A NEW PERSPECTIVE ON COMMON OWNERSHIP: CONSIDERING THE ANTICOMPETITIVE EFFECTS OF THE BIG THREE'S ESG AGENDA

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INTRODUCTION

Investing giants are under attack for their efforts to further the Environmental, Social, and Governance ("ESG") movement. For example, in August of 2022, Texas Comptroller Glenn Hegar proclaimed that "[t]he environmental, social and corporate governance (ESG) movement has produced an opaque and perverse system in which some financial companies no longer make decisions in the best interest of their shareholders or their clients, but instead use their financial clout to push a social and political agenda shrouded in secrecy[.]"[1] Shortly thereafter, he and nineteen attorneys general across the country issued a letter to the CEOs of several powerful institutional investors, questioning whether their "'coordinated conduct with other financial institutions' . . . to demonetize the oil-and-gas industry raises potential antitrust issues."[2] The attorneys general have gone so far as to call for institutional investors' prosecution under Section 1 of the Sherman Act for their participation in a group boycott of the oil and gas industry.[3] Other scholars have gone further and suggested that investing giants be prosecuted under Section 7 of the Clayton Act, positing that "[w]e're now facing the original problem that Congress wrote American antitrust laws to address—coordinated ownership of everything by

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1. Press Release, Tex. Comptroller of Pub. Accts., *Comptroller Glenn Hegar Announces List of Financial Companies that Boycott Energy Companies*, (Aug. 24, 2022), https://comptroller.texas.gov/about/media-center/news/20220824-texas-comptroller-glenn-hegar-announces-list-of-financial-companies-that-boycott-energy-companies-1661267815099.

2. Dan Morenoff, *Break Up the ESG Investing Giants*, WALL ST. J. (Aug. 31, 2022, 3:10 PM), https://www.wsj.com/articles/break-up-the-esg-investing-giants-state-street-blackrock-vanguard-voting-ownership-big-three-competitor-antitrust-11661961693.

3. *See* Press Release, Tex. Comptroller of Pub. Accts., *supra* note 1. Their efforts were likely more politically motivated than legally sound because investing giants have not threatened to divest from or otherwise not do business with oil and gas firms who fail to incorporate ESG initiatives into their businesses. In fact, it would be nearly impossible for them to do so given their use of index funds. *See generally infra* Part I.B. In short, index funds allow a fund manager to purchase shares of companies across several different industries on a pre-established stock index. As a result, investing giants could not divest only from the oil and gas companies on an index. *Id.*

concentrated cliques pursuing their own priorities at the expense of the common good."[4] They specifically argue that this coordinated ownership—often called common ownership—"'*may* substantially lessen tension', or 'tend to create a monopoly'" in violation of federal antitrust laws.[5]

Both the attorneys generals concerned with the competitive effects of Big Three's ESG agenda on the oil and gas industry and the scholars worried about the harmful effects of common ownership in the institutional investor paradigm share the same concerns: the Big Three's coordinated use of shareholder voting power to pursue anticompetitive ends. As a result, this paper proposes an alternative approach that would address both the attorneys' general and common ownership skeptics' concerns. It argues that institutional investors' common ownership should not be independently condemned by antitrust law. Instead, antitrust scholars should use common ownership as part of the more traditional joint venture analyses to underscore the anticompetitive effects of specific ventures and to signal to triers of facts that they be viewed more antagonistically than those lacking common ownership. To the extent that investing giants' efforts to further an ESG constitutes a joint venture, their common ownership in competing industries, such as in the oil and gas industry, should cause the venture to be viewed as an unfriendly one requiring substantial procompetitive justifications to proceed.

The remainder of this paper proceeds in four parts. Part 1 will provide background on institutional investing and the rise of the three largest institutional investors—the "Big Three." Part 2 will discuss the theoretical and empirical debate about the possible anticompetitive effects of common ownership. Part 3 will engage in a thought experiment to illustrate the common ownership debate in the ESG context. Part 4 analyzes the Big Three's ESG efforts as a quasi-joint venture and uses their common ownership as a reason to treat the potential anticompetitive effects of such a venture with greater hostility than a similar venture without common ownership would.

I. UNDERSTANDING INSTITUTIONAL INVESTING

A. Antitrust Law's Historic Concern with Common Ownership

Antitrust law was first formed to combat the formation of trusts—the original form of common ownership.[6] A trust exists when a company's stockholders transfer control of their shares of a company to a set of trustees who manage those shares in exchange for a share of the company's total earnings.[7] Near the end of the nineteenth century, trusts dominated several

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4. *See* Morenoff, *supra* note 2.

5. Richard M. Steuer, *Incipiency*, 31 LOY. CONSUMER L. REV. 155, 169 (2019) (emphasis added).

6. *See* Eric A. Posner, Fiona M. Scott Morton & E. Glen Weyl, *A Proposal to Limit the Anticompetitive Power of Institutional Investors*, 81 ANTITRUST L.J. 669, 670 (2017).

7. *Sherman Anti-Trust Act (1890)*, NAT'L ARCHIVES, https://www.archives.gov/milestone-documents/sherman-anti-trust-act (last updated Mar. 15, 2022).

significant U.S. industries, including standard oil, steel, railroads, and tobacco.[8] Because a company's trustees held a majority interest in many competing companies within an industry and could make unilateral decisions about each company, the trusts effectively functioned like monopolies and suppressed competition.[9] As a result, Congress passed the 1890 Sherman Antitrust Act, which prohibited the formation of trusts and any "combination in restraint of trade."[10]

Firms, however, found creative ways to avoid liability under the Sherman Act. For example, while the Sherman Act initially prohibited the formation of trusts and other monopolistic firms, it did not explicitly prohibit firms from merging to form a monopolistic entity. To prevent firms from acquiring other firm's stock to create a monopoly, Congress passed the 1914 Clayton Act. The Clayton Act prohibited "the purchase of stock where the effect of such acquisition would substantially lessen competition . . . or tend to create a monopoly of any line of commerce."[11] Firms continued to avoid liability under the 1914 Clayton Act, however, by forming monopolies via the purchase of assets rather than stocks. As such, Congress amended the Clayton Act to prohibit the formation of monopolies via the purchase of stocks or assets.[12]

Today, there is growing concern about the emergence of a new trust system stemming from institutional investor's common ownership of competing firms in an industry that is "reminiscent of the early twentieth-century system of finance capital when business was under the control of tycoons such as J. P. Morgan and J. D. Rockefeller."[13] Unlike the trusts from the late nineteenth and early twentieth centuries, where trustees owned majority shares of several companies in a single industry, the new trust system today is driven by institutional investors—mutual funds, index funds, private equity groups, banks, hedge funds, real estate investment trusts, etc.—who buy and hold shares in companies across many different industries on behalf of millions of individuals.[14] When combined, those shares of millions of individual investors may give institutional investors the ability to exert strong influence over a corporation's business strategy.[15]

8. *See* Posner, Morton & Weyl, *supra* note 6, at 670.

9. *See Sherman Anti-Trust Act (1890)*, *supra* note 7.

10. Posner, Morton & Weyl, *supra* note 6, at 670.

11. *Id. See also* Clayton Act, ch. 323, § 7, 38 Stat. 730 (1914) (current version at 15 U.S.C. § 18).

12. Clayton Act, ch. 323, § 7, 38 Stat. 730 (1950) (current version at 15 U.S.C. § 18).

13. Fichtner, Heemskerk & Garcia-Bernardo, *Hidden Power of the Big Three? Passive Index Funds, Re-Concentration of Corporate Ownership, and New Financial Risk*, 19 BUS. & POL. 298, 299 (2017).

14. Menesh S. Patel, *Common Ownership, Institutional Investors, and Antitrust*, 82 ANTITRUST L.J. 279, 284 (2018).

15. Jenny Luna, *The Biggest Antitrust Story You've Never Heard*, STAN. GRAD. SCH. OF BUS. (Aug. 6, 2018), https://www.gsb.stanford.edu/insights/biggest-antitrust-story-youve-never-heard.

B. History of Institutional Investing and Emergence of Passively Managed Funds

Institutional Investing has existed since the 1920s. At that time, investing firms such as State Street allowed fund managers—a version of a trustee—to invest their customer's money into a diversified portfolio of stocks and bonds known as mutual funds (or pension funds or insurance funds).[16] This required the fund manager to be "active" and purchase large blocks of stock in specific industries that they believed would outperform the market.[17] Unlike the trustees from the late nineteen century, mutual fund managers held concentrated ownership without governance control.[18] They rarely exerted influence on a company's corporate governance by voting at annual shareholder meetings. When the result of a shareholder vote was unsatisfactory, mutual fund managers simply divested their shares and "exit[ed]."[19]

In the 1970s, however, there was a dramatic shift away from actively managed mutual funds towards passively managed ones called index funds.[20] Index funds allow a fund manager to purchase shares of companies across several different industries to replicate/mimic pre-established stock indices. In other words, a fund manager could purchase shares of hundreds of companies from a pre-set index (e.g., the S&P 500) with relatively low overhead costs.[21] Unlike active mutual fund managers, passive fund managers do not purchase shares in companies that they believe will individually outperform the market; instead, they aim to replicate the group performance of all the businesses in the pre-set index. They could, in theory, hold these stocks forever—or at least until the stock index changes—regardless of their satisfaction with the corporate governance of the company.[22] As a result, unlike the more active mutual fund managers, passive index fund managers are less likely to exit an investment and more likely to unitize their voting power to enact governance change.[23] In fact, sixty-three percent of passive institutional investors admitted that they engaged

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16. Jan Fichtner, *The Rise of Institutional Investors*, *in* THE ROUTLEDGE INTERNATIONAL HANDBOOK OF FINANCIALIZATION 265–66 (2020).

17. *See* Fichtner, Heemskerk & Garcia-Bernardo, *supra* note 13, at 299.

18. *Id.*

19. *Id. See also* Gerald F. Davis, *A New Finance Capitalism? Mutual Funds and Ownership Re-Concentration in the United States*, 5 EUR. MGMT. REV. 11, 20 (2008) (suggesting that mutual fund managers utilize an "exit" strategy rather than a voice strategy because (1) they are often "insiders;" (2) their size creates a risk of conflicts of interests; and (3) voting often alienates clients).

20. *See* Fichtner, Heemskerk & Garcia-Bernardo, *supra* note 13, at 271.

21. *See* Posner, Morton & Weyl, *supra* note 6, at 673.

22. *See* Fichtner, Heemskerk & Garcia-Bernardo, *supra* note 13, at 300.

23. *See* Einer Elhauge, *Horizontal Shareholding*, 129 HARV. L. REV. 1267, 1305–09 (2016) ("[B]ecause passive investment strategies prevent threats of 'exit,' they give institutional investors with such strategies even more incentives to focus on exercising 'voice.'"). *See also* Fichtner, Heemskerk & Garcia-Bernardo, *supra* note 13, at 300 ("'In the past, some have mistakenly assumed that our predominantly passive management style suggests a passive attitude with respect to corporate governance. Nothing could be further from the truth.' In a similar vein . . . CEO and Chairman of BlackRock writes in a letter to all S&P 500 CEOs that he requires them to engage with the long-term providers of capital, i.e., himself.").

in discussions with the corporate management of the companies in which they had ownership, and fifty-three percent of those investors indicated that had used shareholder voting to influence corporate management.[24] Some institutional investors have indicated that they seek to impose governance changes using "private engagements" or "meetings behind closed doors."[25] Only nineteen percent of passive institutional investors indicated that they made zero efforts to influence corporate management.[26]

C. The Emergence of the "Big Three"

Presently, institutional investors hold between seventy and eighty percent of the stock market.[27] Of those institutional investors, Vanguard, BlackRock, and State Street—the "Big Three"—emerge as the dominant entities. The Big Three collectively "constitute the single largest shareholder in at least forty percent of all listed companies in the United States. . . . When restricted to the . . . S&P 500 stock index, the Big Three combined constitute the largest owner in 438 of the 500 most important American corporations . . . ."[28] For example, the Big Three own a three to seven percent stake in competing companies within the airline, mobile phone, soft drink, aluminum, and breakfast food industries.[29] This places the Big Three—and particularly BlackRock and Vanguard—at the center of the corporate ownership debate because they have both breadth of ownership across several industries and depth of ownership (in terms of the number of shares) within those industries. This breadth and depth allow them to exert centralized power[30] over corporations via shareholder votes.[31]

The Big Three's power is especially concentrated because they "own each other and themselves."[32] For example, Vanguard's directors act as the trustees of its managed funds. This means that they appoint the fund managers who, in turn, vote to determine Vanguard's board and control Vanguard's own equity.[33]

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24. Elhauge, *supra* note 23, at 1307.

25. Fichtner, Heemskerk & Garcia-Bernardo, *supra* note 13, at 318.

26. Elhauge, *supra* note 23, at 1307. However, Elhauge notes that even where investors are purely passive, the fact that they hold stock in competing industries may be enough to lessen competition. *Id.* at 1308.

27. Posner, Morton & Weyl, *supra* note 6, at 673.

28. Fichtner, Heemskerk & Garcia-Bernardo,, *supra* note 13, at 313.

29. Posner, Morton & Weyl, *supra* note 6, at 727.

30. "Centralized" power means that BlackRock's, Vanguard's, and State Street's internal disagreement on proxy voting statements remains low. Fichtner, Heemskerk & Garcia-Bernardo, *supra* note 13, at 316–17. While this centralized voting strategy is important for exerting their shareholder votes effectively, it potentially conflicts with the fund managers' fiduciary duties. *See* John D. Morley, *Too Big to Be Activist*, 92 S. CAL. L. REV. 1407, 1412 (2019) (noting that "[i]f a BlackRock hedge fund invests in a company's equity at the same time that a BlackRock mutual fund invests in the company's debt, then any attempt by either fund to influence the company's affairs will damage the interests of the other fund").

31. Fichtner, Heemskerk & Garcia-Bernardo, *supra* note 13, at 316–17.

32. Morenoff, *supra* note 2.

33. *See id.*

It is interesting to note also that the Big Three have significant cross-ownership stakes in each other and have significant ownership stakes in many other institutional investors.[34]

This concentrated and circular ownership structure suggests that the Big Three are not—–or perhaps do not vote like—independent actors.[35] In fact, the most common proposals that the Big Three shareholders voted on in 2017 were those having to do with Environmental, Social, and Governance ("ESG") initiatives. Today, the Big Three are pursuing (or declaring to pursue) ESG initiatives in lockstep.[36] For example, until December 7, 2022, BlackRock, Vanguard, and State Street were signatories to the Net Zero Asset Managers (NZAM) initiative.[37] Upon joining NZAM, the Big Three promised:

> to push its portfolio companies in its actively managed funds to achieve this same objective, including by "implementing a stewardship and engagement strategy, with a clear escalation and voting policy, that is consistent with our ambition for all assets under management to achieve net zero emissions by 2050 or sooner.[38]

The Big Three's involvement in NZAM is more than empty promises. For example, after joining NZAM, BlackRock, Vanguard, and State Street leveraged their combined twenty-one percent ownership in Exxon Mobile to elect an ESG-minded director who claimed to have reduced Exxon's oil production targets.[39]

In sum, the scale of the Big Three's common ownership (in other institutional investors and competing companies across various industries) "raises the possibility of active efforts to coordinate the decisions of competitors by or through common owners."[40] Their efforts to do so in furtherance of ESG initiatives have raised antitrust flags.[41]

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34. *Id.* For example, Vanguard is the largest shareholder in BlackRock and in State Street, which suggests that it also "owns" BlackRock and State Street. BlackRock has a similar director/manager structure to Vanguard's and is the second largest shareholder in State Street. *Id.*

35. *See id.*

36. *See id.*

37. Courtney Vinopal, *Vanguard Splits from BlackRock over Major Climate Alliance as the Backlash to ESG Builds*, OBSERVER (Dec. 15, 2022, 2:32 PM), https://observer.com/2022/12/vanguard-splits-from-blackrock-over-major-climate-alliance-as-the-backlash-to-esg-builds/.

38. MINORITY STAFF OF S. COMM. ON BANKING, HOUS., AND URB. AFFS., 117th CONG., THE NEW EMPERORS: RESPONDING TO THE GROWING INFLUENCE OF THE BIG THREE ASSET MANAGERS 5 (Dec. 2022).

39. *Id.*

40. United States, Note, *Hearing on Common Ownership by Institutional Investors and Its Impact on Competition,* ORG. FOR ECON. COOP. AND DEV. (OECD) at 3 (Nov. 28, 2017), https://one.oecd.org/document/DAF/COMP/WD(2017)86/en/pdf.

41. *See generally* Morenoff, *supra* note 2.

II. THEORETICAL AND EMPIRICAL ANTITRUST BATTLEGROUND OF COMMON OWNERSHIP

Given their similarities to the later nineteenth and early twentieth-century trusts, it is not surprising that institutional investors' common ownership of competing industries has raised antitrust flags. There are good reasons to worry that when firms, such as BlackRock, own many of the competing companies in a given industry, competition will be reduced enough to warrant prosecution under Section 7 of the Clayton Act.[42] Additionally, there is "also the darker possibility that these managers will launch vast programs of political influence or destroy the delicate balance of power between shareholders and directors."[43] These concerns are heightened when the institutional investors own and influence each other such that they vote as conglomerates.[44] Nonetheless, some scholars are hesitant to dismantle the Big Three. They are particularly hopeful that common ownership could improve shareholder oversight,[45] and are generally skeptical that there is harm to competition. Even assuming there is significant harm to competition, there is concern that enforcement under the Clayton Act or a sweeping regulatory policy would cause more harm than good.[46]

A. Common Ownership Reduces Competition and Harms Consumers

Scholars have proposed that common ownership has two potentially harmful effects on competition: unilateral effects and coordinated effects.[47]

First, the unilateral effect of common ownership involves a company's ability to alter the price or quantity of a good without fear of losing significant profits because their ownership in a competing company allows their shareholders to recapture profits when the customer inevitably shifts to the competing company.[48] For example, suppose that BlackRock's shareholders own shares of Exxon and of its competitor Chevron. Suppose also that those shareholders receive a similar portion of Exxon and Chevron's profits and that those companies consider their shareholders when making decisions about the price and supply of their product (e.g., how competitive they should be in the market for oil and gas). Traditional economic theory posits that Exxon will only raise their prices or decrease their supply to the extent that they will not lose

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42. *See* Morenoff, *supra* note 2. *See also* Luna, *supra* note 15.

43. Morley, *supra* note 30, at 1410 (footnote omitted).

44. *See* Morenoff, *supra* note 2.

45. *See* Morley, *supra* note 30, at 1410 (citing Lucian A. Bebchuk et al., *The Long-Term Effects of Hedge Fund Activism*, 115 COLUM. L. REV. 1085, 1149 (2015)).

46. *See generally* Thomas A. Lambert & Michael E. Sykuta, *The Case for Doing Nothing About Institutional Investors' Common Ownership of Small Stakes in Competing Firms*, 13 VA L. & BUS. REV. 213 (2019). *See also Hearing on Common Ownership by Institutional Investors and Its Impact on Competition*, *supra* note 40, at 2 ("Institutional investors hold trillions of dollars in assets. Given the size of these holdings, requiring institutional investors to divest holdings could have a significant effect on capital markets.").

47. *See generally infra* Part II.A–II.B.

48. *See* Posner, Morton & Weyl, *supra* note 6, at 669.

customers to their competitor, Chevron, such that they can maximize their shareholders' return. Common ownership, however, allows shareholders who own shares of both Exxon and Chevron, to recapture the profits of any lost customers.[49] Importantly, the harm caused by the unilateral effects of common ownership does not require common owners to tactically collude with the officers of the competing companies that they own shares of.[50] Communication can, however, exacerbate those effects.[51]

Scholars have quantified the theoretical unilateral effects of common ownership in several concentrated U.S. industries, including the banking, airline, mobile phone, and beverage industries.[52] With traditional mergers, this calculation is known as the Herfindahl-Hirshman Index ("HHI").[53] In addition, the modified HHI ("MHHI") measures the market concentration caused by common ownership. The MHHI is the sum of the HHI and an MHHI Delta that reflects the extent of common ownership.[54] As an investor's ownership in a competing company increases, so too does the MHHI Delta and corresponding MHHI.[55] While the causal effects of the MHHI are unknown, the empirical studies on the banking[56] and airline industries suggest that as the MHHI increases—in other words, as the market becomes more concentrated because

49. *See generally* Patel, *supra* note 14 (explaining a stylized example of the basic economic recapture theory). *See also* Posner, Morton & Weyl, *supra* note 6, at 682 (citing Robert J. Reynolds & Bruce R. Snapp, *The Competitive Effects of Partial Equity Interests and Joint Ventures*, 4 INT'L J. INDUS. ORG. 141 (1986)) (describing a similar stylized example using Ford and GM).

50. Patel, *supra* note 14, at 287. *See also* Elhauge, *supra* note 23, at 1308 n.203 (citing United States v. Dairy Farmers of Am., Inc., 426 F.3d. 850, 859–60 (6th Cir. 2005) ("[E]ven without control or influence, an acquisition [of stock] may still lessen competition.")). This suggests that even "passive" investment strategies can be subject to liability under Section 7 of the Clayton Act. *See* Posner et al., *supra* note 6, at 678 ("[E]ven those [institutional investors] that engage in 'passive' investment strategies—vote and communicate with corporations in an effort to influence their behavior, and are likely to be liable even if they only have the capacity to influence a corporation, whether or not they use it.").

51. Patel, *supra* note 14, at 287.

52. *See* José Azar et al., *Anticompetitive Effects of Common Ownership*, 73 J. FIN. 1513, 1559 (2018) (finding that common ownership of airlines increased ticket prices by three to seven percent). *See also* José Azar et al., *Ultimate Ownership and Bank Competition*, 51 FIN. MGMT. 227, 266 (2019) (common ownership in the banking industry increases prices). *See also* Posner, Morton & Weyl, *supra* note 6 (common ownership in concentrated industries such as the mobile phone and beverage industries have high MHHIs).

53. "The HHI is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers." *Herfindahl-Hirschman Index*, U.S. DEPT. OF JUST. (July 31, 2018), https://www.justice.gov/atr/herfindahl-hirschman-index.

54. Patel, *supra* note 14, at 294.

55. The MHHI was first proposed by Daniel P. O'Brien and Steven C. Salop to quantify the competitive effects of joint ventures. *See generally* Daniel P. O'Brien & Steven C. Salop, *Competitive Effects of Partial Ownership: Financial Interest and Corporate Control*, 67 ANTITRUST L.J. 559 (2000).

56. Importantly, Azar's study on the banking industry utilized a broader measure of the MHHI, known as the GHHI. Both the MHHI and GHHI "follow[] the same logic." Posner, Morton & Weyl, *supra* note 6, at 688.

of firm's small shareholding across competing companies in a concentrated industry—consumer prices correspondingly increase.[57]

Second, the coordinated effect of common ownership involves shareholders' use of their governance and voting rights to encourage rival companies to engage in coordinated conduct, which ultimately lessens industry-wide competition.[58] Traditional merger law "rests upon the theory that, where rivals are few, firms will be able to coordinate their behavior, either by overt collusion or implicit understanding, in order to restrict output and achieve profits above competitive levels."[59] Because institutional investors concentrate the market over time by acquiring shares of competing industries, the concern for collusion amongst competing companies is heightened.[60]

Empirical studies have demonstrated that common owners of passive funds are likely to exercise their "voice" to "influence what proxy agenda items get proposed to shareholder meetings in the first place."[61] When they do exercise their voice, common owners in passive funds are incentivized to maximize the portfolio performance, rather than maximize the performance of an individual company.[62] Institutional investors' voices can also be clouded by political or social goals that are unrelated to their beneficiaries' financial interests.[63] For more passive funds, like pension funds, there is especially

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57. *See generally* Azar et al., *Anticompetitive Effects of Common Ownership*, supra note 52; *see also* Azar et al., *Ultimate Ownership and Bank Competition*, *supra* note 52, at 266.

58. *See* Posner, Morton & Weyl, *supra* note 6, at 680 (citing *Horizontal Merger Guidelines*, U.S. DEPT. OF JUST. (Aug. 19, 2010), https://www.justice.gov/atr/horizontal-merger-guidelines-08192010). *See also Hearing on Common Ownership by Institutional Investors and Its Impact on Competition*, *supra* note 40, at 5.

59. Jonathan B. Baker, *Mavericks, Mergers, and Exclusion: Proving Coordinated Competitive Effects Under the Antitrust Laws*, 77 NYU L. REV. 135, 139 (2002) (footnote omitted).

60. *See* Posner, Morton & Weyl, *supra* note 6, at 690 ("This argument applies with extra force to institutional investment, which may significantly concentrate the market through quite incremental acquisitions, and which exhibits a significant decades-long trend toward such concentration."). Common ownership could facilitate tacit collusion in three ways. First, a shareholder that maintains ownership in competing firms could act as an information "conduit" between rival firms. There, shareholders with common ownership could more easily share information between rival firms and create an anticompetitive agreement. Second, given their stake in competing companies, a common owner shareholder would have substantial access to information about each firm's competition strategy. As a result, they would be able to identify any defections from the collusive agreement. Finally, common ownership may deter defections because while shareholders of a defecting firm may feel the short-term benefits of a defection, they will *also* feel the long-term harm of that defection given that they also own shares of competing firms who continue to collude despite the defection. *See* Patel, *supra* note 14, at 318–22.

61. Shenje Hshieh et al., *How Do Passive Funds Act as Active Owners? Evidence from Mutual Fund Voting Records*, UCLA ANDERSON SCH. OF MGMT. (May 7, 2018), https://www.anderson.ucla.edu/documents/areas/fac/finance/passive-funds-act.pdf.

62. *See* Jie He et al., *Internalizing Governance Externalities: The Role of Institutional Cross-Ownership*, 134 J. FIN. ECON. 400, 416–17 (2019).

63. *See generally* Stephen M. Bainbridge, *Shareholder Activism and Institutional Investors* 16–17 (UCLA Sch. of Law, Law & Econ Rsch. Paper No. 05-20, 2005),

"widespread political pressure on public funds to engage in 'social investing.'"[64] As a result, these shareholders are likely to "use any incremental power conferred on them to benefit their private interests at the expense of the firm and other shareholders."[65]

Measuring the anticompetitive effects of this sort of voting is especially complicated in the context of ESG initiatives. For example, a single company may be hesitant to undergo the added expense of engaging in ESG initiatives (e.g., monitoring carbon disclosures) unless its competitors do the same. Institutional investors could act as a cartel "ringmaster" and pressure competing companies to incur that added expense in pursuit of similar ESG goals. Eventually, the added expense will be passed on, either in the form of a short-term price increase or in the form of a decrease of shareholder profits.[66] In the antitrust world, that value decrease *could* be considered anticompetitive because it harms consumer welfare—in this case shareholder welfare and ordinary consumer welfare. It is equally possible, however, that short-term harm to shareholders is outweighed by long-term benefits. For instance, "firms that improved on *material* ESG issues significantly outperformed their competitors."[67] This is perhaps because ESG initiatives allow shareholders to consider all potential risks before making an investment decision.[68] It is also possible that shareholder welfare is broader than pure profits. To the extent that shareholders care about both increasing profits and having a clean conscience, ESG initiatives fundamentally change the product that shareholders own.[69] In

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http://ssrn.com/abstract=796227 (discussing how a California treasurer used the retirement/pension fund savings of California citizens to further his political ambitions).

64. Iman Anabtawi, *Some Skepticism About Increasing Shareholder Power*, 53 UCLA L. REV. 561, 589 (2006).

65. *Id.* at 561.

66. Mark J. Roe, *Corporate Purpose and Corporate Competition*, 99 WASH. U. L. REV. 223, 255 (2021) (citation omitted) ("If . . . purpose activists can press a code of conduct or a wider-than-shareholder-value perspective on the institutional investors owning a slice of each firm in the industry, those institutional investors can in turn pressure all their portfolio firms in an industry to comply."). Importantly, the Big Three have argued in response that any added cost of ESG initiatives is worth the long-term financial gain. *See, e.g.*, 2020 Letter from Larry Fink to CEOs in *A Fundamental Reshaping of Finance*, BLACKROCK, https://www.blackrock.com/us/individual/larry-fink-ceo-letter (last visited Jan. 17, 2023) ("Climate change has become a defining factor in companies' long-term prospects.").

67. George Serafeim, *Social-Impact Efforts That Create Real Value*, HARV. BUS. REV. (Sept.–Oct. 2020), https://hbr.org/2020/09/social-impact-efforts-that-create-real-value (discussing how companies have shifted away from treating "ESG efforts like a cell phone case—something added for protection [of reputation]" to an "ambitious and differentiated . . . strategy.").

68. *See 17 Democratic State Attorneys General Defend ESG Investing*, OFF. OF THE ATTY GEN. FOR D.C. (Nov. 23, 2022), https://embodied-economics.ghost.io/antitrust-and-anti-esg-have-broken-through/ ("These anti-ESG efforts are akin to putting a blindfold on investors.").

69. *See* Robert G. Eccles & Svetlana Klimenko, *The Investor Revolution*, HARV. BUS. REV. (May–June 2019), https://hbr.org/2019/05/the-investor-revolution ("Some people think 'purpose' means diverting from profitability—but it doesn't. . . . The purpose of a company is not just to produce profits, it is to produce solutions to problems of people and planet and in the process to produce profits.").

this sense, ESG initiatives could be considered procompetitive because they facilitate a product that was otherwise not available.

Nonetheless, there is an additional concern that joint governance of a company could allow for competing funds (or fund managers) to coordinate and suppress competition.[70] For example, fund managers from BlackRock, who own shares in competing companies A and B might tacitly collude with fund managers from Vanguard and State Street, each of whom also owns shares in competing companies A and B. Because the institutional investment market is especially concentrated, the risk for collusion amongst those fund managers is heightened.[71] Though each institutional investor may individually own a small percentage of competing companies on that list, the Big Three together have accumulated enough shares to exercise a powerful, near controlling, vote at shareholder meetings. As a result, they have extraordinary power to further private social and political interests, such as ESG initiatives, across entire industries regardless of whether those initiatives benefit their clients.[72] In other words, the concentration of the Big Three could "potentially [be] supercharging the oligopolistic effects of already oligopolistic industries."[73]

B. Common Ownership's Impact on Competition is Unproblematic

Scholars have similarly posited that the anticompetitive effects of an institutional investor's common ownership are unproblematic. They have generally taken issue with theoretical and empirical evidence suggesting that common ownership has harmful unilateral effects on competition. First, they argue that supporters of antitrust liability incorrectly presume that institutional investors aim to maximize the profits of industries rather than of individual company's profits. Such an approach would not be advantageous for the institutional investors (who compete with each other to gain clients).[74] For example, if BlackRock were to invest in the S&P 500 with the purpose of maximizing industry profits, its competitors—Vanguard and State Street—similarly profit off that investment.[75] Further, supporters of antitrust liability presume that corporate managers will disregard shareholder interests to maximize industry profits, but skeptics argue that that is a flawed presumption

70. Posner, Morton & Weyl, *supra* note 6, at 691 n.78.

71. Andrea Pawliczek, A. Nicole Skinner & Sarah L. C. Zechman, *Facilitating Tacit Collusion through Voluntary Disclosure: Evidence from Common Ownership* (May 26, 2022) (unpublished manuscript) (available at https://papers.ssrn.com/sol3/papers.cfm? abstract_id =3382324) ("[A]chieving and sustaining collusion is easier in more concentrated markets."). *See also* Einer Elhauge, *How Horizontal Shareholding Harms Our Economy—And Why Antitrust Law Can Fix It*, 10 HARV. BUS. L. REV. 207, 216 (2019) (noting that "[t]o be sure, the new [economic] proofs do find that shareholder-manager communication can exacerbate anticompetitive effects by giving more weight to the shareholders who communicate").

72. *See* Morley, *supra* note 30, at 1407.

73. Farhad Manjoo, *What BlackRock, Vanguard and State Street Are Doing to the Economy*, N.Y. TIMES (May 12, 2022), https://www.nytimes.com/2022/05/12/opinion/vanguard-power-blackrock-state-street.html.

74. *See* Lambert & Sykuta, *supra* note 46, at 233–37.

75. *Id.*

because those managers owe a fiduciary duty to maximize profits for their shareholders (even those who are not common owners).[76] Setting aside those theoretical presumptions, these scholars suggest that there are significant issues with the methodology of the data collection. For example, it is not clear that the MHHI index used in the banking and airlines studies properly accounted for shareholders' economic interests. Even if they did, some argue that it is not clear that the MHHI proves that common ownership *causes* consumer harm.[77]

Further, scholars have posited large institutional investors that have accumulated shares of competing companies within major industries are unlikely to exercise their corporate voting power in index funds because they would be unable to do so without harming other types of fund types (e.g., mutual funds) and breaching their fiduciary duties.[78] The Big Three have become especially powerful because they represent a diverse set of clients, each of whom is owed a fiduciary duty. It is highly likely that the Big Three's use of their shareholder votes to engage in political and social activism could help one client (e.g., one investing in index funds) and hurt another (e.g., one investing in more specific and contradicting mutual funds).[79] The same is true where two of the institutional investor's funds hold stock in competing companies on an index fund.[80] For these reasons, "fund[] [managers] have especially poor incentives to engage in stewardship activities that could improve governance and increase value."[81]

Finally, even if common ownership caused unilateral and/or coordinated anticompetitive effects, some scholars argue that prosecution under the Clayton Act is an improper remedy. It may, for example, cause investors who did not intend to lessen competition to be liable due to the interactive nature of the institutional investing market.[82] Additionally, liability under Section 7 of the Clayton Act could "thwart significant welfare gains in the form of agency cost reductions."[83]

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76. *Id. See also* Merritt B. Fox & Menesh S. Patel, *Common Ownership: Do Managers Really Compete Less?*, 39 YALE J. ON REG. 136 (2022).

77. *See generally* Lambert & Sykuta, *supra* note 46. Importantly, Einer Elhauge has rebutted this argument and argued that there are several causal mechanisms. *See generally* Einer Elhauge, *The Causal Mechanisms of Horizontal Shareholding*, 82 OHIO ST. L.J. 1 (2021).

78. *See* Morley, *supra* note 30, at 1407.

79. *See generally id.*

80. *See id.* at 1440.

81. *Id.* at 1413 n.21 (citation omitted). This proposition might confuse "passive investors" with "passive owners." *See generally* Ian R. Appel, Todd A. Gormley & Donald B. Keim, *Passive Investors, Not Passive Owners*, 121 J. FIN. ECON. 111 (2016) (finding that passive investors exercise block votes to influence firm governance).

82. *See* Posner, Morton & Weyl, *supra* note 6, at 678.

83. Lambert & Sykuta, *supra* note 46, at 269. For example, one study found that institutional investors increased board independence, boosted innovation, increased dividends and share repurchases, and higher returns of portfolio companies. *Id.* (discussing the findings of Jarrad Harford, Ambrus Kecskés & Sattar Mansi, *Do Long-Term Investors Improve Corporate Decision Making?*, 50 J. CORP. FIN. 424 (2018)).

III. ANALYZING THE BIG THREE'S COMMON OWNERSHIP IN THE OIL AND GAS INDUSTRY

The following section will engage in a thought exercise to demonstrate how a trier of fact might assess the modern antitrust concerns surrounding institutional investors' common ownership within a politically charged industry such as the U.S. integrated oil and gas industry. Given that the Big Three's efforts to promote ESG at the expense of oil and gas companies have been the subject of much public debate,[84] the following sections will consider the effects of the Big Three's common ownership in the context of the ESG movement.

A. Overview of the U.S. Integrated Oil and Gas Industry

Because the entry costs for oil and gas operations are so high, most "Big Oil"[85] companies have integrated operations.[86] Integrated oil and gas companies are involved with the entire oil and gas value chain. They are engaged in the exploration and production of ("upstream" operations), the transportation and storage of ("midstream" operations), and the refining and marketing of oil ("downstream" operations).[87] Integrated operations are targeted by many ESG activists because the upstream, midstream, and downstream oil operations are some of the top contributors of global greenhouse gas emissions.[88] ESG initiatives, then, could impact every level of operation within integrated companies. As a result, integrated oil and gas operations are highly impacted by institutional investors capitalizing on their common ownership to further specific ESG initiatives.[89]

The S&P 500 lists twenty-three publicly traded US companies in the energy sector.[90] Eighteen of those twenty-three companies are integrated oil and gas companies.[91] The five largest of those eighteen companies collectively

84. *See generally* Morenoff, *supra* note 2.

85. "Big Oil" is a term used to describe the largest, publicly traded oil and gas companies in the world. *See What are the Big Oil Super Majors?*, HEROLD FIN. DICTIONARY, https://www.financial-dictionary.info/terms/big-oil-super-majors/ (last visited Dec. 31, 2022).

86. James Chen, *Integrated Oil and Gas Co.: Definition, Operations, and Examples*, INVESTOPEDIA (June 4, 2022), https://www.investopedia.com/terms/i/integrated-oil-gas-company.asp.

87. *See id.*

88. *See* Nilesh Dayal, Clare Chatfield & Amar Gujral, *How Should the Oil and Gas Industry Plan for Increasing ESG Pressure?*, LEK (July 20, 2020), https://www.lek.com/sites/default/files/insights/pdf-attachments/LEK_OilGas-ESG-EI.pdf ("The industry, when including downstream consumption, remains one of the top contributors to global emissions.").

89. *See generally* Lisa Rushton, *ESG: How it Applies to the Oil & Gas Industry and Why It Matters*, WOMBLE BOND DICKINSON (Sept. 22, 2021), https://www.womblebonddickinson.com/us/insights/articles-and-briefings/esg-how-it-applies-oil-gas-industry-and-why-it-matters.

90. *See S&P 500 Energy Components*, BARCHART, https://www.barchart.com/stocks/indices/sp-sector/energies (last visited Dec. 31, 2022).

91. *See Exxon Mobil Corporation (XOM)*, CSIMARKET.COM, https://csimarket.com/stocks/competitionSEG2.php?code=XOM (last visited Dec. 31, 2022).

own more than sixty-three percent of the market.[92] As a result, those five companies could reasonably constitute competitors in the US[93] integrated oil and gas market. Further, BlackRock, State Street, and Vanguard are three of the top five largest institutional investors in each of those five companies.[94] Though a market limited to the top five US-based Big Oil companies on the S&P 500 is somewhat narrow, it is potentially concentrated enough to raise concerns about the anticompetitive effects of the Big Three's common ownership.

The barriers to entry into a commonly owned industry like integrated oil and gas are especially high. First, there are significant start-up costs at the upstream, midstream, and downstream operation levels of the integrated oil and gas industry.[95] New suppliers must consider the cost of exploring new oil sites, purchasing land-rights to those sites, obtaining the technology (and patents) required to obtain and store the oil, etc.[96] As a result, it is difficult for new integrated oil and gas companies to enter the market.[97] Even if they could enter the market in a timely manner, it is unlikely that they would reach the scale of the Big Oil companies.[98]

In any case, all integrated oil and gas companies that become large (and profitable) enough to be on the S&P 500 (or similar index) will be subject to institutional investor capital and those investors' shareholder votes.[99] Similarly, the passive institutional investor market itself has extraordinary barriers to entry. Specifically, the index fund industry is characterized by very low (or in some cases no) beneficiary fees.[100] As a result, "it would be extraordinarily difficult for a new competitor to outperform on fees given the massive economies of scale enjoyed by the Big Three."[101] Taken together, this suggests that the commonly owned integrated oil and gas industry is especially concentrated and that the Big Three have extraordinary power by virtue of their ability to own shares in competing energy companies. Under traditional merger

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92. *See id.* (adding twelve-month, Q3 2022 market shares of Chevron Corp., Marathon Petroleum Corp., Phillips 66, Valero Energy Corp., and Exxon Mobil Corp.). *See also* Appendix A, Table 1.

93. This analysis focuses on domestic companies because the S&P 500 is a domestic Index.

94. *See* Appendix A, Table 2.

95. *See* Andy Smith, *How Strong Are the Barriers to Entry in the Oil and Gas Sector?*, INVESTOPEDIA, https://www.investopedia.com/ask/answers/061115/how-strong-are-barriers-entry-oil-and-gas-sector.asp (last updated Sept. 6, 2022).

96. *See id.*

97. *See id.*

98. Justin Worland, *The Reason Fossil Fuel Companies Are Finally Reckoning with Climate Change*, TIME (Jan. 16, 2020, 5:43 AM), https://time.com/5766188/shell-oil-companies-fossil-fuels-climate-change/ (describing the Big Oil industry as "untouchable").

99. As mentioned in Part I, index funds involve an institutional investor holding shares of all companies on a set index.

100. Caleb N. Griffin, *We Three Kings: Disintermediating Voting at the Index Fund Giants*, 79 MD. L. REV. 954, 960 (2020).

101. *Id.*

analysis, the compounded barriers to entry in oligopolistic markets are concerning.[102]

B. Anticompetitive Effects of the Big Three's ESG Agenda in the Oil and Gas Industry

As mentioned in Part II, the anticompetitive harms of common ownership are twofold: unilateral and coordinated effects. The unilateral effects of common ownership refer to a company's ability to raise prices because shareholders, who are common owners in competing companies, can recapture lost profits. Scholars typically utilize an MHHI Index to measure how harmful the unilateral effects of a commonly owned industry are.[103] In particular, the MHHI measures the market concentration of a specific industry by summing the value of the HHI, which measures the concentration of a specific product market and the MHHI Delta, which accounts for the additional concentration caused by common ownership across that market.[104] Additionally, the coordinated effects of common ownership involve a shareholder's use of their governance and voting rights in a concentrated industry to encourage rival companies to engage in orchestrated conduct that ultimately reduces competition.[105] An added concern is that those effects are compounded by fund managers coordinating with each other to encourage companies to engage in synchronized conduct that furthers a specific social goal.

First, using publicly available data, I calculated[106] the MHHI for the five largest US-based integrated oil and gas companies on the S&P 500 Index: Chevron Corporation, Phillips 66, Marathon Petroleum Corporation, Valero, and Exxon Mobil Corporation. My analysis is limited to the effects of BlackRock, State Street, and Vanguard's common ownership because they are the three common institutional investors with significant ownership across each of the five companies. Table 1 reflects the data used to calculate the MHHI Delta, the key component of the MHHI calculation. It includes: the Big Three's ownership in each of the five companies, the possible common ownership pairings of each firm in the defined market, the MHHI Delta's numerator ("the degree to which the firms in the coupling are commonly owned, such that their

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102. Anna Tzanaki, *Varieties and Mechanisms of Common Ownership: A Calibration Exercise for Competition Policy*, 18 J. COMPETITION L. & ECON. 168, 200 (2021) ("Specifically, in oligopolistic markets with high entry barriers shareholding links between actual or potential competitors may have clear competitive implications as they are likely to lead to reduced output and higher prices.").

103. *See generally* O'Brien & Salop, *supra* note 55.

104. *See* Michael Sykuta, *The Case for Doing Nothing: The 'Problem' of Common Ownership*, TRUTH ON THE MARKET (May 15, 2018), https://truthonthemarket.com/2018/05/15/the-case-for-doing-nothing-the-problem-of-common-ownership/.

105. *See* Posner, Morton & Weyl, *supra* note 6, at 680; *see also Hearing on Common Ownership by Institutional Investors and Its Impact on Competition*, *supra* note 40, at 5.

106. *See* Thom Lambert, *Lowering the Barriers to Entry to the Common Ownership Debate: A (Relatively) Non-Technical Explanation of MHHI Delta*, TRUTH ON THE MARKET (Aug. 16, 2018), https://truthonthemarket.com/2018/08/16/lowering-the-barriers-to-entry-to-the-common-ownership-debate-a-relatively-non-technical-explanation-of-mhhi-delta/.

owners would not benefit from price-reducing, head-to-head competition and would instead prefer that the firms compete less vigorously so as to maximize coupling profits"),[107] the MHHI Delta's denominator ("the degree to which the investor base . . . of the firm whose competition-reduction incentive is under consideration . . . would prefer that it maximize its own profits, not the profits of the coupling"), and the MHHI Delta for each common ownership pairing.[108] Table 2 reflects the five largest institutional investors' ownership in each integrated oil and gas company, each individual company's share of the US-integrated oil and gas operations market, the HHI of the integrated oil and gas market, the combined MHHI Delta of all possible common ownership pairings, and the total MHHI of the top five companies in the US-integrated oil and gas operations market.[109]

If the MHHI calculations first proposed by Daniel P. O'Brien and Steven C. Salop[110] are accurate,[111] the MHHI of the top five US-based Big Oil companies suggests that there are potentially significant unilateral effects from the common ownership in the integrated oil and gas market. By my calculations, the US-integrated oil and gas market is not particularly concentrated on its own. It has an HHI of only 946.20,[112] which is well below the 1500–2500 HHI threshold that antitrust agencies are likely to be concerned about.[113] However, my calculations reveal that the U.S. integrated oil and gas industry has an MHHI of 3,968.26.[114] While the causal effects of the MHHI Delta are still subject to debate, scholars have demonstrated that an MHHI that exceeds the HHI by 1000 points or more (or exceeds the HHI by one to two-thirds of the MHHI) has anticompetitive effects (e.g., an increase in prices for consumers).[115] In this case, the MHHI is more than 3000 points higher than the HHI.[116] In theory, this suggests that the five integrated oil and gas companies are highly likely to raise consumer prices or restrict supply because shareholders who commonly own shares of each company, like the Big Three, can recapture any lost profits from customers who choose to utilize a competing oil company.[117] That said, more extensive research would need to be conducted to

107. *Id.*

108. *See* Appendix A, Table 1.

109. *See* Appendix A, Table 2.

110. *See generally* O'Brien & Salop, *supra* note 55*; see* Lambert, *supra* note 106.

111. *See generally supra* Part II.B for a summary of critiques of the MHHI.

112. *See* Appendix A, Table 2.

113. *Herfindahl-Hirschman Index, supra* note 53 (noting that HHIs between 1500 and 2500 only "moderately concentrated").

114. *See* Appendix A, Table 2.

115. *See* Posner, Morton & Weyl, *supra* note 6, at 695 (discussing the findings of Azar et al.'s banking and Azar et al.'s airline study); *see also* Azar et al., *supra* note 52.

116. *See* Appendix A, Table 2.

117. *See* Posner, Morton & Weyl, *supra* note 6, at 682 (citing Robert J. Reynolds & Bruce R. Snapp, *The Competitive Effects of Partial Equity Interests and Joint Ventures*, 4 INT'L J. INDUS. ORG 141 (1986)) (describing a similar stylized example using Ford and GM).

determine whether institutional investor's common ownership *caused* any increase in gas prices or decrease in oil and gas supply for consumers.[118]

To analyze the coordinate effects of the Big Three's common ownership in the integrated oil and gas industry, I considered the Big Three's voting records with regard to ESG issues in two of the largest competitors in the U.S. integrated oil and gas industry. Table 3 reflects the votes that BlackRock, Vanguard, and State Street cast on ESG issues in 2022.[119] Based on those votes, the coordinated effects in the integrated oil and gas industry, at least with regard to ESG initiatives, appear only moderately concerning. As a preliminary note, the Big Three engage in a significant amount of voting; "Vanguard, BlackRock, and State Street cast about a quarter of votes at S&P 500 companies' shareholder meetings . . . ."[120] That voting has become increasingly focused on ESG initiatives. Taken together, these two pieces of preliminary information suggest that supporters of common ownership liability correctly hypothesize that passive funds are likely to engage in social investing.[121] There is also evidence that investing funds' social investing is paying off. For example, companies in which BlackRock, State Street, and Vanguard have a substantial minority share have generally reduced their carbon emissions.[122] Despite these datapoints, which at least facially raise concerns that investing giants are coordinating amongst themselves, there is little evidence to suggest that the Big Three coordinated to vote the same way on ESG initiatives. Even if they were, there is little evidence to suggest that those coordinated votes have harmed competition.[123]

There appears to be some overlap in the proposals put forth by the Big Three at both ExxonMobil's and Chevron's shareholder meetings. For

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118. See generally Elhauge, *supra* note 77, for a discussion on the causal effects of common ownership on the MHHI. The causal analysis for the integrated oil and gas operations market must account for independent intervening variables such as: restricted supply because of the Russia-Ukraine war, political motives, etc.

119. *See* Appendix A, Table 3.

120. Dan Romito, *The Top 15 Anticipated ESG-Related Considerations That Will Influence Strategy in 2023*, HARV. L. SCH. F. ON CORP. GOV. (Dec. 31, 2022), https://corpgov.law.harvard.edu/2022/12/31/the-top-15-anticipated-esg-related-considerations-that-will-influence-strategy-in-2023/.

121. *Id.* ("Blackrock 'saw a 133% increase in the number of environmental and social shareholder proposals, many of them more prescriptive than in prior years.'"); *see also 2022 Voting Spotlight Summary*, BLACKROCK 21 (2022), https://web.archive.org/web/20230514053549/https://www.blackrock.com/corporate/literature/publication/2022-investment-stewardship-voting-spotlight-summary.pdf. *See generally* Bainbridge, *supra* note 63 (passive institutional investors are likely to exercise their votes to further social and political goals); *see also* Anabtawi, *supra* note 64 (passive funds are especially susceptible to social shareholder voting).

122. *See generally* José Azar et al., *The Big Three and Corporate Carbon Emissions Around the World*, (European Corp. Governance Inst., Working Paper No. 715, 2020), https://ecgi.global/sites/default/files/working_papers/documents/finalazardurokadachormazabal.pdf.

123. *See generally* Mei Li, Gregory Trencher & Jusen Asuka, *The Clean Energy Claims of BP, Chevron, ExxonMobil and Shell: A Mismatch Between Discourse, Actions and Investments*, PLOS ONE (Feb. 16, 2022), https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0263596.

example, both ExxonMobil and Chevron considered proposals to "Adopt Medium and Long-Term GHG Emissions Reduction Targets" and "Issue Audited Net-Zero Scenario Analysis Report."[124] In some of those instances, the Big Three shareholders voted the same way on proposals shared by competing companies, which on first glance makes it appear as though institutional investors could be acting as "ringmaster" to further industry-wide ESG initiatives. Institutional investors are in some respects expected to vote the same way on a proposal being considered by competing companies, absent company-specific issues, such as financial distress. This consistency initially suggests that there is a *possible* foundation for the Big Three to facilitate coordination amongst competing companies. However, deeper analysis reveals that there is not a consistent effort by investors to use their shareholder votes to encourage competing oil and gas companies to engage in coordinated action because institutional investors do not always vote the same way on proposals considered by rival companies. For example, Vanguard voted against both ExxonMobil's and Chevron's proposal to adopt GHG emission reduction targets.[125] State Street, however, issued different votes for ExxonMobil's and Chevron's proposal to adopt GHG emission reduction targets.[126] Additionally, there is no consistent evidence suggesting that the Big Three coordinating amongst themselves to cast a block shareholder vote that would further an ESG agenda in individual oil and gas companies. For example, BlackRock, State Street, and Vanguard all voted differently on ExxonMobil's proposal to "Issue Audited Net-Zero Scenario Analysis Report."[127] At the same time, however, BlackRock, State Street, and Vanguard all voted against ExxonMobil's proposal to "[a]dopt Medium and Long-Term GHG Emissions Reduction Targets."[128] Taken together, these conflicting voting results indicate that while there appears to be some parallel voting conduct,[129] there is no clear coordination amongst the Big Three to exercise a block shareholder vote for all ESG initiatives. Where the institutional investors did all vote the same way, and where there appears to be the possibility of unlawful coordination, the Big Three voted *against* initiatives that would reduce carbon emissions in the oil and gas industry.[130] This suggests that any coordination to combine shareholder votes is intended to maintain the industry status quo rather than to enable coordination amongst competing oil and gas companies to reduce carbon emissions.

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124. Also known as the "Report on Scenario Analysis Consistent with IEA's Net Zero by 2050." *See* Appendix A, Table 3.

125. *See Appendix A, Table 3*. Importantly, this consistency is not reflected in all institutional investor votes. State Street, for example, issued different votes for ExxonMobil and Chevron on the same GHG reduction proposal. *Id.*

126. *Id.*

127. *See id.* (Blackrock voting "For" that proposal for ExxonMobil, State Street "Abstaining" from that proposal for ExxonMobil, and Vanguard voting "Against" that proposal for ExxonMobil).

128. *See id.*

129. *See id.*

130. *See* Appendix A, Table 3.

Even if the Big Three did engage in some coordinated voting scheme to implement ESG initiatives, it is not clear that shareholders and oil/gas consumers are experiencing price or output effects because of those coordinated votes. As a preliminary matter, a company's decision to spend resources to implement an ESG initiative, even at the request of shareholder voters, is not costless. The cost of implementing an ESG disclosure program or emissions reduction program incurs costs that are either passed onto ordinary customers (in the form of an increase in the price of the good or decrease in the quantity of a good) or onto shareholders (in the form of reduced profits). In this hypothetical, there is evidence that competing oil and gas companies have responded to and spent resources on ESG initiatives vocalized by investing giants. For example, companies like ExxonMobil and Chevron have slightly increased their discourse regarding reducing greenhouse gas ("GHG") emissions.[131] They have also agreed to invest in carbon capture and storage projects to reduce emissions.[132] There is mixed evidence, however, about whether these decisions significantly impacted the output of traditional oil and gas or increased the price. First, both Exxon and Chevron slightly decreased their downstream oil sales.[133] While this reduction in output might be initially concerning from an anticompetition perspective, neither Chevron nor Exxon significantly decreased their spending on upstream exploration or the production of traditional oil and gas.[134] In other words, competing companies are willing to engage in discussions that suggest they are complying with pressures to shift away from fossil fuels, but have not taken coordinated steps to restrict the supply of traditional oil and gas in a way that would harm traditional consumers. Second, the price of oil and gas increased in the first half of 2022, but they have steadily declined since then.[135] This suggests that the cost of implementing ESG initiatives was not passed onto traditional consumers of oil and gas. Since the costs of implementing ESG initiatives do not appear to have been passed along to traditional oil and gas consumers, that cost may have been passed onto shareholders in the form of a short-term reduction in profits.[136]

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131. *See* Li, Trencher & Asuka, *supra* note 123, at 8, Fig. 1.

132. *See* Starr Spencer, *ExxonMobil, Chevron Affirm Large Scale Carbon Capture Projects in Q1 Calls*, S&P GLOBAL (Apr. 30, 2021), https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/electric-power/043021-exxonmobil-chevron-affirm-large-scale-carbon-capture-projects-in-q1-calls.

133. *See* Li, Trencher & Asuka, *supra* note 123, at 17.

134. *See id.* at 14–15.

135. *See Crude Oil Prices Increased in First-Half 2022 and Declined in Second-Half 2022*, U.S. ENERGY INFO. ADMIN. (Jan. 4, 2023), https://www.eia.gov/todayinenergy/detail.php?id=55079; *Crude Oil Prices Forecast to Decline Beginning in the Second Half of 2023*, U.S. ENERGY INFO. ADMIN. (Jan. 11, 2023), https://www.eia.gov/todayinenergy/detail.php?id=55159. Importantly, even that slight price increase could have been caused by other effects such as the COVID-19 pandemic or rising tensions in Eastern Europe.

136. More intensive research would need to be done to determine *if* shareholder profits were reduced *and* whether that reduction was *caused by* the implementation of ESG initiatives.

C. Procompetitive Effects of the Big Three's Common Ownership in the Oil and Gas Industry

Even where the anticompetitive effects of the Big Three's common ownership in the integrated oil and gas industry are theoretically high, there are procompetitive effects that *might* justify investing giants' common ownership in the oil and gas industry. Procompetitive effects, in the antitrust sense, means "reduce[d] cost, increase[d] output or improve[d] product quality, service, or innovation."[137] It does not account for social effects.[138] In this case, the Big Three's coordinated efforts must do more than facilitate a reduction in carbon footprint for the sake of improving general environmental goals. One procompetitive effect of the Big Three's common ownership, for example, is the facilitation of joint research and development initiatives that could spark innovation within the oil and gas industry. As shareholders (and other consumers) become more concerned with the world's ability to meet the net-zero goals set forth in the Paris Climate Agreement, they will favor more sustainable energy sources as compared to traditional oil and gas.[139] For traditional oil and gas companies to survive, they will need to evolve and transition to new products.[140] The Big Three's common ownership could help facilitate the sharing of costly research and development required for such innovation. This effect seems promising given that both ExxonMobil and Chevron have pledged to invest billions in emission reduction projects.[141]

IV. RETHINKING HOW TO USE COMMON OWNERSHIP IN THE ESG DEBATE

A. Common Ownership as a Tool in the Joint Venture's Competitive-Harm-Toolbox

Given the above debate and thought exercise, prosecuting institutional investors for their common ownership under the Clayton Act is likely too extreme a remedy; it "puts the legal cart before the economic horse" and could increase investing transaction costs for consumers.[142] Worse it would cause the Clayton Act to be turned into a political sword that politicians could use to "manipulat[e] the political system to exercise market power through special-

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137. John M. Newman, *Procompetitive Justifications in Antitrust Law*, 94 IND. L.J. 501, 516 (2019).

138. *See id.*

139. *See ESG Is an Opportunity for Oil and Gas Companies*, OFFSHORE TECH. (July 16, 2021), https://www.offshore-technology.com/analyst-comment/esg-opportunity-oil-and-gas/.

140. *See id.*

141. *See generally* Sabrina Valle, *Exxon, Chevron to Spend Billions More on Oil Projects Next Year*, REUTERS (Dec. 8, 2022), https://www.reuters.com/business/energy/exxon-chevron-spend-billions-more-oil-projects-next-year-2022-12-08/ (describing how ExxonMobil and Chevron have plans to invest a significant amount of capital into emission reduction projects).

142. Honorable Douglas H. Ginsburg, *Why Common Ownership Is Not an Antitrust Problem*, HARV. L. SCH. F. ON CORP. GOV. (Dec. 4, 2018), https://corpgov.law.harvard.edu/ 2018/ 12/04/why-common-ownership-is-not-an-antitrust-problem/.

interest protectionism and crony capitalism."[143] However, the lack of clearly harmful anticompetitive effects caused by common ownership does not warrant declaring common ownership "per se lawful."[144] The theoretical unilateral and coordinated harm is too high.

Rather than treat industry-specific instances of common ownership as individual violations of the Clayton Act like the thought exercise discussed in Part 3, this Paper proposes analyzing firms' common ownership in the context of a traditional joint venture analysis under the Sherman Act. A joint venture is a group of persons/organizations who intend to combine resources (in this case shares of competing companies) to engage in a single business venture for shared profits.[145] It typically requires: (1) the parties to intend to form a joint venture; (2) the manifestation of that intent into an explicit or implicit agreement; (3) the combination of their resources in a common undertaking; (4) the parties' equal control in the interest; and (5) the sharing in losses and profits.[146] Antitrust law is generally skeptical about agreements amongst competitors, and considers all anticompetitive harms caused by the joint venture. However, defendants can demonstrate that the venture has procompetitive benefits. For example, "[j]oint ventures can benefit consumers because they enable companies to do an activity more efficiently and at a lower cost than they could independently or to create a new or improved product or service that they are incapable of creating alone."[147] Even where there are procompetitive effects, a joint venture amongst competitors is permissible only where there is no less restrictive way to achieve the proffered procompetitive effects, or where those procompetitive benefits outweigh the potential anticompetitive harms.[148]

This Note specifically suggests that, once a joint venture is proven to exist, a trier of fact can use common ownership to highlight where there is actual or potential anticompetitive harm; it is a tool in the joint venture analysis' competitive-harm-toolbox rather than an independent claim. Because common ownership is theoretically likely to make competitive harms more poignant,

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143. Jonathan B. Baker, *Why the Political Misuse of Antitrust Must Be Prevented*, PROMARKET (July 20, 2020), https://www.promarket.org/2020/07/20/why-the-political-misuse-of-antitrust-must-be-prevented/.

144. Patel, *supra* note 14, at 326.

145. *See* George A. Locke, *Existence of Joint Venture*, 12 AM. JUR. PROOF OF FACTS 2D 295 § 1 (1977).

146. *See id.* § 2.

147. Erin L. Schencopp, *Joint Venture Antitrust Considerations*, LEXISNEXIS 1 (Sept. 25, 2018), https://www.jonesday.com/en/insights/2018/09/joint-venture-antitrust-considerations-lexisnexis.

148. *See* Gregory J. Werden, *Cross-Market Balancing of Competitive Effects: What Is the Law, and What Should It Be?*, 43 J. CORP. L. 119, 132 (2017) ("The defendant then has the burden to show that 'a legitimate objective is served' by the restraint, and in response to such a showing, the plaintiff has the opportunity to show that the objective 'can be achieved by a substantially less restrictive alternative.' If the case gets to the third stage, and the plaintiff fails to make this showing, the court must determine whether 'the challenged behavior is, on balance, unreasonable.'") (citation omitted).

however, a trier of fact should approach joint ventures involving common ownership with more hostility than they would joint ventures without common ownership. To be lawful, a joint venture involving common ownership should require significant procompetitive effects to counteract the risk of significant competitive harm.

B. Treating the Big Three's ESG Agenda Like a Quasi-Joint Venture

Both the attorneys general concerned with the competitive effects of Big Three's ESG agenda on the oil and gas industry and the scholars worried about the harmful effects of common ownership in the institutional investor paradigm are concerned about the Big Three's coordinated use of shareholder voting power to pursue anticompetitive ends. It is possible to address both of their apprehensions by treating the Big Three's ESG agenda as a quasi-joint venture and using its common ownership in competing companies as a reason to treat it with great hostility and require especially compelling procompetitive benefits.

Analyzing institutional investors' ESG initiatives using joint venture mechanics, however, is somewhat difficult because there is no obvious agreement between investing giants to coordinate votes—in fact, it could be against their individual interests to do so.[149] However, by joining coalitions such as NZAM and the Climate Action 100+, which are designed to use shareholder engagement to encourage the largest carbon-emitting companies (e.g., those in the oil and gas industry) to adopt ESG disclosure measures and reduce their Greenhouse Gas emissions,[150] the Big Three appear to form something that resembles a joint venture.

C. Anticompetitive Effects of the Big Three's ESG Quasi-Joint Venture

Simply calling an arrangement a "joint venture" or "quasi-joint venture" will not absolve parties of liability if their true intentions are to raise prices or restrict output.[151] In this case, the Big Three's quasi-joint venture potentially raises prices (or at the very least restricts profits). A company's decision to spend resources to implement an ESG initiative, even at the request of shareholder voters, is not costless. The cost of implementing an ESG disclosure program or emissions reduction program is either passed onto ordinary customers (in the form of an increase in the price of the good or a decrease in

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149. *See supra* notes 74–75 and accompanying text.

150. *See generally* Letter from Larry Fink to CEOs, *supra* note 66. *See generally Building a Sustainable Future*, STATE ST. GLOB. ADVISORS, https://www.ssga.com/us/en/intermediary/ic/capabilities/esg (last visited Jan. 18, 2023) (describing ESG investing initiatives); *The Economics of Climate Change*, VANGUARD (Apr. 21, 2022), https://institutional.vanguard.com/insights-and-research/report/the-economics-of-climate-change.html (describing the impact of policies aiming to reduce GHG emissions on the economy).

151. *See* FED. TRADE COMM'N & U.S. DEP'T OF JUST., ANTITRUST GUIDELINES FOR COLLABORATIONS AMONG COMPETITORS 8 (2000), https://www.ftc.gov/sites/default/files/documents/public_events/joint-venture-hearings-antitrust-guidelines-collaboration-among-competitors/ftcdojguidelines-2.pdf.

the quantity of a good) or onto shareholders (in the form of reduced profits).[152] In this way, *some* short-term anticompetitive harm—to shareholders or ordinary consumers—will inevitably be caused by the Big Three's quasi ESG joint venture.[153] The scale of that harm, of course, requires resource-intensive research that is beyond the scope of this Paper. Even where the scale of that harm appears initially small, the Big Three's common ownership threatens to magnify it.[154] For example, a single company may be hesitant to undergo the added expense of engaging in ESG initiatives, such as monitoring carbon disclosures, unless its competitors do the same.[155] Institutional investors could act as a cartel "ringmaster" and pressure competing companies to incur that added expense in pursuit of similar ESG goals.[156] In this sense, the anticompetitive effects of the profit reduction experienced by shareholders or price increase experienced by ordinary consumers are worsened because it decreases choice amongst substitutes. For example, shareholders may not want to invest in a company that furthers environmental initiatives but will be unable to avoid doing so because the Big Three may have used their significant market power to encourage competing companies to further environmental initiatives and have eliminated viable substitutes for those shareholders.

In sum, there is likely to be at least some anticompetitive price effect from the Big Three's quasi-joint venture. That harm, even if initially small, is likely to be amplified by their pervasive common ownership in competing firms. As a result, a trier of fact should only allow such a venture if there are significant procompetitive justifications.

D. Procompetitive Effects of the Big Three's ESG Quasi-Joint Venture

As was true with the hypothetical discussed in Part III, only "restraints that alleviate an economic market failure are cognizable as procompetitive justifications."[157] Thus, a trier of fact will not consider whether the joint venture furthers a beneficial social cause, such as reducing carbon emissions. Nonetheless, Big Three's quasi-joint venture to encourage companies to adopt ESG disclosure methods and ultimately reduce their carbon emissions has two potentially significant procompetitive justifications: the creation of a new product and the reduction of information asymmetry.

The first procompetitive justification—the facilitation of a new product—presumes that a company with ESG initiatives is perceived to be of higher *quality*—or competitively more advantaged—than companies without them. In other words, ESG issues are a priority for a significant portion of the shareholder

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152. *See* Roe, *supra* note 66, at 255.

153. Institutional Investors have commonly asserted that even if that were true, ESG is predicted to facilitate long-term profit return. *See generally* Letter from Larry Fink to CEOs*, supra* note 66.

154. *See* Manjoo, *supra* note 73 (common ownership is concerning because The Big Three could "potentially [be] supercharging the oligopolistic effects of already oligopolistic industries").

155. *See* Roe, *supra* note 66, at 255.

156. *Id.*

157. Newman, *supra* note 138, at 529.

base of shareholders.[158] For example, following the COVID-19 pandemic, shareholders want companies to safeguard against future risks and global catastrophes, such as climate change.[159] In that context, perhaps we should think of stocks as a product, one that evolves from having a single feature that consumers evaluate (profits/returns) to one that has two (or potentially more) features (profits/returns and environmental impact).[160] Shareholders (and other consumers), then, prioritize investing in companies that have adopted ESG strategies and, at the very least, appear more climate-conscious.[161]

The second procompetitive justification—reduction of information asymmetry—follows on the heels of the first. Because there is no uniform measure of ESG benchmarks, many shareholders who are interested in stocks that have both a profit and consciousness feature fall victim to corporate greenwashing.[162] Greenwashing is a marketing tactic, "use[d] to lure in environmentally conscious customers, despite their products or services being anything but."[163] In other words, companies like Exxon and Chevron are incentivized to capitalize on information asymmetry to encourage people to invest in their "ESG minded" companies even if they are not really doing a lot to achieve those goals. For example, one study found that while Big Oil companies engaged in significant dialogue about shifting to clean energy, they have made few concrete steps to do so.[164] A market failure exists here because while a company's ESG agenda is central to many shareholders' investment preferences, they lack an efficient method to evaluate whether companies like Exxon and Chevron are pursuing ESG initiatives or simply greenwashing. The Big Three, however, are potentially in a good position to monitor and publicize the effectiveness of those ESG initiatives and lessen the information asymmetry between shareholders and the companies in which they invest.[165] Increasing

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158. *See* Eccles & Klimenko, *supra* note 69 ("ESG was almost universally top of mind for . . . executives."). *Cf.* Lydia Saad, *Where U.S. Investors Stand on ESG Investing*, GALLUP (Feb. 23, 2022), https://news.gallup.com/poll/389780/investors-stand-esg-investing.aspx.

159. *See* Naveen Bhateja, *Align Company Purpose with ESG for a Profitable Competitive Advantage*, FORBES (Aug. 12, 2022), https://www.forbes.com/sites/ forbeshumanresourcescouncil/ 2022/08/12/align-company-purpose-with-esg-for-a-profitable-competitive-advantage/?sh= 3934c97752f0.

160. "Sophisticated asset owners [are] aware that sustainable investing improves returns, but many of them, including high-net-worth individuals, are also focused on the nonfinancial outcomes . . . [the] 'wealthiest clients want to know their investments are making a difference to make the world a better place[.]'" *See* Eccles & Klimenko, *supra* note 69.

161. *See id.*

162. *See* Kelly Anne Smith, *Greenwashing and ESG: What You Need to Know*, FORBES (Aug. 25, 2022), https://www.forbes.com/advisor/investing/greenwashing-esg/.

163. *Id.*

164. *See* Joe Hernandez, *Accusations of 'Greenwashing' by Big Oil Companies Are Well-Founded, A New Study Finds*, NPR (Feb. 16, 2022, 3:28 PM), https://www.npr.org/2022/02/ 16/1081119920/greenwashing-oil-companies.

165. Because ESG initiatives encompass more than environmental goals, the Big Three's ability to eliminate information asymmetry in this context refers to the environmental aspects of ESG.

shareholder access to information spurs competition because shareholders will be able to investigate whether a company's stock provides both financial and environmental returns, companies will compete with each other to adopt ESG initiatives in an effort to "win" shareholders' investments.[166]

E. Less Restrictive Alternatives to the Big Three's ESG Quasi-Joint Venture and Balancing of the Competitive Effects

Because "overly restrictive restraint[s] 'invite[] suspicion" that [their] "real purpose" [is] to suppress competition," a joint venture will be allowed where there are no less restrictive alternatives to accomplish the venture's procompetitive effects or where those effects outweigh the potential anticompetitive harms.[167] The Big Three's efforts to encourage companies to disclose their ESG benchmarks could be achieved by other, possibly less restrictive alternatives such as federal disclosures. For example, in 2022, the SEC considered three rules proposals that would "require public companies to disclose climate-related risks that have a material impact on their business, operations, and financial condition" and to disclose "related quantitative information in a company's financial statements, as well as disclosure of a company's greenhouse gas emissions using the widely adopted GHG Protocol."[168] Whether the SEC's disclosures are comparable to those that the Big Three are promulgating requires more research, and is beyond the scope of this Note.[169] Regardless, a trier of fact should be prepared to determine whether the procompetitive effects of the Big Three's quasi-joint venture encourage companies to adopt ESG disclosure outweigh the anticompetitive ones. This will be an incredibly difficult inquiry. Although the anticompetitive effects of the Big Three's quasi-joint venture are potentially significant, and theoretically worsened by the Big Three's common ownership across several industries, there is a strong procompetitive justification for the Big Three's quasi-joint venture to encourage companies to adopt ESG disclosure measures and ultimately reduce their emissions. This is especially true if we are to combat the rapidly worsening effects of climate change.

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166. *See* Rushton, *supra* note 89 ("[A] lack of an ESG strategy will ultimately affect a company's access to public, and increasingly private, capital.").

167. Werden, *supra* note 149, at 138.

168. Jaime Lizárraga, *Meeting Investor Demand for High Quality ESG Data*, SEC. EXCH. COMM'N (Oct. 17. 2022), https://www.sec.gov/news/speech/lizarraga-speech-meeting-investor-demand-high-quality-esg-data.

169. *See* Javier El-Hage, *Fixing ESG: Are Mandatory ESG Disclosures the Solution to Misleading Ratings?*, 26 FORDHAM J. CORP. & FIN. L. 359, 369 (2021) (describing how the current voluntary disclosure system is misleading the public).

CONCLUSION

Many skeptics are using antitrust law to attack efforts to further the ESG movement. Some have argued that institutional investors' ESG agenda constitutes an unlawful "boycott" of the oil and gas industry.[170] Others have gone further and argued that institutional investors should be individually prosecuted under the Clayton Act for their common ownership in competing companies.[171]

Because the empirical evidence on the anticompetitive effects of common ownership—especially in the ESG space—is still subject to great scholarly debate, prosecuting institutional investors for their common ownership of competing companies under the Clayton Act would be unwise. This paper suggests instead that common ownership be used as a tool in the traditional joint venture's analytical toolbox. Triers of fact should use the potential threat of common ownership's unilateral and coordinated harm when considering the extent of a venture's anticompetitive effects. Because those harmful effects can be especially intense, a trier of fact should approach joint ventures involving common ownership with great hostility and allow them to proceed only where there are significant procompetitive justifications.

For example, this Note considered how common ownership might be utilized in the context of the Big Three's collective efforts to further the ESG movement. To the extent that the Big Three constitute a quasi-joint venture, a trier of fact should place special weight on its anticompetitive effects because the Big Three have a significant amount of common ownership. That is to say that even if the anticompetitive effects (e.g., profit reduction for shareholders) of the Big Three's quasi-joint venture to further ESG initiatives appear small, they should be treated as especially concerning because common ownership exacerbates anticompetitive effects. Even so, the Big Three's quasi-joint venture has strong procompetitive justifications that could combat even potentially strong procompetitive justifications. For example, the Big Three's quasi-joint venture helps to facilitate the creation of a new product—stock that focuses on both long-term profits and environmental concerns. Unlike ordinary consumers, the Big Three are in a potentially good position to monitor a company's ESG benchmarks and ultimately eliminate information asymmetry. Whether the procompetitive effects of such a venture ultimately outweigh the anticompetitive ones requires additional research, though they seem especially likely to if we wish to combat the rapidly worsening effects of climate change.

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170. *See Texas Comptroller Glenn Hegar Announces List of Financial Companies That Boycott Energy Companies*, *supra* note 1.

171. *See* Morenoff, *supra* note 2.

APPENDIX A

Table 1[172]:

Common Ownership Pairing	Vanguard Ownership (Firm 1)	Vanguard Ownership (Firm 2)	State Street Ownership (Firm 1)	State Street Ownership (Firm 2)	BlackRock Ownership (Firm 1)	BlackRock Ownership (Firm 2)
Chevron-Marathon P	0.0786	0.0935	0.067	0.0735	0.047	0.062
Chevron-Phillips	0.0786	0.1031	0.067	0.0699	0.047	0.0504
Chevron-Valero	0.0786	0.1036	0.067	0.0291	0.047	0.0587
Chevron-Exxon	0.0786	0.0855	0.067	0.0559	0.047	0.049
Marathon P-Phillips	0.0935	0.1031	0.0735	0.0699	0.062	0.0504
Marathon P-Valero	0.0935	0.1036	0.0735	0.0291	0.062	0.0587
Marathon P-Exxon	0.0935	0.0855	0.0735	0.0559	0.062	0.049
Marathon P-Chevron	0.0935	0.0786	0.0735	0.067	0.062	0.047
Phillips-Chevron	0.1031	0.0786	0.0699	0.067	0.0504	0.047
Phillips-Marathon P	0.1031	0.0935	0.0699	0.0735	0.0504	0.062
Phillips-Valero	0.1031	0.1036	0.0699	0.0291	0.0504	0.0587
Phillips-Exxon	0.1031	0.0855	0.0699	0.0559	0.0504	0.049
Valero-Chevron	0.1036	0.0786	0.0292	0.067	0.0587	0.047
Valero-Marathon P	0.1036	0.0935	0.0292	0.0735	0.0587	0.062
Valero-Phillips	0.1036	0.1031	0.0292	0.0699	0.0587	0.0504
Valero-Exxon	0.1036	0.0855	0.0292	0.0559	0.0587	0.049
Exxon-Chevron	0.0855	0.0786	0.0559	0.067	0.049	0.047
Exxon-Marathon P	0.0855	0.0935	0.0559	0.0735	0.049	0.062
Exxon-Valero	0.0855	0.1036	0.0559	0.0291	0.049	0.0587
Exxon-Phillips	0.0855	0.1031	0.0559	0.0699	0.049	0.0504

172. Calculations based on data collected in Table 1 are based on the process described by Lambert, *supra* note 106.

Table 1 (continued):

Common Ownership Pairing	MHHI Delta Numerator	MHHI Delta Denominator	Product of Pairing Market Share	Cross MHHI Delta
Chevron-Marathon P	0.0152	0.0129	0.0115	0.0136
Chevron-Phillips	0.0152	0.0129	0.0119	0.0140
Chevron-Valero	0.0129	0.0129	0.0129	0.0129
Chevron-Exxon	0.0128	0.0129	0.0306	0.0303
Marathon P-Phillips	0.0179	0.0180	0.0076	0.0076
Marathon P-Valero	0.0155	0.0180	0.0083	0.0071
Marathon P-Exxon	0.0151	0.0180	0.0196	0.0165
Marathon P-Chevron	0.0152	0.0180	0.0115	0.0097
Phillips-Chevron	0.0152	0.0181	0.0119	0.0100
Phillips-Marathon P	0.0179	0.0181	0.0076	0.0075
Phillips-Valero	0.0157	0.0181	0.0086	0.0074
Phillips-Exxon	0.0152	0.0181	0.0202	0.0170
Valero-Chevron	0.0129	0.0150	0.0129	0.0111
Valero-Marathon P	0.0155	0.0150	0.0083	0.0085
Valero-Phillips	0.0157	0.0150	0.0086	0.0089
Valero-Exxon	0.0134	0.0150	0.0221	0.0196
Exxon-Chevron	0.0128	0.0128	0.0306	0.0304
Exxon-Marathon P	0.0151	0.0128	0.0196	0.0231
Exxon-Valero	0.0134	0.0128	0.0221	0.0230
Exxon-Phillips	0.0152	0.0128	0.0202	0.0239
SUM				0.3022

Table 2[173]:

MHHI	MHHI Delta	HHI	Oil + Gas Integrated Operations Firm	Integrated Oil + Gas Operations Firm's Market Share	Five Largest Institutional Investors
3,968.26	3022.66	946.20	Chevron Corp.	0.1340	Berkshire Hathaway (8.55%), Vanguard (7.86%), State Street (6.70%), BlackRock (4.70%), Geode Capital (1.71%).
			Marathon Petroleum Corp.	0.0858	Vanguard (9.35%), State Street (7.35%), BlackRock (6.20%), Elliot Investment (2.36%), Geode Capital (1.93%).
			Phillips 66	0.0886	Vanguard (10.31%), State Street (6.99%), BlackRock (5.04%), Wells Fargo (2.91%), Geode Capital (2.09%).
			Valero Energy Corp.	0.0966	Vanguard (10.36%), State Street (2.91%), BlackRock (5.87%), Fidelity (3.72%), Charles Schwab (2.15%).
			Exxon Mobil Corp.	0.2283	Vanguard (8.55%), State Street (5.59%), BlackRock (4.90%), Fidelity (2.49%), Geode Capital (1.81%).

173. Tables 1 and 2 are based on the data from the following sources:

S&P 500 Energy Components, BARCHART, https://www.barchart.com/stocks/indices/sp-sector/energies (last visited Dec. 31, 2022).

XOM vs. Market Share Relative to its Competitors, as of Q3 2022, CSIMARKET, https://csimarket.com/stocks/competitionSEG2.php?code=XOM (last visited Dec. 31, 2022).

Conocophillips, CNN BUS., https://money.cnn.com/quote/shareholders/shareholders.html?symb=COP&subView=institutional (last visited Dec. 31, 2022).

Chevron Corp, CNN BUS., https://money.cnn.com/quote/shareholders/shareholders.html?symb=CVX&subView=institutional (last visited Dec. 31, 2022).

Marathon Petrolium Corp, CNN BUS., https://money.cnn.com/quote/shareholders/shareholders.html?symb=MPC&subView=institutional (last visited Dec. 31, 2022).

Phillips 66, CNN BUS., https://money.cnn.com/quote/shareholders/shareholders.html?symb=PSX&subView=institutional (last visited Dec. 31, 2022).

Exxon Mobil Corp, CNN BUS., https://money.cnn.com/quote/shareholders/shareholders.html?symb=XOM&subView=institutional (last visited Dec. 31, 2022).

Valero Energy Corp, CNN BUS., https://money.cnn.com/quote/shareholders/shareholders.html?symb=VLO&subView=institutional (last visited Dec. 31, 2022).

Table 3[174]:

Institutional Investor	2022 ESG-Related Shareholder Resolution	ExxonMobil	Investor Vote	Chevron	Investor Vote
BlackRock	Shareholder Resolution 1	Reduce Company Emissions and Hydrocarbon Sales	Against	Adopt Medium and Long-term GHG Reduction Targets	Against
	Shareholder Resolution 2	Report on Low Carbon Business Planning	Against	Report on Impacts of NetZero 2050 Scenario	Against
	Shareholder Resolution 3	Report on Scenario Analysis	For	Report on Reliability of Methane Emission Disclosures	For
	Shareholder Resolution 4	Report on Reducing Plastic Production	Against	N/A	N/A
	Shareholder Resolution 5	Report on Political Contributions	Against	N/A	N/A

174. Table 3 is based on data from the following sources:
Vote Bulletin: ExxonMobil Corporation, BLACKROCK (May 27, 2022), https://www.blackrock.com/corporate/literature/press-release/vote-bulletin-exxonmobil-may-2022.pdf. *Vote Bulletin: Chevron Corporation*, BLACKROCK (May 27, 2022), https://www.blackrock.com/ corporate/literature/press-release/vote-bulletin-chevron-may-2022.pdf. *Vote Bulletin – Exxon Mobil Corporation*, STATE STREET GLOBAL ADVISORS, https://www.ssga.com/library-content/pdfs/asset-stewardship/vote-bulletin-exxon.pdf (last visited Jan. 11, 2023). *Vote Bulletin – Chevron Corporation*, STATE STREET GLOBAL ADVISORS, https://www.ssga.com/library-content/pdfs/asset-stewardship/vote-bulletin-chevron.pdf (last visited Jan. 11, 2023). *Vanguard Proxy Voting Records*, VANGUARD, https://vds.issgovernance.com/vds/#/MjAxMA==/ (search "Exxon," select "multiple" fund name) (last visited Jan. 11, 2023). *Vanguard Proxy Voting Records*, VANGUARD, https://vds.issgovernance.com/vds/#/MjAxMA==/ (search "Chevron," select "multiple" fund name) (last visited Jan. 11, 2023).

Table 3 (continued):

Institutional Investor	2022 ESG-Related Shareholder Resolution	ExxonMobil	Investor Vote	Chevron	Investor Vote
State Street	Shareholder Resolution 1	Set GHG Emissions Reduction Targets Consistent With Paris Agreement Goal	Abstain	Adopt Medium and Long-Term GHG Emissions Reduction Targets	Against
	Shareholder Resolution 2	Report on Scenario Analysis Consistent with IEA's Net Zero by 2050	Abstain	Issue Audited Net-Zero Scenario Analysis Report	Against
	Shareholder Resolution 3	Report on Reducing Plastic Pollution	For	Oversee and Report on Reliability of Methane Emission Disclosures	For
	Shareholder Resolution 4	N/A	N/A	Oversee and Report a Racial Equity Audit	For
Vanguard	Shareholder Resolution 1	Adopt Medium and Long-Term GHG Emissions Reduction Tagets	Against	Adopt Medium and Long-Term GHG Emissions Reduction Tagets	Against
	Shareholder Resolution 2	Issue Audited Net-Zero Scenario Analysis Report	Against	Issue Audited Net-Zero Scenario Analysis Report	Against
	Shareholder Resolution 3	Oversee and Report on Reliability of Methane Emission Disclosures	For	N/A	N/A