading cases),<sup>35</sup> trading ‘on the basis of the information at issue (and not simply while aware of that information),<sup>36</sup> and have required tippees to have received a ‘personal benefit’ in return for their tip and tippees to know of the receipt of that personal benefit.<sup>37</sup>

As far as many are concerned, the scope of prohibited insider trading activity is thus too limited. The Insider Trading Prohibition Act picks up on this concern,<sup>38</sup> listing a broader set of misappropriated information (beyond that which was ‘deceitfully’ misappropriated) that can give rise to sanction,<sup>39</sup> makes trading while the person ‘was aware of’ the information actionable (gutting the ‘on the basis of’ requirement),<sup>40</sup>

trading opposite lesser-informed counterparties in the market); *Dirks v SEC*, 463 US 646 (1983) (extending *Chiarella*-type analysis to tipper and tippee conduct); *United States v O'Hagan*, 521 US 642 (1997) (endorsing the broader misappropriation theory of insider trading).

34 See discussion and sources cited in n 33.

35 *O'Hagan*, 521 US at 652 (‘[T]he misappropriation theory premises liability on a fiduciary-turned-trader’s deception of those who entrusted him with access to confidential information.’ (emphasis added)); *ibid* 653–54.

36 *Eg, SEC v Adler*, 137 F.3d 1325, 1337 (11th Cir 1998); see also 17 CFR § 240.10b5-1 (2017).

37 *Eg, Salman v United States*, 137 S Ct 420, 427.

38 See John C Coffee, Jr, ‘Prof. Coffee Testifies on Insider Trading Legislation before the House Financial Services Subcommittee on Investor Protection’ *CLS Blue Sky Blog* (3 April 2019), <<https://clsbluesky.law.columbia.edu/2019/04/03/putting-investors-first-reviewing-proposals-to-hold-executives-accountable>> accessed 28 July 2021 (noting that the Insider Trading Prohibition Act ‘expands liability in ways that should not be controversial’); Stephen M Bainbridge, ‘A Critique of the Insider Trading Prohibition Act of 2021’, UCLA School of Law, Law-Econ Research paper No 21-08 (21 June 2021) (‘The Act’s proponents claim that it simply codifies and clarifies existing law. In fact, the Act does neither. It likely will expand the scope of insider trading in undesirable ways . . .’).

39 See HR 2655 § 2(a) (broadening the types of informational usage that would be actionable to include those involving ‘theft, bribery, . . . or espionage (through electronic or other means’, ‘a violation of any Federal Law protecting computer data or the intellectual property or privacy of computer users’, ‘conversion’, or ‘a breach of any other personal or other relationship of trust and confidence for a direct or indirect personal benefit’); see also Preet Bharara, ‘Report on Insider Trading by the Bharara Task Force’ Harv L Sch F on Corp Governance (1 February 2020), <<https://corpgov.law.harvard.edu/2020/02/13/report-on-insider-trading-by-the-bharara-task-force>> accessed 28 July 2021 (suggesting the following guiding principle for codification of insider trading law: ‘Focus on “wrong” use of material nonpublic information, not exclusively on “deception” or “fraud”’); *ibid* (‘The Task Force believes any effort to improve upon the current legal regime should decouple the offense of insider trading from its exclusive reliance on concepts of “deception” and “manipulation,” and tie it instead to “wrongfully” obtained or communicated information.’). In this way, the House bill and the official support for it goes back to the broader conception of misappropriation that Justice Burger contemplated in his dissent in the seminal *Chiarella* case in 1980. *Chiarella*, 445 US at 240 (Burger CJ, dissenting) (‘I would read section 10(b) and Rule 10b-5 . . . to mean that a person who has misappropriated nonpublic information has an absolute duty to disclose that information or to refrain from trading.’); *ibid* at 245 (defining actionable misappropriation under Section 10(b) and Rule 10b-5 as theft, without considering whether or not that theft involved deceit).

40 HR 2655 § 2(a) (‘It shall be unlawful for any person, directly or indirectly, to purchase, sell, or enter into, or cause the purchase or sale of or entry into, any security . . . while aware of material, nonpublic information relating to such security . . . if such person knows, or recklessly disregards, that such information has been obtained wrongfully, or that such purchase or sale would constitute a wrongful use of such information.’ (emphasis added)); see also Jonathan Richman and Joshua M Newville, ‘House Passes Proposed Legislation Defining Insider Trading’ *Proskauer on Priv Fund Litig* (12 December 2019), <[www.privateequitylitigation.com/2019/12/house-passes-proposed-legislation-defining-insider-trading](http://www.privateequitylitigation.com/2019/12/house-passes-proposed-legislation-defining-insider-trading)> accessed 28 July 2021

largely eliminates the requirement that tippers receive a personal benefit in return for their tip<sup>41</sup> (and, to the extent a personal benefit is still relevant to the inquiry, eliminates the requirement that the tippee have known of the personal benefit received by the tipper<sup>42</sup>). The end result is a series of changes to insider trading law that would more easily allow prosecutors to stop a broader set of asymmetrically informed trade than they can today. Moreover, the Act does not contain a clause abrogating the existing law of insider trading, meaning that the new law, if enacted, would arguably be additive in terms of its effect on the insider-trading tools provided to prosecutors.

Lastly, the SEC might be expected to more vigorously prosecute insider trading violations. This effort is likely to involve rulemaking or related interpretative activity that reigns in what many view as overly permissive stock-trading plans under the current version of Rule 10b5-1.<sup>43</sup> Indeed, not long after being confirmed, Chair Gensler listed a number of reforms to ‘freshen up Rule 10b5-1’.<sup>44</sup> In so doing, he focused on investor confidence in the market and ‘helping both investors and business’.<sup>45</sup>

### III. IDENTIFYING THE INITIAL COSTS OF INTER-INVESTOR INFORMATION ASYMMETRY FOR PASSIVE INVESTORS

As described in this section, the initial costs of stock-market information asymmetry for passive investors primarily come in the form of spread costs, market-movement costs, and avoidance costs.

#### 1. Spread costs

Stock-market information asymmetry results in spread costs for passive investors. This fact can most easily be seen by thinking about how information asymmetry affects market-maker pricing.

Market makers supply an intermediation service by posting bid and ask quotes against which any investor on a given trading venue can transact.<sup>46</sup> Their bid quotes

(‘[T]he House debated but ultimately rejected a proposed amendment [to the 2019 version of the act] to change the “aware of” material, nonpublic information standard to a “while using” standard.’)

41 HR 2655 § 2(b) (‘It shall not be necessary that the person trading while aware of such information . . . knows . . . whether any personal benefit was paid or promised by or to any person in the chain of communication, so long as the person trading while aware of such information or making the communication . . . was aware, consciously avoided being aware, or recklessly disregarded that such information was wrongfully obtained, improperly used, or wrongfully communicated.’); see also Bharara, (n 39) (suggesting the following guiding principle for a new, codified version of insider trading law: ‘Principle 3: Eliminate the “personal benefit” test’); John C Coffee, ‘Congress and the Insider Trading Prohibition Act: “Can’t Anybody Here Play This Game?”’ *CLS Blue Sky Blog* (25 May 2021) (arguing that the Insider Trading Protection Act ‘attempted to simplify the law to make it easier for prosecutors to reach professional traders’, but that this ‘attempt will fail if “personal benefit” is read back into the law [by judges]’ due to ambiguous language in the bill).

42 See Richman and Newville (n 40) (noting that the House bill ‘does not require that a tipper or tippee be aware that the tipper had received a personal benefit in exchange for providing information in breach of a duty’).

43 SEC.gov, Prepared Remarks by Gary Gensler at the CFO Network Summit (7 June 2021).

44 Ibid.

45 Ibid.

46 Larry Harris, *Trading & Exchanges: Market Microstructure for Practitioners* (2003) 278. Consistent with this description, many refer to these market participants today as ‘professional liquidity providers’ or simply ‘liquidity providers’. Eg, Merritt B Fox, Lawrence R Glosten and Gabriel V Rauterberg, *The New Stock*

represent firm offers to buy stock.<sup>47</sup> Bid prices are thus those in return for which investors can sell stock on demand. Market makers' ask quotes likewise represent the prices at which they are prepared to sell in the same fashion. Ask prices are thus those at which investors can buy stock on demand.

Market makers do not specialize in understanding *fundamental* values.<sup>48</sup> Instead, their primary mission is to determine *market* values. In short, they aim to find the value around which to place their quotes so that a two-sided market of buyers and sellers is created.<sup>49</sup> Doing so allows them to profit by purchasing shares from the sellers at bid prices that are below the ask prices for which they sell them to the *buyers*—thereby earning their bid–ask spread.

It follows that trading stocks centres on the price of the asset and the price of immediacy—with the latter represented by the spread cost that the buyer or seller must pay. The size of the price of immediacy is the product of a number of forces.<sup>50</sup> But spreads are primarily driven by information asymmetry.<sup>51</sup> This is because market makers are generally at an informational disadvantage when they transact opposite savvy speculators.<sup>52</sup> The latter generally specialize in spotting market prices that fail to reflect better understandings of *fundamental* values.<sup>53</sup> All the while, the former are channelling their energy to hone in on the market values and prices that allow them to earn their spread.<sup>54</sup> The problem that often comes to fruition for these lesser-informed market participants is thus one of getting stuck having bought an overvalued stock for their market-making inventory from better-informed investors, or having sold to those better-informed investors a stock from that inventory that was undervalued.<sup>55</sup> Either way, the market makers suffer losses traceable to information asymmetry.<sup>56</sup>

*Market: Law, Economics, and Policy* (2019) 20 ('Historically, liquidity providers have gone by a variety of names, including "market makers" and "dealers":').

47 When displayed on trading platforms, the law—not just industry practice—ensures that the quotes are firm. Regulation National Market System, 17 CFR § 242.602(b) (2017) (requiring displayed quotes to be legally binding offers to trade).

48 Eg, Harris (n 46) 277 ('[Market makers] tend to . . . not know much about . . . the fundamental values of the instruments that they trade.').

49 Eg, *ibid* 401 ('[Market makers] simply try to discover the prices that produce balanced two-sided order flows.');

*ibid* 287–88 ('[Market makers aim to] . . . set their bids just below fundamental values and their ask prices just above them.');

*ibid* 297.

50 See, eg, Ananth Madhavan, 'Market Microstructure: A Survey' (2000) 3 J Fin Mkts 205.

51 See, eg, Harris (n 46) 303 ('[I]n most markets the adverse selection spread component accounts for more of the total spread than does the transaction cost spread component.');

*ibid* 297 (noting that market maker fortunes depend on, among other things, "how much they lose to informed traders").

52 For the seminal microstructure work modelling the discrepancy in knowledge between informed traders and these market makers, and the adverse-selection costs associated with it, see Lawrence R Glosten and Paul R Milgrom, 'Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders' (1985) 14 J Fin Econ 71.

53 For an overview of information-driven investors, see, eg, Kevin S. Haeberle, *Information Asymmetry and the Protection of Ordinary Investors*, 53 UC Davis L Rev 145 (2019). (n 15) 15–19.

54 See nn 48–49 and accompanying text.

55 See Glosten and Milgrom (n 52).

56 Eg, *ibid*; Harris (n 46) 299 ('[I]nformed traders choose the side of the market on which they trade, and the dealers end up losing money to them.').

The market-maker losses to which this information-asymmetry problem leads are considerable.<sup>57</sup> These market makers find themselves sustaining direct trading losses when supplying their firm quotes<sup>58</sup> on the front lines of the stock market. Those losses represent information-asymmetry costs.

Market makers respond by posting inferior quotes—that is, by increasing the size of their ‘inside spread’<sup>59</sup> and decreasing the number of shares quoted at it and successively inferior prices. Making this change improves their ability to make up what they lose to better-informed investors for two reasons.

First, all else being equal, inferior quotes mean fewer losses to those investors. From the perspective of information-driven investors seeking to transact on demand, these prices that are further away from current market values are ones that limit the profits associated with buying underpriced stocks or selling overpriced ones. Facing these inferior prices, those investors therefore then inflict fewer losses on market makers, leaving the market makers with less to make up from other sources in order to stay in business.<sup>60</sup>

Second, the inferior quotes increase the extent to which the market makers are able to bring in enough revenue from other traders to cover whatever losses they do sustain to the more informed investors. While market makers generally lose when supplying their services to informed investors, they generally gain when providing them to ‘uninformed’ ones. This is because uninformed investors trade for reasons other than the possession of superior information. For example, they trade as passive investors. Consequently, in contrast to the periods after superiorly informed investors buy and sell stocks,<sup>61</sup> in the periods after these uninformed investors transact, prices are generally stable. In those moments after diversification-driven buying and selling, the market is generally not witnessing the type of flurry of net buy or sell orders that often follows information-driven trading and the revelation of the relevant underlying information.<sup>62</sup> This price stability allows market makers to generate revenue by purchasing from some passive investors at their lower bid prices while more or less contemporaneously selling to others at their higher ask ones.<sup>63</sup>

Thus, passive investors, among others, incur spread costs due to the presence of information asymmetry.

57 See nn 48 and 51 and accompanying text; Harris (n 46) 297 (noting that market makers’ fortunes depend on, among other things, ‘how much they lose to informed traders’).

58 See n 47 and accompanying text (noting these quotes and the law that requires them).

59 The term ‘inside spread’ is traceable to a vertical depiction of prices, where they are set out with a series of bids below a stock’s market value and a series of asks above that value. The best bid and ask surrounding the market value fall in the inside of the diagram.

60 Glosten and Milgrom (n 52).

61 See section III.2 (discussing the price movements that generally follow informed trading).

62 See *ibid.*

63 For the original work modelling how market makers offset their losses to informed investors by transacting at a spread with uninformed ones, see Albert S Kyle, ‘Continuous Auctions and Insider Trading’ (1985) 53 *Econometrica* 1315. See also Harris (n 46) 299 (discussing that model).

## 2. Market-movement costs

The second initial cost of inter-investor information asymmetry for passive investors is that associated with the market movements that typically result from informed trade.

In a market with unevenly informed buyers and sellers, market makers cannot simply place static bid and ask quotes, all the while expecting to gain enough from uninformed investors to cover their losses to informed ones. Doing so would expose them to massive losses to the latter. Market makers must be more fleet-footed and change their prices in response to trading activity in order to keep those losses in check. For this reason, market makers infer that net buying or selling activity in the market has some chance of being motivated by superior information.<sup>64</sup> To ensure that they can cover their losses to better-informed investors, market makers therefore adjust their estimates of value and their corresponding bid and ask prices up or down in response to such activity in the market.

Market makers generally cannot be sure that the trading activity they are observing is traceable to something other than the arrival of new information to the market. The overwhelming majority of trading in the market takes place at exchanges and off-exchange platforms with—at least before the trade is executed— anonymity between traders.<sup>65</sup> Consequently, when significant net buying activity against their ask prices is occurring, market makers infer that there may be new information that indicates their current value estimates and prices are too low.<sup>66</sup> They then move those estimates and corresponding prices up—continuing the process until market prices equilibrate around a value that better comports with trading activity in the market. When analogous selling against their bid prices is taking place, they do the opposite. Thus, market-maker reactions to activity opposite their quotes are the product of net buying and selling activity—not simply net buying and selling activity *by better-informed investors*.

When passive-investor buying opposite market-maker ask quotes causes market prices to move up over the short-run, those behind that buying pay an average price that is higher than that dictated by the fundamental-value information known by the market at the time plus the cost of the spread. This buying is thus said to have a ‘price impact’, or to ‘leave a footprint’. Because the price impact/footprint causes prices to move in the opposite direction of at least the passive investor’s short-term trading interest before that investor can complete buying, the investor suffers a cost. The cost comes in the form of an average price tag per share that is higher than it would otherwise be. Because the cost is traceable to the market-maker concern for adverse selection at the hands of better-informed investors, it too is rooted in information asymmetry. Indeed, the amount of net buying or selling that will trigger market-maker price movements will turn on the level of information asymmetry in the market.<sup>67</sup>

64 Glosten and Milgrom (n 52) 87.

65 Eg, Merritt B Fox, Lawrence R Glosten and Gabriel V Rauterberg, ‘Informed Trading and Its Regulation’ (2018) 43 J Corp L 817, 829 (‘Because the stock market is anonymous, a liquidity supplier generally does not know the identity of her counterparty or what, if anything, that person knows.’).

66 Glosten and Milgrom (n 52).

67 See *ibid*. For empirical evidence supporting this point, see David Easley and others, ‘Time-Varying Arrival Rates of Informed and Uninformed Traders’ (2008) 6 J Fin Econometrics 171, 196 fig 4 (showing the price impact of individual trades in the same stock in different informational environments).

When market makers expect heightened information asymmetry, the threshold that triggers these movements will be lower, and market-movement costs thus higher.<sup>68</sup> When they sense a reduction in information asymmetry in the coming period, the opposite is true.<sup>69</sup>

### 3. Avoidance costs

The third and final category of costs in this taxonomy of the initial costs of stock market information asymmetry for passive investors are what I term ‘avoidance costs’.

Avoidance costs are the costs investors incur to avoid the first two types of costs detailed above. These costs come in two main forms: through (1) harmful omissions to trade and (2) resource-intensive trade manoeuvring.

The trade-omission harm occurs whenever expected spread and/or market-movement costs result in one of these investors opting not to buy or sell stock.<sup>70</sup> To the extent this forbearance results in the investor missing out on what would otherwise be a utility-enhancing portfolio adjustment, missed investment opportunity, liquidation, or the like, it represents a cost.<sup>71</sup> Because it is rooted in information asymmetry, it is thus yet another initial cost of the same.

The second relevant avoidance cost occurs when passive investors allocate resources toward transacting without at least some of the spread and/or market-movement costs associated with information asymmetry. Here, the investor, directly or indirectly, has avoided these costs not by omitting to trade, but instead by allocating resources toward, for example, extensive search for a true counterparty who is willing to trade at the midpoint of the reigning bid–ask spread.<sup>72</sup>

68 See *ibid.*

69 See *ibid.*

70 Eg, Glosten and Putnins (n 10) 19–20; Spindler (n 11) 112 (‘Precaution costs could also include abstaining from the market altogether, in the face of expropriation by informed traders; the investor gives up the benefits of investing in return for not being expropriated by those better informed.’); *ibid* 81, n76 (‘One might suppose that, at the very least, uninformed investors can abstain from entering the market altogether, which they will tend to do if they find themselves systematically expropriated by better-informed traders.’).

71 My focus in this article is on well-distributive effects specific to passive investors. But it is worth noting that avoidance costs impede voluntary trade, and thus represent a welfare cost for society. See n 70; eg, Glosten and Putnins (n 10) 18 (‘The bid-ask spread causes welfare losses because uninformed agents will choose not to trade when their private valuation lies within the spread, resulting in lost gains from trade.’); *ibid* 5, 26.

72 Some might think that passive investors incur information-asymmetry costs in ways beyond those in focus in this Part, namely by trading directly opposite better-informed investors without market-maker intermediation. That type of trading no doubt takes place. Indeed, I turn to ‘liquidity-making trading’ in section V.1. In that section, I add more nuance to the framework set forth above. At this point, it should be sufficient to note that, absent the costs discussed above, on an expected basis, when these passive investors buy and sell in the market at current market prices, there is roughly a 50/50 chance that they overpay or underpay for the asset. See, eg, Manne (n 13) 115. Of course, *ex post*, the investor who trades opposite a better-informed investor would likely have rather traded at least a moment later. But before the trade, all else being equal and without thinking yet about the effects of posting a firm quote to the market when attempting to complete directional trading (as opposed to market making), the prospect of the next trade in the market sending prices up or down is, broadly speaking, 50/50. See Malkiel (n 4) 183–84; see also Share Price Accuracy (n 13) 335–36, 336 (stating that in an efficient market, ‘the possibility that the [ordinary] investor will end up *ex post* worse off . . . by paying too much for the share is no greater than the possibility that she will end up better off *ex post* by paying too little’); Mahoney (n 6) 642–43.

#### IV. THE SIZE OF THE INITIAL COSTS OF INTER-INVESTOR INFORMATION ASYMMETRY FOR PASSIVE INVESTORS

This section marshals evidence to present a picture of the size of the costs identified in section III. This picture, viewed in light of the market mechanisms detailed in section V, gives rise to my main conclusion and related insights previewed in section I and more fully articulated in section VI.

##### 1. The size of spread costs today

The most prominent measure of spread costs is provided by the size of market makers' inside spread.<sup>73</sup> For the vast majority of public-company trading, the average size of that spread nationwide is now remarkably small.

For the stocks of large-capitalization firms, the average inside spread has been a mere penny for some time<sup>74</sup>—only .04 per cent of the average share price of those stocks.<sup>75</sup> At the time of drafting, truly diversified investors have over 86 per cent of their investment money in the US stock market invested in these companies.<sup>76</sup> The average inside spread for the stocks of medium-sized public firms is only two cents per share—coming in at just .18 per cent of the average share price of those stocks.<sup>77</sup> Almost 11 per cent of the investment money in a well-diversified portfolio of the US public companies is allocated toward these companies.<sup>78</sup> (Approximately 97 per cent of a fully diversified investment in US public-company stocks is therefore allocated to these companies and larger ones described above.)

These inside quotes are typically for a significant number of shares today. For large-size public firms, the average combined value of the shares posted at the best bid and ask quotes nationwide for a stock is in the \$1,000,000 range.<sup>79</sup> For medium-sized public companies, the average is about \$120,000 in recent years.<sup>80</sup>

It follows that the costs imposed by the inside spread are very small today for at least those who trade in individual stocks in amounts that are lower than \$500,000 (for large-capitalization stocks) or \$60,000 (for medium-capitalization ones). For them, the prospect of buying or selling relatively large amounts of stock without having to go beyond the number of shares that are typically found at the best quoted prices in the market is a reality, and therefore so too is the prospect of buying or selling a large amount of stock without incurring significant spread costs.

73 This aspect of the spread provides the most prominent measure of information asymmetry costs more generally. See, eg, James J Angel, Lawrence E Harris and Chester S Spatt, 'Equity Trading in the 21st Century: An Update' (2015) 5 QJ Fin (March) 1, 36 (noting that the size of the spread 'is a traditional measure of market quality').

74 See, eg, *ibid* 4 ('The quoted spreads for the largest stocks remain at one cent.');

75 See, eg, CFA Institute, *Dark Pools, Internalization, and Equity Market Quality* (2012) 5, <[www.cfainstitute.org/-/media/documents/article/position-paper/dark-pools-internalization-equity-market-quality.ashx](http://www.cfainstitute.org/-/media/documents/article/position-paper/dark-pools-internalization-equity-market-quality.ashx)> accessed 28 July 2021.

76 See, eg, CFA Institute (n 74) 5.

77 See Vanguard Total Stock Market Exchange-Traded Fund Index, ETF.com (hereinafter 'VTI'), <[www.etf.com/VTI#fit](http://www.etf.com/VTI#fit)> (numbers are as of 21 June 2021).

78 CFA Institute (n 74) 5; Angel, Harris and Spatt (n 73) 4 fig 2.

79 VTI (n 76) (numbers are as of 21 June 2021).

80 See Angel, Harris and Spatt (n 73) 7 fig 7.

81 *Ibid* 6 fig 5.

The quantity of shares quoted at inside spreads today far surpasses the number demanded by at least retail-level investors who manage their own accounts. Only in exceptional cases will such retail investors want to buy more than the large amount quoted at inside spread prices.<sup>81</sup> In fact, virtually all individual, everyday investors are able fill their entire orders at prices that are at least as good as those embodied in the best prices quoted nationwide. Almost 100 per cent of their orders to transact on demand are routed to specialized off-exchange platforms where those orders are internalized.<sup>82</sup> When this happens, by law, the orders must receive prices that are at least as good as those reflected in the then-operative inside spread in the market.<sup>83</sup> And as a matter of practice, internalizing platforms generally improve on those prices.<sup>84</sup> About 23 per cent of all reported trading now consists of this type of internalization.<sup>85</sup>

The presence of this massive internalization at these prices indicates that at least non-institutional-size passive trading involves spread costs that are even smaller than they first appear. This is so for two related reasons. First, this internalization indicates that even the large number of shares quoted at inside-spread prices at exchanges provides a misleadingly *low* indication of the number of shares available at those prices in the market. Many more shares are effectively being quoted at those prices, albeit in an undisplayed fashion by internalizers.<sup>86</sup> Second, to the extent internalization is occurring at undisplayed prices that are *better than* those quoted on exchanges, inside spreads today are even smaller than they first appear. This is because the already low average inside-spread prices noted above track only displayed bids and asks. Yet, the market also contains undisplayed quotes on both exchange and off-exchange trading platforms (including those that ‘internalize’ individual-investor trades).<sup>87</sup>

Moreover, market makers quote inferior prices in response to more than just information asymmetry. Recall that market-maker spreads are a product of the costs they incur to supply their intermediation services.<sup>88</sup> Supplying those services in securities

81 See nn 79–80 and accompanying text.

82 Rule 606 of the SEC’s Regulation National Market System requires brokers to share information about where they route their customers’ orders. Regulation National Market System, 17 CFR § 242.606 (2017). As the SEC has noted, a review of the Rule 606 disclosures of the eight largest retail-level brokerage houses reveals that each routes virtually all of its orders mentioned in the text to internalizing platforms. See Market Structure Concept Release (n 4) 3600.

83 See Regulation National Market System, 17 CFR § 242.611 (2017). This rule essentially bars non-displaying trading platforms (among others) from transacting orders at prices that ‘trade through’ the best displayed ones then quoted in the market. In other words, trading platforms generally cannot execute orders at prices that are inferior to those best ones quoted openly in the market. Because internalizing platforms do not display their quotes, they can never execute orders at such inferior prices.

84 Eg, Fox, Glosten and Rauterberg (n 46) 288; TD AMERITRADE, Comment Letter on Market Structure Concept Release 9 (21 April 2010) <[www.sec.gov/comments/s7-02-10/s70210-124.pdf](http://www.sec.gov/comments/s7-02-10/s70210-124.pdf)> accessed 28 July 2021 (noting that TD AMERITRADE provides retail investors ‘price improvement to the best displayed price’).

85 See Angel, Harris and Spatt (n 73) 16, 16 fig 19.

86 See, eg, Market Structure Concept Release (n 4) 3599 (‘The internalized executions of broker-dealers . . . primarily reflect liquidity that is not included in the consolidated quote data.’).

87 See section V.1 (discussing hidden quotes).

88 See sections IV.1, IV.2.

markets involves costs beyond just those traceable to information asymmetry.<sup>89</sup> Market makers respond to such additional costs in the same general way in which they respond to those relating to information asymmetry: they increase the size of their spreads.<sup>90</sup> Thus, not even all of the small spread costs described above are due to information asymmetry.

Still, on their own, none of the data points presented thus far forecloses the possibility that the spread costs attributable to information asymmetry are a problem *for passive investors that transact in very large quantities*. We know that market makers are only willing to quote so many shares at inside-spread prices.<sup>91</sup> Investors seeking to buy or sell a quantity of shares that surpasses the number of shares quoted at those prices can therefore expect to incur more than a half-penny or penny spread cost. This matters for both individual passive investors who invest through large investment-fund intermediaries and large institutional passive investors transacting on their own behalf. This share-quantity caveat limits my ability to conclude with certainty that the spread costs passive investors pay today are overall small. However, section V shows why the information-asymmetry concern for even those investors should be very limited today.

## 2. The size of market-movement costs today

It is far harder to nail down the costs passive investors incur as a result of the price impact of their own trading in a market with heterogeneously informed investors. Still, evidence with respect to the magnitude of these market-movement costs is available. That evidence indicates that these costs too are limited.

Private databases track execution costs for institutions that split up their overall trading interest into a series of smaller trades to be executed over time. Access to one such database has provided a window into the impact of a single large institutional trader's buying or selling on market prices when that buying or selling is stretched over a relatively prolonged timeframe (for example, four trading days rather than four seconds, minutes, or even hours).<sup>92</sup> With this data, economists have looked at the average execution price for the entire larger trade that takes place over that span. One study was able to compare that average price to the one that prevailed in the market when the first part of the trade was executed—thereby revealing to some extent just how much prices changed due to the pressure an institution's own trading places on them.<sup>93</sup>

Of course, market prices between the first and last trade in such a series jump around based on factors other than merely the pressure placed on them by large buying or selling by a single institution. The largest such factor is likely the revelation of new

89 See, eg, Madhavan (n 50) 205–58. The main other cost incurred by market makers relates to the inventory risk associated with holding assets with values that can vary widely. See *ibid* 219; Hong Liu and Yajun Wang, 'Market Making with Asymmetric Information and Inventory Risk' (2016) 163 *J Econ Theory* 73, 78.

90 See section III.1.

91 See section III.1.

92 See Angel, Harris and Spatt (n 73) 17 (focusing on data that allows for an 'estimate [of] the price-impact costs associated with executing large orders that have been split into small parts for execution').

93 See *ibid* 17–18.

information,<sup>94</sup> whether through information-driven investing that takes place quietly in the market or through that following a public announcement. But in an efficient market, movement due to such factors will, on average, cancel itself out.<sup>95</sup> In other words, as the variance in securities prices associated with other factors during these periods cancels itself out in this way,<sup>96</sup> upward price impact traceable to the large, sustained buying of any single investor and downward impact due to the selling of the same is revealed. When tracking thousands upon thousands of such examples of large net buying or selling over these periods, the average movement in market prices that occurs thus evinces much about the price impact of the trading at issue—and hence the size of market-movement costs the investors behind it incur.

The above-referenced study found these costs to be relatively limited. The average market-movement cost for a trade of a million shares in a \$30-per-share stock (thus, a \$30 million trade) came in at under .04 per cent of the trade's value.<sup>97</sup> Those costs are the same whether it is net buying or selling involved.<sup>98</sup> Accordingly, even large-sized, institutional investors can buy and sell significant quantities of public-company shares without being subjected to acute market-movement costs.

A closer look at this data shows that it actually *overstates* the size of market-movement costs for passive investors. The data is based on *all* large institutional trading, and not just that attributable to passive investors. This evidence therefore includes the impact of information-driven trades. Despite anonymity in the market, institutional-size trading by *superiorly informed investors* is likely to be accompanied by larger movements in market prices per share traded. This is because, formal anonymity aside, that trading may be more easily detected by market makers (and other market participants) than institutional-size trading of even the same size based on other motivations (namely, diversification). After all, the underlying information will often get revealed through more than just one investor's buying and selling within the relevant period. If one institution has market-moving information, others will often have it too, meaning that more shares will be traded in the period at issue—and thus more pronounced price impacts will be present.

In the end, despite the above window into the size of market-movement costs today, those costs are not the subject of widespread, publicly available study, and are thus not clear.<sup>99</sup> However, it is worth noting that market-movement costs are, for the most part,

94 See section III.2.

95 See generally Eugene F Fama, 'The Behavior of Stock-Market Prices' (1965) 38 J Bus 34 (offering one of the seminal descriptions of the 'random walk' concept: all else being equal, stock prices reflect consensus views of the import of at least all publicly available information, and are therefore more or less just as likely to move up as down over the next period).

96 See n 95 and accompanying text.

97 See Angel, Harris and Spatt (n 73) 17 fig 20.

98 See *ibid*.

99 See, eg, Market Structure Concept Release (n 4) 3604–05 ('Most of the Commission's past analyses of market performance have focused on the execution of smaller orders (for example, less than 10,000 shares), rather than attempting to measure the overall transaction costs of institutional investors to execute large orders (for example, greater than 100,000 shares). Measuring the transaction costs of institutional investors that need to trade in large size can be extremely complex . . . Direct measures of large order transaction costs typically require access to institutional order data that is not publicly available.').

almost entirely irrelevant to individuals who trade directly. Very few small investors will trade a number of shares that surpasses that quoted at inside spreads.<sup>100</sup> And virtually all individual, direct-trading investors have their orders to trade on demand internalized at inside-spread prices or better.<sup>101</sup> For these reasons, smaller passive investing lacks the type of net buying or selling over time that would trigger even the unclear, yet apparently limited, market-movement costs summarized in this section.

### 3. The size of avoidance costs today

Measuring avoidance costs is a project—if possible today at all—that is beyond the scope of this article. That is because these costs are far less tangible and accessible than spread and market-movement costs. But the close examination of the market found above reveals something important about the extent of these costs: the size of avoidance costs is inextricably tied to the size of the spread and market-movement costs. When spread and market-movement costs are larger, passive investors will be more likely to seek to trade absent them or stop pursuit of the contemplated trade (or even sit out the larger game altogether).<sup>102</sup> When spread and market-movement costs are smaller, the opposite is true. What is important to recognize here is therefore that sections IV.1 and IV.2, when viewed together with section V, demonstrate that both spread and market-movement costs are very limited for passive investors today.

## V. CONSIDERING THE SIZE OF THE COSTS FOR PASSIVE INVESTORS IN LIGHT OF MARKET MECHANISMS

Four main market mechanisms significantly reduce the extent to which passive investors incur the costs identified in section III and further detailed in section IV. These mechanisms are encompassed in the ability to engage in liquidity-making trading, piecemeal trading, block trading, and information-asymmetry forecasting.<sup>103</sup>

### 1. Liquidity-making trading

The ability to complete trades by making liquidity (rather than having to take liquidity opposite market-maker quotes) reduces spread costs for passive investors. When investors are able to complete their trading in this fashion,<sup>104</sup> they buy at bid prices and

100 See section IV.1.

101 See n 82 & 83 and accompanying text.

102 See *ibid*; see also George Constantinides, 'Capital Market Equilibrium with Transaction Costs' (1986) 94 *J Pol Econ* 842, 859 ('[I]nvestors accommodate transaction costs by drastically reducing the frequency and volume of trade.').

103 Other market mechanisms further limit the extent to which passive investors incur these costs. For example, large mutual fund families (eg, Fidelity) are known to net out their trading within the family before going to the outside market, thereby sidestepping both spread and market-movement costs (and thus avoidance costs) on those transfers from one Fidelity fund to another. For present purposes, the mechanisms discussed in the text suffice.

104 Passive investors can generally attempt to trade in this fashion in today's market. Securities exchanges must allow brokers or dealers to become exchange members. See Exchange Act § 6(b)(2), 15 USC § 78f(b)(2). All such exchanges must post bid and ask quotes submitted by their members. See Regulation National Market System, 17 CFR § 242.604 (2017). Off-exchange trading platforms generally operate in the same manner as exchanges (see n 136) and are thus happy to offer the same arrangement *sua sponte*.

sell at ask ones rather than ‘crossing the spread’ to buy against ask quotes or sell opposite the bid quotes.<sup>105</sup>

Thinking through in detail the full import of this avoidance of spread costs introduces more complexity than is helpful for the current study. But it is worth briefly looking at the dynamics at play here.<sup>106</sup> To the extent that the spread set by professional market makers is perfectly competitive, then diversification-driven buying through a quote placed at the best bid price in the market likely incorporates the expected costs of adding liquidity to the market. The main such cost is that associated with adverse selection of that quote at the hands of a better-informed seller in, for example, one out of every 10 trades.<sup>107</sup> Relatedly, posting a quote to the market is not free because it provides an option to the rest of the market that will be exercised if the price moves against the quote before the investor behind it can cancel it.

Thus, imagine that the best bid quote in the market is \$10.48 and the best ask quote is \$10.52 (around a market value of \$10.50). The best way to view a scenario in which there is a purchase by a passive investor who places a bid quote at \$10.48 is perhaps as a scenario in which this investor has been able to negate spread costs traceable to information asymmetry. And perhaps the best way to view a purchase via a quote at, for example, \$10.49 by this same investor would be to see the liquidity-making trading as negating only part of those costs.

However, to the extent that the spread set by market makers is not perfectly competitive, or to the extent that the costs of information asymmetry for a liquidity-making passive investor are lower than those of a market maker, passive investors can gain from the presence of better-informed investors.<sup>108</sup> In so far as the spread is traceable to information asymmetry,<sup>109</sup> liquidity-making investors would thus receive a *benefit* from information asymmetry when they are able to transact at the best prices quoted in the market. This possible benefit to passive investors is distinct from the one about which I recently theorized,<sup>110</sup> and would exist even if that theorized benefit does not.

This is not to say that information asymmetry, on the whole, will always be beneficial for all of these investors (*qua* investors) in even the above-noted scenarios. This is

105 The ability to trade in this way was one of the five objectives of Congress’s 1975 amendments to the Exchange Act. See Section 11A, 15 USC § 78k-1 (‘It is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure . . . (v) an opportunity . . . for investors’ orders to be executed without the participation of a dealer.’).

106 I thank Joshua Mitts for thinking through this additional level of nuance with me.

107 See Glosten and Milgrom (n 52).

108 See James Angel, ‘Comment Letter on Transaction Fee Pilot 2’ (3 August 2018) (‘The bid-ask spread is the price of immediacy, and it is a mistake to think that a smaller spread is always better. The spread is a cost to those who demand immediacy, but it is a reward to those who supply it (including retail customers placing limit orders as well as professional market makers).’).

109 See Madhavan (n 50) (focusing on how spread costs are generally driven by more than just information asymmetry).

110 See Kevin S. Haeberle, *Information Asymmetry and the Protection of Ordinary Investors*, 53 UC Davis L. Rev. 145 (2019) (n 15).

because these liquidity-supplying investors face the risk of non-execution.<sup>111</sup> My assertion is thus merely that there can be an information-asymmetry benefit for investors when they transact via making liquidity, and that any such benefit should therefore be considered when thinking about the scope of the costs of information asymmetry for passive investors.

The story on this front gets even more nuanced. Investors can place *hidden* bid and ask quotes at prices that are equal to or better than the best ones displayed in the market. Hidden quotes are still firm offers to buy and sell. But, by definition, they cannot be seen by other market participants.<sup>112</sup> Notably, these quotes can even be placed at the midpoint of the inside spread then quoted on an exchange. (Such hidden quotes are sometimes referred to as ‘midpoint liquidity orders’.)

Moreover, hidden liquidity-making trading can significantly reduce the market-movement costs investors incur. Net buying and selling *transactions* are not the only things that lead to changes in market prices.<sup>113</sup> A large number of shares posted at bid prices relative to that posted at ask ones (or vice versa) can result in movements in market values and prices—even without transactions occurring against them.<sup>114</sup> This phenomenon is in part traceable to the fact that information-driven investors too can attempt to buy and sell by making liquidity to the rest of the market. Consequently, market makers would have good reason to move their prices up if they saw large buying interest at bid quotes in the market relative to that associated with ask quotes, or down in the opposite situation. Hidden liquidity-making trading can help conceal such buying or selling interest—and therefore can be used by investors to mitigate market-movement costs.

Lastly, the ability to engage in *hidden* liquidity-making trading at prices that are halfway between the best ones quoted in the market provides even greater market-movement-cost mitigation. When an investor places a hidden quote at the midpoint of the spread and an opposite-side investor transacts against it, all that is reported to the market is a transaction at the midpoint price. For this reason, other market participants have no signal as to net buying or selling in the market. Instead, the zero-sum game of secondary-market trading has simply witnessed a change in ownership of shares, along with an indication that a transaction took place at a price that generally reflects a stock’s then-current market value. For these reasons, inferences as to the likelihood of underlying information motivating the trade will be more limited, meaning that—all else being equal—less (if any) market-price movement will be triggered by this type of liquidity-making trading.

111 Eg, Fox, Glosten and Rauterberg (n 46) 23 (noting the risk market prices moving away from the quotes posted by liquidity-making investors); *ibid* (‘Market orders provide speed and certainty of execution. Limit orders may obtain a better price but are less certain to execute.’).

112 Much trading on off-exchange platforms is generally hidden in this way. See Kevin S Haeberle, ‘Discrimination Platforms’ (2017) 42 *J Corp L* 809, 814–15.

113 See section III.2 (discussing the relationship between net trading activity and movements in market prices).

114 See, eg, Fox, Glosten and Rauterberg (n 46) 70 (noting that ‘[e]mpirical . . . analyses of intraday changes in quotes and in the prices of executed transactions consistently show that they respond to the pattern of buy and sell orders’).

About 11 to 14 per cent of all trades on exchanges involve hidden quotes.<sup>115</sup> The portion of these hidden quotes that are placed at the midpoint of the bid–ask spread is no doubt high as well—as evidenced by data published by exchanges.<sup>116</sup>

Passive investors surely avail themselves of all of these benefits of liquidity-making trading today—and do so on large scale. These investors are not trading based a depreciating informational asset, but instead merely accumulating a basket of stocks to track the market (or some portion thereof), balancing that basket, and/or liquidating the same.<sup>117</sup>

Still, it is worth noting that this mechanism is likely relevant only for passive investors who trade through investment–fund intermediaries and for institutional investors who trade on their own behalf.<sup>118</sup> Today, both market makers and sophisticated liquidity-making directional traders use algorithms to post, cancel, and modify their quotes at striking speeds.<sup>119</sup> Those algorithms are complemented by ‘co-location’ and related advantages that decrease the latency between their computers and those of trading platforms where prices are changing by the microsecond.<sup>120</sup> All the while, the redis-seminated pricing information delivered by the likes of e\*Trade and Google Finance is at least a second old by the time it lands on the average investor’s laptop. That delay represents eons in today’s computerized market. Access to execution services that might otherwise solve this problem is likely to be unavailable to the vast majority of these investors.<sup>121</sup> Consequently, there is a good chance that these individuals are generally flying at least half blind when trying to complete their trading via making liquidity to the market. Without the ability to reference the actual prices that reign in the market (let alone the ability to cancel and modify their quotes within a tiny fraction of a second of changes to those prices), it is hard to see how this type of liquidity-making trading would help this one subset of investors.<sup>122</sup>

115 See SEC, Market Structure Research: ‘Hidden Volume Ratios’ (9 October 2013), <[www.sec.gov/marketstructure/research/highlight-2013-02.html#\\_YA3JzjNKjOQ](http://www.sec.gov/marketstructure/research/highlight-2013-02.html#_YA3JzjNKjOQ)> accessed 28 July 2021.

116 See, eg, NASDAQ, Midpoint Liquidity (2018), <<https://www.nasdaqtrader.com/content/productservices/trading/midpointpeg.pdf>> accessed 28 July 2021 (advertising that ‘Nasdaq has [hidden] midpoint liquidity for a large portion of the day in high volume securities’ and listing a number of securities for which hidden quotes at the midpoint of the bid–ask spread are posted for well over half of the trading day).

117 See n 4; eg, Market Structure Concept Release (n 4) 3602 (noting that brokers commonly offer algorithms to help investors reduce spread- and market-movement costs and that ‘[s]uch algorithms . . . may be “passive,” and submit resting orders at one or more trading centers and await executions at favorable prices’).

118 But see Angel (n 108) 2 (asserting that the spread ‘is a reward to those who supply [immediacy] (including retail customers placing limit orders as well as professional market makers)’; see discussion at n 122).

119 Many institutional investors may not have in-house access to the speedy systems that allow for this behaviour. But they are able to obtain that access via outside providers of trade-execution services. Well-known brokers working in this space include ITG, RBS, and Goldman Sachs (specifically, the latter two’s Execution Services divisions).

120 Market Structure Concept Release (n 4).

121 The SEC has formally raised this access issue. See Market Structure Concept Release (n 4) 3603; see also Notice of Proposed NYSE Rule and Request for Comment Regarding Market Fragmentation, Exchange Act Release No 42450, 65 Fed Reg 10,577, 10,581 n 26 (28 February 2000).

122 To the extent retail-level investors can submit midpoint liquidity orders through their brokerage services, they can still be helped by engaging in liquidity-making trading. After all, no matter what the current market

## 2. Piecemeal trading

For liquidity takers, chopping up larger ‘parent’ trades into a series of smaller ‘children’ helps ensure trade execution at (or near) the prices associated with inside-spread quotes. Passive investors can generally afford to be relatively patient.<sup>123</sup> And current inside-spread prices barely diverge from market values for the stocks of large and medium-sized companies today.<sup>124</sup> Further, those prices now have a large number of shares sitting behind them.<sup>125</sup> Thus, at least as a matter of theory, piecemeal trading in today’s market can be quite effective at avoiding spread costs for a large part of the passive-investor universe, including even retail-level ones who trade in size large enough to even require use of this tool.

The story is slightly more complicated when it comes to the relevant reduction in market-movement costs for these investors. All else being equal, small trades move market prices less than large ones.<sup>126</sup> But algorithms can detect net buying or selling activity over time just as easily as men in colour-coded jackets could see institutional-size buying or selling happening on the floor of the New York Stock Exchange (NYSE) not too long ago. Thus, if many children orders of a single parent order are condensed into even a relatively circumscribed period, those orders will often lead to observable net buying or selling activity. Sensing that activity in the market, market makers will move their estimates of value and corresponding prices up or down, respectively, in order to protect themselves against the chances that the trading was information driven.<sup>127</sup> At a minimum, to the extent the value and price changes were caused by passive-investor trading, the investor behind that trading incurs market-movement costs.<sup>128</sup>

However, piecemeal trading helps reduce the extent to which even this type of large trading moves market prices. Computerized market makers do not have a monopoly on sophisticated algorithms. Institutional investors, including index funds, also employ programmers, whether directly or through their outside service providers.<sup>129</sup> The programs they use are skilled at burying their trading among the more or less 50/50 buying and selling activity of fellow passive investors that takes place over time. (One way to accomplish this is by purchasing or selling via *liquidity-making* piecemeal trading in a patient manner.<sup>130</sup>)

value and spread for a stock, the midpoint generally represents a stock’s current market value. See section III.1.

123 See section III.2.

124 See section IV.1.

125 See section IV.1.

126 See section IV.2.

127 See section III.2.

128 See *ibid.*

129 The same well-known brokers as mentioned in n 119 help investment-fund clients accomplish their trading piecemeal through proprietary trading algorithms. Additional firms operate in this area as well. See, eg, Angel, Harris and Spatt (n 73) 17 (discussing piecemeal trading and noting a company (Ancerno) that ‘provides transaction cost analysis services to various investment sponsors, managers, and brokers’).

130 See section III.1; Market Structure Concept Release (n 4) 3602 (noting that many brokers offer algorithms for piecemeal trading and that those algorithms ‘may be “passive,” and submit resting orders at one or more trading centers and await executions at favorable prices’).

It is well known that institutional investors (including both investment-fund intermediaries and institutional investors pursuing trades on their own behalf) are in fact transacting via piecemeal trades—and thus limiting the spread and market-movement costs they incur.<sup>131</sup> Moreover, this activity is evidenced by the average number of shares transacted in a trade in the market today: 220.<sup>132</sup> These facts must be viewed along with the computerization of the stock market, which removed practical impediments to sending sets of, for example, 220 shares to the floor of the exchange hundreds—if not thousands—of times to complete a large parent order.<sup>133</sup>

### 3. Block trading

To the extent that block trades<sup>134</sup> take place at prices that reflect market values rather than prices spread out from the same, they involve no spread costs for either side of each trade. And to the extent that these types of trades involve mere swapping of shares between two or more large investors at a price that tracks current market values, there is no observable net buying or selling that would cause prices to move. For that reason, like with liquidity-making trades at the midpoint of the bid–ask spread,<sup>135</sup> market-movement costs would be avoided as well.

Block trading is facilitated in a number of ways in today's market. Pre-trade transparency aside, most 'dark pools' operate much like exchanges: These alternative trading systems simply host continuous auctions in which market makers and liquidity-making investors post relatively small quotes against which liquidity-taking investors transact.<sup>136</sup> But a handful of highly specialized off-exchange platforms operate in a

131 The website of one well-known broker-dealer advertises its 'proprietary and powerful algorithmic trading suite'. A review of the nine advertised algorithmic approaches in that suite demonstrates a focus on piecemeal trading to reduce spread and market-movement costs. See Electronic Trading, 'RBC Cap Mkts.' <<https://www.rbccm.com/en/expertise/electronic-trading.page>> accessed 28 July 2021; see also Angel, Harris and Spatt (n 73) 18 n 2 ('The typical large order [in a specific institutional-trading database] was filled over three trading days.');

132 See, eg, Angel, Harris and Spatt (n 73) 11 fig 12 (showing the average number of shares per trade for NYSE-listed firms from 2004 to 2013). See *ibid* 15 fig 17.

133 Eg, *ibid* 13 (noting the 'increased use of algorithmic trading strategies that break large orders into many smaller ones'); *ibid* 18–19 ('We believe that the reduction in large order transaction costs are mainly due to the development of electronic algorithms for executing large orders, to the development of dark pool order matching systems that protect large traders from front-running while they search for liquidity, and to a general increase in market liquidity due to the growth of electronic trading which has greatly reduced the physical and administrative costs of trading.');

134 The law defines block trades as those involving either over 10,000 shares or over \$200,000 of market value. Regulation National Market System, 17 CFR § 242.600(b)(9) (2017). But in a market with an average trade size in the 200-share range, conventional usage of the term includes any decent-sized trade. Although not my focus here, block trades also include trades where institutions temporarily act as a dealer, taking a large number of shares into inventory and then looking to distribute them to institutional investors.

135 See section V.1.

136 Eg, Regulation of Exchanges and Alternative Trading Systems, Exchange Act Release No 34-40760, 63 Fed Reg 70,844, 70,845 (1998) ('Market participants have developed a variety of alternative trading systems that furnish services traditionally provided solely by registered exchanges.');

distinct way, trying instead to bring together block traders to ‘cross’ their trades.<sup>137</sup> These platforms market their services to large investors and their agents, encouraging them to post blocks along with an indication of whether they are buying or selling. When an opposite-side block arrives at the trading platform, the two transact against each other in a single trade at, for example, the current midpoint of the best bid and ask displayed nationwide.<sup>138</sup> Trade reporting from the off-exchange platforms that match large traders with each other shows that they host a significant amount of trading.<sup>139</sup>

Sophisticated investors (including those trading on behalf of a fund with passive-investor money or an institutional investor trading for its own account) are also free to find each other and enter into block trades on their own—all without the help of securities exchanges or even the off-exchange platforms considered significant enough to be regulated as ‘alternative trading systems’. Indeed, large passive investors are known to send out indications of interest to each other less formal trading networks. For these investors, coming up with an agreed upon price for their transaction is generally not difficult. Before the large trade, each side will often be amenable to a proxy for the current market value, such as the volume-weighted-average price (VWAP) on the day or week of the transaction, or the midpoint of the nationwide inside spread displayed at the moment of the trade.

#### 4. Information-asymmetry forecasting

Savvy passive investors can predict (and avoid) heightened periods of information asymmetry.<sup>140</sup> Whether the result of the well-publicized events or subtler market conditions, when these investors see information-asymmetry danger on the horizon, they can pause their non-time-sensitive buying and selling to avoid both the spread and market-movement costs.

The release of market-moving information is associated with heightened information asymmetry only for a brief moment in time.<sup>141</sup> And such releases are often

markets . . . These dark pools that primarily match smaller orders . . . execute more than 90% of dark pool trading volume.’)

137 See Market Structure Concept Release (n 4) 3599 (‘[S]ome dark pools, such as block crossing networks, offer specialized size discovery mechanisms that attempt to bring large buyers and sellers in the same NMS stock together anonymously and to facilitate a trade between them. The average size of these block crossing networks can be as high as 50,000 shares.’).

138 Eg, *ibid* 3600 n37 (‘A crossing system is, typically, one that allows participants to enter unpriced orders to buy and sell securities. Orders are crossed at specified times at a price derived from another market.’).

139 Two such well-known platforms are operated by broker-dealer firms are Liquidnet and POSIT. The latter’s block-trading platform reported, for example, 14,500,000 shares transacted in block trades per day in May 2018, with an average of 15,500 shares swapped per transaction during that period. ‘ITG Releases May 2018 U.S. Trading Volumes and Provides International Trading Commission Update’ *GlobeNewswire* (8 June 2018, 6:59 AM) <<https://www.globenewswire.com/news-release/2018/06/08/1518893/0/en/ITG-Releases-May-2018-U-S-Trading-Volumes-and-Provides-International-Trading-Commission-Update.html>> accessed 28 July 2021.

140 Less savvy passive investors (namely, retail-level ones) may be less able to wield this tool. See sources cited at n 121 and accompanying text.

141 See, eg, Kevin S Haerberle and M Todd Henderson, ‘Information-Dissemination Law: The Regulation of How Market-Moving Information Is Revealed’ (2016) 101 *Cornell L Rev* 1373 (examining the ordinary-investor effects of legal efforts geared at ensuring that new market-moving information is made available to all investors at the same exact time).

foreseeable. For example, the US Department of Labor releases key economic indicators at well-advertised times.<sup>142</sup> The same goes for other sources of similar data. The University of Michigan, for instance, has long released its Index of Consumer Sentiment every other Friday around 10:00 am.<sup>143</sup>

Similarly, these periods can also be detected from derivative signs, such as spikes in trading volume or net buying or selling in a period. Such signs can be indicative of a market that is in the midst of adjusting to new information. Information-asymmetry forecasting can be conducted on a more general level too. For example, market participants understand that information asymmetry is typically going to be higher during corporate earnings season than on the Friday before Labor Day Weekend.

Notably, market makers at times cease to provide their services when they expect to detect (or begin to detect) the trading associated with heightened information asymmetry. By taking the step of removing themselves from the market, they broadly protect themselves from incurring losses to better-informed investors in that period. Sophisticated passive investors may not have their finger as tightly on the pulse of the market as the high-frequency traders that make markets for a living. But they too can detect at least the more obvious signs of impending (or in-progress) information digestion in the market. Or, they can detect the departure of the market makers associated with the same. In either case, they can protect themselves from incurring abnormal spread and market-movement costs.

## VI. MAIN IMPLICATIONS

This section steps back from the close study of the market provided above to set forth my main positive conclusion, offer related thinking as to the road forward for securities law, and raise key questions that remain.

### 1. Marginal benefits that are marginal in another sense of the word as well

Taken together, the initial costs of information asymmetry for passive investors today presented in section III, their current size shown in section IV, and the effects of market mechanisms on the extent to which they are incurred examined in section V give rise to the inference that these costs are very much in check today. The benefits of reducing information asymmetry on the margin for passive investors are therefore very limited. In short, while the costs of information asymmetry for passive investors might be significant in the aggregate, it is hard to see significant larger passive-investor-based consumer-protection, fairness, and efficiency benefits<sup>144</sup> to be had from further reductions to that asymmetry.

142 Release Calendar: 2021, US Bureau Labor Stat (last updated 18 December 2020), <<https://www.bls.gov/schedule/2021/home.htm>> (displaying public calendar of the DOL's release schedule for economic indicators such as unemployment, producer and consumer price indices, exporter-importer price indices).

143 See Surveys of Consumers, Univ Mich <<http://www.sca.isr.umich.edu>> (announcing the next release of survey revisions for the second or fourth Friday of each month); see also Grace Xing Hu, Jun Pan and Jiang Wang, 'Early Peek Advantage? Efficient Price Discovery with Tiered Information Disclosure' (2017) 126 *J Fin Econ* 399, 404 (studying market behaviour around these well-advertised information releases).

144 See nn 5–7 and accompanying text (discussing the larger social costs thought to arise out of stock-market information asymmetry).

My conclusion is underscored by the fact that a penny spread for a stock is so small that the law, worried about de minimis competitive jostling among liquidity providers complicating market interactions without any offsetting material benefit, generally prohibits the quotation of spreads any smaller for public-company stocks.<sup>145</sup> This means that, even before considering the mitigating effects of the market mechanisms discussed in section V, the average spread quoted to passive investors today is, for over 86 per cent of the stocks in a fully diversified portfolio of US public-company stocks,<sup>146</sup> the one the SEC sets as the legal *minimum*. For medium-sized companies, and thus another almost 11 per cent of such a portfolio,<sup>147</sup> that average is but a single tick on the allowable price grid above that legal minimum. And even these spreads give a misleading large impression of the actual spread paid by passive investors today. For one thing, at least retail investors generally receive price improvement on that displayed spread thanks to undisplayed liquidity offered by internalizers.<sup>148</sup> For another, widespread use of hidden liquidity-making trading dictates that, for all investors, the displayed spread is larger than the actual spread that reigns in the market.<sup>149</sup> Moreover, both the presence of massive internalization and widespread hidden liquidity-making trading more generally dictate that both the displayed spread and the true spread have more shares quoted at them than is otherwise apparent.<sup>150</sup>

Of course, one must also consider the scope of the third type of initial cost at issue—what I labelled ‘avoidance costs’ in the taxonomy offered in section III. But the scope of those costs is inextricably tied to that of the first two types of costs in the taxonomy: spread and market-movement costs. While it is interesting to think about the avoidance costs incurred when passive investors use some of the market mechanisms discussed in section V, the benefits of using the core securities laws to reduce the costs passive investors incur to avoid spread and market-movement costs are unlikely to change my larger conclusion.

Importantly, all of the above thinking remains in force even if the conventional law and economics wisdom on the neutralizing effect of price discounts for investors<sup>151</sup> is wrong. The above study looked at the relevant costs of information asymmetry without considering the extent to which those discounts negate them. My main positive conclusion, stated in its entirety, is thus the one indicated at the outset of this article: even if law and economics thinking (including my own<sup>152</sup>) is wrong about the largesse of price discounts,<sup>153</sup> the reductions to stock market information asymmetry provided

145 Rule 612 of Regulation National Market System sets out an allowable price grid for suppliers of liquidity, generally requiring them to post quotes in increments of no less than a penny for public stocks. 17 CFR § 242.611 (2017).

146 VTI (n 76) (numbers are as of 21 June 2021).

147 Ibid.

148 See section IV.1 (discussing internalization for retail-level investors).

149 See section V.1.

150 Ibid; section IV.1.

151 See n 14 and accompanying text.

152 See n 15.

153 See nn 13–15 and accompanying text.

by the core securities laws confer, at best, very limited investor-protection benefits on the margin today.

Of course, it is still possible that the marginal investor-protection benefits at issue nevertheless surpass the costs necessary to achieve them. Making such a showing with respect to the costs side of the equation is no simple task. That should be clear from the above effort to understand and detail the benefits side of the equation. The very (at best) limited nature of the marginal investor-protection benefits of the reductions to information asymmetry provided by the core securities laws has now been detailed. Yet, to the best of my knowledge, no work has done the same with respect to the cost side of the ledger. Given the picture of the, at best, very limited scope of the marginal benefits painted above and this absence of knowledge on the costs necessary to generate those benefits, the new leadership at the SEC, among others, should be dubious of the idea that those benefits dominate those costs—let alone do so in a way that generates net benefits that are material.

## 2. The road forward for those in expansion mode

For those who want to expand the core securities laws, there are principled ways forward. However, given the very limited nature of the investor-protection benefits detailed above, any such expansions should be driven by distinct policy justifications. This is because it is hard to identify any other investor-protection concern that is best addressed through increased issuer disclosure, fraud, and insider trading law.

To be sure, mere perceptions of fairness matter. So too does confidence in the market. But each of those concerns is better dealt with through other lower cost means—namely, investor education. That approach also has the benefit of not indulging misleading impressions of the status quo. Articles like the instant one can perhaps play a role in that education—even if only in an indirect manner in most circumstances.

According to law and economics scholars, the main social benefits of the core securities laws relate to effects on stock-price accuracy and, in turn, the operation of the economy.<sup>154</sup> Thus, expansions of those laws may be desirable, for example, from a perspective focused on effects on sophisticated, information-driven investors. This expansion could even entail SEC rulemaking to improve the quality of things like climate-risk disclosure, to the extent such disclosure would improve price accuracy.

Along a similar vein, expansions to the core securities laws that lowered the cost of administering the law could be desirable. The overall desirability of such change is outside the scope of this article. But it is worth noting that it would vary depending on the precise change proposed. For example, broadening aspects of insider trading law<sup>155</sup> might lower the cost of prosecution in desirable ways, yet lack appeal if it nets not just socially undesirable insider trading, but also socially desirable fundamental-value trading. Or, expansion pursued by at least Congress might be justified based

154 Merritt B Fox, 'Shelf Registration, Integrated Disclosure, and Underwriter Due Diligence: An Economic Analysis' (1984) 70 *Va L Rev* 1005, 1013–14 (discussing the main social benefits of securities laws that enhance stock-price accuracy: better capital allocation and corporate governance); Marcel Kahan, 'Securities Laws and the Social Cost of "Inaccurate" Stock Prices' (1992) 41 *Duke LJ* 977, 979 (same).

155 See section II.3.

on a more general desire to have more information about firms and their impact on society—including their impact on climate change, political campaigns, and wealth inequality.

Further, my conclusions on the core securities laws and passive investors do not speak to the potential of expanding other areas of securities law to help those investors in meaningful ways. For one thing, as I have argued in the past, reforms to rules that structure stock trading can provide such help.<sup>156</sup> For another, rules imposing heightened duties on investment advisers and brokers likely do the same. Or, efforts to reduce the extent to which retirement savers incur investment-management fees<sup>157</sup> (including even index-fund ones<sup>158</sup>) might provide considerable investor-protection bang for the regulatory buck. Or perhaps even use of the core securities laws to regulate the primary market alone might do the same.

Lastly, it is at least theoretically possible that expansions to even the core securities laws could reduce information asymmetry in a way that provides meaningful investor protection in other important markets, beyond the stock market. In fact, corporate bonds make up a significant part of most diversified *investment* portfolios (as opposed to the diversified *equity-investment* portfolios in focus throughout this article). Yet, the present state of affairs in the corporate-bond market might be far from ideal for passive investors.<sup>159</sup> But given the results of the study at the heart of this article as well as the problems in focus in the work cited at the immediately preceding note, one would think that reforms that improved the structure of those markets would be far preferable to those that expanded issuer disclosure, fraud, and insider trading law.

### 3. Two interesting questions triggered by the main conclusion and related analysis

Although thinking about them in detail is beyond the scope of this article, it is worth closing by touching on two interesting questions triggered by the main conclusion and related analysis offered above.

156 See Kevin S. Haeberle, *Stock-Market Law and the Accuracy of Public Companies' Stock Prices*, 2015 Colum. B. L. Rev. 121 (arguing that trading-platform access rules that require exchanges to remain open to all investors, yet allow off-exchange platforms to restrict access to their trading systems, help passive investors, albeit at a cost to informed investors and, in turn, price accuracy).

157 Eg, Burton G Malkiel, 'Returns from Investing in Equity Mutual Funds 1971 to 1991' (1995) 50 J Fin 549 (documenting mutual-fund fees that, on average, surpass the added returns of active investment management); see also William F Sharpe, 'Asset Allocation: Management Style and Performance Measurement' (1992) 18 J Portfolio Mgmt 7; Jonathan B Berk and Jules H van Binsbergen, 'Measuring Skill in the Mutual Fund Industry' (2015) 118 J Fin Econ 1.

158 See David C Brown and Shaun W Davies, 'Off Target: On the Underperformance of Target-Date Funds' (8 October 2020) (unpublished manuscript), <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3707755](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3707755)> (documenting target date funds' lagging performance—after the consideration of fees and cash drag—relative to funds composed of as little as four low-cost ETFs that replicate the investment strategy of the target date funds).

159 See, eg, Lawrence Harris, *Transactions Costs, Trade Throughs, and Riskless Principal Trading in Corporate Bond Markets 2* (22 October 2015) (unpublished manuscript), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2661801](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2661801) (finding that the spread and related costs of trading corporate bonds are 'several times larger than costs for similar size trades in equity markets'); Amy K Edwards, Lawrence E Harris and Michael S Piwowar, 'Corporate Bond Market Transaction Costs and Transparency' (2007) 62 J Fin 1421.

First, to what extent are the very limited costs documented above the result of market forces rather than the core securities laws? A compelling story can be told in which market forces (namely, those associated with improvements in technology<sup>160</sup>) are primarily driving the low costs of information asymmetry detailed in this Article. Or, a related story can be told in which market dynamics along with the market-structure regulation envisioned in the Securities Act Amendments of 1975 and furthered by Regulation National Market System in 2005 are behind the limited costs.

If market forces (or even market forces along with market-structure regulation) are the primary driver of the low costs, then perhaps the current conversation about the core securities laws should be more about deregulation than expansion. For example, perhaps the ongoing, periodic disclosure regime could accomplish its investor-protection goals through semi-annual reporting rather than through the current quarterly system. However, even if deregulation made sense from an investor-protection perspective, it might make little sense from an efficiency one. And this article focuses only on the scope of investor-protection benefits of the core securities laws. Yet, those laws might do much to further more accurate stock pricing (on the margin and even beyond) and thus efficiency.<sup>161</sup> So this article, standing on its own, does not lead to the conclusion that the core securities laws should be cut back even if those laws are providing a sub-optimally high level of regulation from an investor-protection perspective today.

Still, it is worth noting that the question at hand ties into a larger debate on just how far from the margin are the effects of the core securities laws. To many, even without mandatory disclosure backed by credibility-improving fraud laws and limits on pre-disclosure trading, firms would have much incentive to share information with honesty while restricting their insiders from trading.<sup>162</sup> Such practices decrease the costs of stock-market information asymmetry and thus improve liquidity.<sup>163</sup> The end result is a lower cost of capital for firms.<sup>164</sup> Thus, one has to wonder how different the above picture of very limited initial costs of information asymmetry for passive investors would be even if the law were to be rolled back significantly. Indeed, one has to wonder about the size of the same costs for fundamental-value investors.

Second, despite an ever-increasing amount of scholarly work tethered to economic realities, to what extent are those realities nevertheless continuing to be subordinated

160 See Angel, Harris and Spatt (n 73) 18–19 (opining that the current high level of liquidity in the stock market is ‘due to the growth of electronic trading which has greatly reduced the physical and administrative costs of trading’).

161 See n 154 and accompanying text.

162 See Frank H Easterbrook and Daniel R Fischel, *The Economic Structure of Corporate Law* (Harvard University Press 1991) 276–314; Roberta Romano, *The Advantage of Competitive Federalism for Securities Regulation* (AEI 2002); Easterbrook and Fischel (n 13) 709–13; Roberta Romano, ‘Empowering Investors: A Market Approach to Securities Regulation’ (1998) 107 *Yale LJ* 2359, 2367 (noting empirical research on the power of capital markets to assess the impact of legal regimes on investment returns and the ‘entrepreneurial motivation [of firms] to reduce capital costs’); Mahoney (n 6) 647.

163 See Amihud and Mendelson (n 14) 246 (‘The higher yields required on higher-spread stocks give firms an incentive to increase the liquidity of their securities, thus reducing their opportunity cost of capital. Consequently, liquidity-increasing financial policies may increase the value of the firm.’); *ibid* (‘[I]nformation disclosures may be construed as investments in increased liquidity.’); *ibid* 224 (‘[L]iquidity-increasing financial policies can reduce the firm’s opportunity cost of capital . . .’).

164 See n 163.

to politics? Perhaps this article sheds more light on the answer to the question—in particular on the imperfect reality of political decision making that no doubt exists more generally even when it is carried out by intelligent decisionmakers with access to that scholarly work.

## **VII. CONCLUSION**

Conclusory statements instilling fear of information asymmetry are familiar. In many contexts, the fear is rational and existing safeguards are likely inadequate. Yet this article showed that, in at least the context of the core securities laws and the concern for investor protection, there is little to fear about the current level of stock-market information asymmetry. The article traced the larger social concerns at issue back to their roots in the market, and the resulting journey through the intricacies of contemporary stock trading revealed an important positive conclusion: even putting aside the conventional law and economics wisdom on price discounts, the investor-protection benefits of resisting stock-market information asymmetry on the margin are very limited today. I therefore argued that any expansion of the core securities laws focused on effects in the stock market should be justified by distinct concerns, and that any push to better serve and/or protect passive investors should be focused on other areas of securities law or other markets.