



Yale University

Thurman Arnold Project

2024 Student Projects
Paper 7

Common Ownership: What We Know and Where to Go from Here

May 2024

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This paper provides antitrust enforcers and policymakers with an overview of the current state of the economic and legal literature on common ownership. It further suggests a potential framework for legal action under the existing antitrust laws, highlighting important considerations for bringing the first case under this new theory of harm. Throughout, the paper also identifies areas where additional information would be useful to better understand the incentives and mechanisms through which common ownership can result in anticompetitive outcomes and recommends the antitrust agencies use their investigative authority to gather such information.⁴

Common ownership refers to a setting in which multiple competing firms are owned, in part, by an overlapping set of investors. In this setting, the antitrust theory of common ownership points out that firms whose investors own shares in competing firms in the same industry may have less of an incentive to compete with those firms.⁵ Distinct from traditional antitrust theories of harm, the theory of common ownership depends on the incentives of investors, rather than the incentives of firms and firm managers alone.

The idea that common ownership can result in anticompetitive effects stems from the basic idea that owners and investors in firms seek to maximize their profits.⁶ These owners run the firm and, through various methods of corporate governance, make decisions in order to maximize their profits. These mechanisms can include appointing the CEO and firm officers, raising capital, voting in board meetings and elections, etc. Therefore, if investors hold shares in multiple competing firms, they may be able to use these mechanisms for exercising control over portfolio firms to implement a strategy of maximizing profits *across* the multiple competing firms rather than focusing on one individual firm. In other words, in industries where common ownership is pervasive, investors may be incentivized by their diversified holdings to maximize *industry* profit, rather than a single firm's profit.

Economic theory tells us that industry profits decline with the degree of competition in that industry.⁷ So investors seeking to maximize industry profits are less likely to incentivize the firms they own to compete vigorously with their competitors. This incentive structure links the increasingly widespread phenomenon of common ownership to potential anticompetitive effects in certain product markets.

The economics literature has not coalesced around a single mechanism by which these investor incentives affect anticompetitive outcomes. Regardless of the mechanism or cause, firms deciding not to compete with their competitors can have implications for consumers along the lines

⁴ Throughout the paper, we refer to the U.S. Department of Justice, Antitrust Division and the Federal Trade Commission as “the antitrust agencies” or “the agencies.”

⁵ Backus, Conlon, and Sinkinson, “The common ownership hypothesis: Theory and evidence.” *Brookings*, February 5, 2019. <https://www.brookings.edu/articles/the-common-ownership-hypothesis-theory-and-explanation/>

⁶ “Motivating the assumption, Friedman (1953) contends that investors will discipline firms that do not at least mimic profit-maximizing behavior.” Backus, Conlon, and Sinkinson, “Common Ownership in America: 1980-2017,” *American Economic Journal: Microeconomics*, 2021, 13(3): 273-308.

⁷ McAfee, R.Preston, “Introduction to Economic Analysis,” Section 7.2. <https://mc4f.ee/Papers/Introecon/IEA2007.pdf>

of the harms traditionally associated with the softening of competition: higher prices, lower quality, reduced output, and less innovation.⁸

While the common ownership hypothesis is an old idea that dates back to the 1980s,⁹ the idea has received renewed attention in recent years in large part due to increased investor concentration and the rise of institutional investors. A recent publication by the Washington Center for Equitable Growth points out that, “Recent research shows that there has been a dramatic increase in the extent of common ownership among U.S. publicly traded firms. BlackRock and Vanguard, for example, are now among the top five shareholders of almost 70 percent of the largest 2,000 publicly traded firms in the United States today, compared to 20 years ago, when that number was close to 0 percent for both firms.”¹⁰ Much of the increase in common ownership can be attributed to the increased popularity of diversified investment products, such as mutual funds and ETFs.¹¹

Recent empirical work which we describe in more detail in Section II identifies a rise in common ownership and suggests that this may have wide-ranging effects on the U.S. economy to the detriment of consumers.¹² In response, researchers have suggested various policy and legal interventions¹³ and antitrust agencies around the world have expressed an eagerness to better understand the issue.¹⁴ We summarize the most recent academic work on the potential anticompetitive effects of common ownership and provide recommendations for a set of actions that the antitrust agencies and policymakers can take to better understand the issue and address potential anticompetitive harm.

The rest of the paper is organized as follows. In Section II, we first provide evidence on the economics of common ownership, detailing sources, impact, mechanisms, and measurement. Thereafter, in Section III, we detail the legal landscape as it would apply to a case brought against a set of investors with common stock holdings; we propose that the first such case should be

⁸ For the remainder of this paper, we use terms including “anticompetitive harm,” “competitive harm,” and “competitive effects,” which should all be interpreted to include higher prices, lower quality, reduced output, and less innovation.

⁹ See Rotemberg (1984) and Bresnahan and Salop (1986).

¹⁰ Florian Ederer and Bruno Pellegrino, “Common ownership in the U.S. economy,” *Washington Center for Equitable Growth*, May 25, 2022. <https://equitablegrowth.org/common-ownership-in-the-u-s-economy/>

¹¹ Backus, Conlon, and Sinkinson, “The common ownership hypothesis: Theory and evidence,” *Brookings*, February 5, 2019. <https://www.brookings.edu/articles/the-common-ownership-hypothesis-theory-and-explanation/>.

¹² Ederer and Pellegrino, “Common ownership in the U.S. economy.” *Washington Center for Equitable Growth*, May 25, 2022. <https://equitablegrowth.org/common-ownership-in-the-u-s-economy/>.

¹³ See Azar and Tzanaki (2022); Antón, Ederer, Giné, and Pellegrino (2023); Posner (2020); Scott Morton and Hovenkamp (2018); Posner, Scott Morton, and Weyl (2017).

¹⁴ “State of UK Competition,” *Competition and Markets Authority*, April 2022.

https://assets.publishing.service.gov.uk/media/627e6cf6d3bf7f052d33b0ae/State_of_Competition.pdf ;

Commissioner Robert J. Jackson, Jr., “Common Ownership: The Investor Protection Challenge of the 21st Century,” *U.S. Securities and Exchange Commission*, December 6, 2018.

<https://www.sec.gov/news/testimony/jackson-testimony-ftc-120618>; “FTC Hearing #8: Common Ownership,” *U.S. Federal Trade Commission*, December 6, 2018. <https://ftc.gov/news-events/events/2018/12/ftc-hearing-8-common-ownership>.

brought against large common shareholders in a concentrated industry who have demonstrably leveraged their positions in a way that harms consumers. Finally, in Section IV, we conclude.

I. The Economics of Horizontal Shareholding

A. Background

Economic theory suggests that firms maximize their own profits.¹⁵ This maximization problem can be broken down into the decision problems of both investors and managers. Investors, who have a financial stake in a firm, generally want to maximize the returns on these investments. However, rather than managing firms themselves, investors appoint firm managers who have a fiduciary responsibility to act in their best interests.¹⁶ Through this duty, firm managers are accountable to firm owners and investors and face incentives to maximize investor returns. The economic assumption that firms act to maximize their own profits is the result of these combined relationships, incentives, and responsibilities. Throughout the 20th century, an array of economic research laid the foundation for the idea that firm managers seeking to maximize shareholder value will, in turn, maximize the firm's profit.¹⁷

As diversification has become a more popular and accessible investment strategy in recent years, many of the assumptions which underlie the theory that maximizing shareholder value is equivalent to maximizing own-firm profit have been called into question. Shareholders often have holdings in many different companies and may reasonably be interested in maximizing their total profits, regardless of which investments generate those profits. If each investor seeks to maximize profit across their entire portfolio, different investors may have different objectives with respect to the management decisions of each individual firm, particularly when different firms in their portfolios compete with each other.

The common ownership hypothesis asks: if an investor owns shares in multiple horizontally competing firms, does that investor have the incentive and ability to increase the value of their entire portfolio by softening the competition between those firms?

The idea that investors in multiple competing firms may have an incentive to soften competition between those firms is straightforward. In a competitive market, firms compete with each other for sales of one or more products. Firms employ a variety of competitive mechanisms in order to attract consumers and win sales from their rivals. These generally take the form of lower prices, improved quality, and increased innovation. Each of these competitive mechanisms benefits consumers but is more costly to the firm than the counterfactual wherein they could act less competitively without losing sales. The threat of losing sales to a competing firm drives a firm's

¹⁵ Schmalz 2018, Section 2.1. "The assumption of own-firm profit (or, more accurately, value) maximization has appeared in formal economic thinking at least since Fisher (1930). Indeed, the Fisher Separation Theorem, which stipulates that corporations maximize their own value, regardless of shareholder preferences, forms the core of much of financial economics theory that followed."

¹⁶ See https://www.law.cornell.edu/wex/fiduciary_duty

¹⁷ Schmalz 2018, Section 2.1. "A substantial literature in the 1970s develops sufficient conditions for unanimous shareholder support for profit maximization. Hart (1979) shows the essential assumption is that markets are competitive (rather than complete). Hart also anticipates the literature that followed by noting shareholders may not want firm-value-maximizing behavior when they hold shares in other firms, or when they are consumers of the firm's products."

willingness to employ these competitive strategies. If a firm did not have to worry about losing sales to a competitor, it would prefer to charge higher prices, decrease quality, or invest less in innovation because doing so would not be coupled with the threat of lost sales volume. In less competitive markets, firms charge higher prices and incur fewer costs for the sales of their products. Recognizing that profits increase with reduced competition provides the incentive for firms to collude with each other in order to avoid costly competition and underlies the idea that investors in multiple competing firms can have the incentive to soften competition between those firms.

The more challenging piece of the common ownership hypothesis to test is whether an investor who has an incentive to soften competition between competing firms in their portfolio can actually have the ability to do so. Traditionally, collusion between firms has been evaluated in the form of fixing prices, setting output caps, allocating sales markets, rigging bids for contracts or input goods, and a variety of other methods, all of which harm consumers. Because a firm engaging in such a collusive arrangement will always have the short-term unilateral incentive to “cheat” in order to capture additional sales, these methods of collusion require agreements, either explicit or implicitly understood, between firms. Antitrust enforcement has therefore focused primarily on such collusive agreements between firm managers or, in the context of merger analysis, on the probability that increased concentration can make such coordination more likely.

The theory of common ownership focuses instead on the role of investors, rather than managers and asks whether such collusive arrangements can be achieved, explicitly or implicitly, by firm managers responding to the incentives or explicit direction of shareholders who own shares in multiple competing firms without any explicit agreement between the managers of those firms themselves. An investor who owns shares in multiple competing firms in the same industry may be able to facilitate or encourage coordination between those firms through a variety of corporate governance mechanisms. As we describe in more detail below, if firm managers, who maximize shareholder value, understand or share these incentives, common owners may be able to facilitate reduced competition without an explicit arrangement between managers of competing firms. This presents a novel challenge for antitrust enforcement.

The common ownership hypothesis is not new. Rotemberg (1984) “presents a model in which firms, acting in the interest of their shareholders, tend to act collusively when their shareholders have diversified portfolios.”¹⁸ Bresnahan and Salop (1986) build on this idea in the context of joint venture agreements.¹⁹ A series of more recent empirical papers showed an association between common ownership and anticompetitive effects in certain markets and has sparked continued research and policy debate on the topic.

The question of whether common ownership can cause anticompetitive effects has gained increased attention as mutual funds, ETFs, and other investment products have gained popularity

¹⁸ Rotemberg, Julio, “Financial Transaction Costs and Industrial Performance.” *MIT*, 1984, [hereinafter “Rotemberg (1984)”], p. 1.

¹⁹ Bresnahan, Timothy and Salop, Steven, “Quantifying the Competitive Effects of Production Joint Ventures.” *Industrial Journal of Industrial Organization*, 1986 155-175 [hereinafter “Breshahan and Salop (1986)”].

and allowed investors to diversify their portfolios more easily. Institutional investment firms, including BlackRock, Vanguard, Fidelity, and StateStreet own a disproportionate share of U.S. stock. For example, a 2019 article in the Harvard Business Review finds that “One of either Blackrock, Vanguard, or State Street is the largest shareholder in 88% of S&P 500 companies. They are the three largest owners of most DOW 30 companies. Overall, institutional investors (which may offer both active and passive funds) own 80% of all stock in the S&P 500.”²⁰ As Azar, Schmalz, and Tecu (2018) point out, common ownership is particularly pronounced in certain industries, including retail pharmacies, banking, and airlines, where the previously mentioned institutional investors are among the largest shareholders in nearly every competing firm.²¹ Even in his early work on the topic, Rotemberg points out that mutual funds, “by lowering the costs of diversification naturally induce more collusion if managers follow the wishes of the ultimate recipients of dividends.”²²

The economic literature on common ownership has been confounded by papers that attempt to disprove the idea that common ownership can have anticompetitive effects.²³ We discuss some of these papers below as well. As a result, the antitrust agencies have received conflicting testimony at hearings about whether enforcement action may be appropriate. For example, at a December 2018 FTC hearing, SEC Commissioner Robert Jackson testified, “Although a detailed assessment of the methodological issues raised by this work is beyond the scope of these brief remarks, as a researcher my reaction is that we’re at the beginning, rather than the end, of the academic debate about concentrated common ownership. Like most landmark papers, the work by Professors Azar, Schmalz, Tecu, and Elhauge, for now, provide policymakers with more questions than answers.”²⁴ At the same hearing, Prof. Scott Hirst testified that “the conceptual and empirical support for the alleged mechanisms for linking common ownership with anticompetitive effects is weak.”²⁵

²⁰ Greenspon, Jacob, “How Big a Problem Is It That a Few Shareholders Own Stock in So Many Competing Companies?” *Harvard Business Review*, February 19, 2019. <https://hbr.org/2019/02/how-big-a-problem-is-it-that-a-few-shareholders-own-stock-in-so-many-competing-companies>

²¹ Azar, José and Schmalz, Martin C. and Tecu, Isabel, “Anticompetitive Effects of Common Ownership.” *Journal of Finance*, 73(4), May 10, 2018. <https://ssrn.com/abstract=2427345> [hereinafter “Azar, Schmalz, and Tecu (2018)”], Table 1.

²² Rotemberg (1984), p. 32.

²³ Lambert, Thomas and Sykuta, Michael, “Calm Down about Common Ownership.” *CATO Institute*, Fall 2018. <https://www.cato.org/regulation/fall-2018/calm-down-about-common-ownership>; Dennis, Patrick, Gerardi, Kristopher, and Schenone, Carola, “Common Ownership Does Not Have Anticompetitive Effects in the Airline Industry.” *The Journal of Finance*, August 21, 2022. <https://onlinelibrary.wiley.com/doi/full/10.1111/jofi.13176>; Kennedy, Pauline, O’Brien, Daniel, Song, Minjae, and Waehrer, Keith, “The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence.” *SSRN*, July 24, 2017. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3008331 [hereinafter “Kennedy, et.al (2017)”].

²⁴ “State of UK Competition,” *Competition and Markets Authority*, April 2022. https://assets.publishing.service.gov.uk/media/627e6cf6d3bf7f052d33b0ae/State_of_Competition.pdf; Commissioner Robert J. Jackson, Jr., “Common Ownership: The Investor Protection Challenge of the 21st Century,” *U.S. Securities and Exchange Commission*, December 6, 2018. <https://www.sec.gov/news/testimony/jackson-testimony-ftc-120618>.

²⁵ “FTC Hearing #8: Common Ownership,” *U.S. Federal Trade Commission*, December 6, 2018. <https://ftc.gov/news-events/events/2018/12/ftc-hearing-8-common-ownership>.

In our view, recent research has demonstrated clearly that common ownership can have an anticompetitive effect and that there are many potential mechanisms that can facilitate that effect. While many papers have correctly pointed out that researchers often cannot say for certain how common ownership may cause anticompetitive effects in a particular industry and reasonably criticized how these effects are measured in academic work, these challenges should not deter agencies, who have the ability to gather information not publicly available to researchers, from investigating further and potentially bringing enforcement action where appropriate.

B. Evidence of Potential Anticompetitive Effects

Common ownership is an increasingly prevalent feature of the American economy. Economists generally agree that common ownership is on the rise and that this trend is due, in part, to growing concentration among highly diversified institutional investors (such as index funds).²⁶ The question that follows, then, is the significance of such a trend. In recent years, there has been an explosion of research on the effects of common ownership on competition. This section summarizes some of the literature's most important findings.

The airline industry is among the areas most studied in the context of common ownership. Azar, Schmalz, and Tecu (2018) were among the first to measure common ownership's effect on product market competition in their seminal paper on the airline industry.²⁷ Using a reduced-form regression model, they find that airline ticket prices are, on average, 3% to 7% higher than they would be absent common ownership.

Beyond the airline industry, economists have identified price effects associated with common ownership in a variety of product markets. Azar, Raina, and Schmalz (2019) find that common ownership and cross-ownership are positively correlated with deposit account interest rates, maintenance fees, and fee thresholds.²⁸ Torshizi and Clapp (2021) find that, on average, soy, corn and cotton seed prices are 14.6% higher than they would be absent common ownership. Liu and Yao (2019) find that common ownership in the hospital industry increases hospital charges.²⁹

Furthermore, economists have identified anticompetitive effects of common ownership on innovation and entry decisions. Li, Liu, and Taylor (2020) find that when venture capitalists have shareholdings in start-ups with competing drug projects and one such project gets FDA approval,

²⁶ Backus, Matthew, Christopher Conlon, and Michael Sinkinson. "Common ownership in America: 1980–2017." *American Economic Journal: Microeconomics* 13, no. 3 (2021): 273-308 [hereinafter "Backus, Conlon, and Sinkinson, (2021)"].

²⁷ Azar, José, Martin C. Schmalz, and Isabel Tecu. "Anticompetitive effects of common ownership." *The Journal of Finance* 73, no. 4 (2018): 1513-1565.

²⁸ Azar, José, Sahil Raina, and Martin Schmalz. "Ultimate ownership and bank competition." *Financial Management* 51, no. 1 (2022): 227-269.

²⁹ Liu, Mengde, and Lu Yao. "Players behind the scenes: common ownership in the hospital industry." *Empirical Economics* (2023): 1-33.

the competing project at the other firm is more likely to be shut down.³⁰ Xie and Genakos (2020) find that pay-for-delay settlements are more likely with increased common holdings between generic and brand firms.³¹ Newham, Seldeslachts, and Banal-Estanol (2022) find that greater levels of horizontal shareholding between generic and brand firms reduce generic entry.³²

While numerous papers have been published attempting to demonstrate the anticompetitive effects of common ownership, some critics have pointed out limitations in this work. One common criticism focuses on the use of MHHI, a common metric used to quantify the presence of common ownership, and suggests that findings based on the use of MHHI are driven by endogeneity. For example, Dennis, Gerardi, and Schenone (2022) raise a number of endogeneity concerns with Azar, Schmalz and Tecu (2018) and argue that the correlation between common ownership and ticket prices pointed out in that paper may reflect reverse causality or may be the result of exogenous factors.³³ Critics also point out that observers should be hesitant to interpret the reduced form and correlational analyses presented in many papers as causal, given that we cannot directly observe the presence of mechanisms linking investor incentives to the ability for common owners to enact anticompetitive outcomes.

These critiques have largely been refuted by recent work. Elhauge (2020) provides a detailed overview of recent work that responds to various criticisms of earlier work on the anticompetitive effects of common ownership.³⁴ However, the most persuasive responses to these criticisms are the papers that present structural models, which identify specific causal mechanisms and demonstrate that anticompetitive effects of common ownership are robust to the methodological assumptions that critics have highlighted. These papers include Antón, Ederer, Giné, and Schmalz (2023) and Park and Seo (2019).³⁵

³⁰ Li, Xuelin, Tong Liu, and Lucian A. Taylor. *Do venture capitalists stifle competition*. Rodney L. White Center for Financial Research, 2019.

³¹ Xie, Jin, and Joseph Gerakos. "The anticompetitive effects of common ownership: the case of paragraph iv generic entry." In *AEA Papers and Proceedings*, vol. 110, pp. 569-572. 2014 Broadway, Suite 305, Nashville, TN 37203: American Economic Association, 2020.

³² Newham, Melissa, Jo Seldeslachts, and Albert Banal-Estanol. "Common ownership and market entry: Evidence from pharmaceutical industry." (2018).

³³ A number of papers make similar criticisms. These critics tend to focus on the use of MHHI, a common metric used to quantify the presence of common ownership in a particular market. We discuss this metric in more detail below. Dennis, Patrick, Kristopher Gerardi, and Carola Schenone. "Common ownership does not have anticompetitive effects in the airline industry." *The Journal of Finance* 77, no. 5 (2022): 2765-2798. *See also*, O'Brien, Daniel P., and Keith Waehrer. "The competitive effects of common ownership: We know less than we think." *Antitrust LJ* 81 (2016): 729. *See also*, Rock, Edward B., and Daniel L. Rubinfeld. "Defusing the antitrust threat to institutional investor involvement in corporate governance." *NYU Law and Economics Research Paper* 17-05 (2017); Kennedy et.al (2017).

³⁴ Elhauge, Einer, "How Horizontal Shareholding Harms Our Economy - And Why Antitrust Law Can Fix It." *Harvard Law School*, August 2, 2019.

³⁵ Park and Seo (2019) use a structural model of the airline industry which avoids certain endogeneity concerns to examine the effect of common ownership on airline ticket prices. Their findings are consistent with Azar, Schmalz, and Tecu (2018). Park, Alex Haerang, and Kyoungwon Seo. "Common ownership and product market competition: Evidence from the US airline industry." *Korean Journal of Financial Studies* 48, no. 5 (2019): 617-640.

Antón, Ederer, Giné, and Schmalz (2023) address many of the concerns about the measurement and causal mechanisms of common ownership described above by estimating a structural model.³⁶ The paper shows that “managerial incentives can serve as a mechanism that connects common ownership to softer competition” because common owners are “more willing to tolerate managerial slack and productive inefficiency at their portfolio firms.”³⁷ Specifically, the model predicts a “negative relationship between common ownership and the sensitivity of top management incentives to firm performance.”³⁸ Intuitively, competing firms often invest resources on innovation and productivity improvements in order to reduce costs and gain advantage over rival firms. However, if a common owner holds shares in multiple competing firms in the same market, the common owner can profitably incentivize the managers of their portfolio firms to withhold these costly investments without fear of losing out to a competitor. Across a wide variety of robustness checks that address the methodological critiques associated with the use of MHHI, Antón, Ederer, Giné, and Schmalz (2023) show that the degree of common ownership in a firm is associated with a reduction in the own-firm performance sensitivity of CEO compensation and with higher consumer prices.

Antón, Ederer, Giné, and Schmalz (2023) is an important advancement in our understanding of common ownership for several reasons. First, the paper employs a structural model, which addresses many of the criticisms of earlier work associated with measurement errors and reliance on particular metrics to quantify common ownership. The paper affirms that the central result that common ownership results in higher consumer prices is robust to the choice of which metric to use to quantify common ownership.³⁹ Second, the paper directly links common ownership to anticompetitive outcomes through a specific causal mechanism: executive compensation. Using a structural model that is based on a “conventional model of strategic product market competition,” Antón, Ederer, Giné, and Schmalz (2023) provide robust evidence that common ownership can have anticompetitive effects, even without “(i) owners having access to sophisticated market-level incentives or communications to steer product market behavior in different markets, (ii) top managers knowing the ownership structure of either their own firms or their competitors, (iii) top managers making detailed market-specific strategic choices (e.g., setting prices), or (iv) explicit or tacit collusion among managers, firms, or shareholders.”⁴⁰

C. *Causal Mechanisms*

Scholars have identified numerous plausible causal mechanisms through which firms may internalize shareholder incentives, each of which is supported by ample evidence in the corporate governance literature. This academic work is supported and complimented by public statements from institutional investors themselves that often describe engagement with firm managers as a selling point for their investment products. The proposed causal mechanisms include, but are not

³⁶ Antón, Ederer, Giné, and Schmalz, “Common Ownership, Competition, and Top Management Incentives.” *Journal of Political Economy*, Vol. 131 (5), May 2023.

³⁷ Antón, Ederer, Giné, and Schmalz (2023), p. 2.

³⁸ Antón, Ederer, Giné, and Schmalz (2023), p. 3.

³⁹ Antón, Ederer, Giné, and Schmalz (2023), Section 5.2.

⁴⁰ Antón, Ederer, Giné, and Schmalz (2023), pp. 3-4.

limited to, direct communication, board elections, executive compensation, the market for corporate control, and trading in the stock market.

Although management at closely-held firms may easily identify the corporate governance preferences of their shareholders, management at widely-held firms with a large number of diversified shareholders face a much more difficult task. Shareholders interact with firm management through various avenues in order to ensure managerial decision-making is aligned with their interests and goals.

All else equal, industry profits are greater when competition is weaker.⁴¹ Thus, it is natural that institutional investors with horizontal shareholdings (i.e. common owners) would benefit from less-vigorous competition in the markets in which their portfolio firms operate. Economists generally agree on this point in the common ownership literature. Critics most commonly question the mechanism through which -- and the extent to which -- the managers of portfolio firms internalize these incentives.

Critics of the common ownership hypothesis often point out that many of the proposed mechanisms by which common owners could communicate their incentives to firm managers (and incentivize the managers to act accordingly) are theoretical. Indeed, it is difficult for researchers and antitrust enforcers to observe these kinds of interactions, which are often not publicly disclosed. Given the substantial evidence related to the presence and potential effects of common ownership, the agencies should use their investigative authority to study how investors interact with firm managers. Information on the frequency and nature of communications between investors and firm managers, executive compensation structures, and board meeting minutes could be useful to the agencies and to future academic work. This is, perhaps, the piece of the common ownership hypothesis least well understood. However, by using their investigative authorities to study the potential causal mechanisms outlined in this section, the agencies have the ability to close the gap. A study that asks the top 5 institutional investment funds about the details of their relationships with portfolio firm managers could be a useful first step.

1. Horizontal shareholders can communicate directly with the managers of their portfolio firms.

In a recent survey of institutional investors, 63% admitted that they had engaged in direct discussions with managers at their portfolio firms.⁴² Let's consider, for example, BlackRock -- one of the "Big Three" index fund managers. In 2017, BlackRock's Global Head of Investment Stewardship described the institutional investor as "patient long-term capital" that focuses "heavily on governance and board oversight," going so far as to state that she expects an email from each of their portfolio firms *at least* once a year.⁴³ In the same year, BlackRock's stewardship

⁴¹ McAfee, R.Preston, "Introduction to Economic Analysis," Section 7.2.
<https://mc4f.ee/Papers/Introecon/IEA2007.pdf>

⁴² McCahery, Joseph A., Zacharias Sautner, and Laura T. Starks. "Behind the scenes: The corporate governance preferences of institutional investors." *The Journal of Finance* 71, no. 6 (2016): 2905-2932.

⁴³ John C. Wilcox, Getting Along with BlackRock, *Harvard Law School Forum on Corporate Governance* (Nov. 6, 2017), <https://corpgov.law.harvard.edu/2017/11/06/getting-along-with-blackrock>.

team issued a public statement explaining that it had voted against a director at one of its portfolio companies for upholding a policy against meeting with shareholders.⁴⁴ BlackRock's Chief Legal Officer, in an article co-authored by the Vice President of their Legal & Compliance Department, has indicated that BlackRock believes its direct communications with management yield "change through incremental, non-confrontational means."⁴⁵ BlackRock has thus, in no unclear terms, revealed that communicating with management is a central tenet of their modus operandi.

Black Rock is not the only institutional investor engaging directly with its portfolio firms' management teams. In 2018, BlackRock, Vanguard, and State Street were documented as having had private engagements with managers at 50%, 59%, and 70% of their portfolio firms, respectively.⁴⁶ It is unsurprising, then, that both Vanguard and State Street also consider direct engagement with management as an important part of their duty to their clients.⁴⁷

2. Horizontal shareholders vote in board elections.

In a recent survey of institutional investors, 53% admitted they had attempted to influence managers by voting against them in board elections.⁴⁸ Each of the "Big Three" index funds explicitly states that they consider their vote in board elections an important tool in their stewardship strategy. Azar (2017) shows that if managers at firms competing in an oligopolistic market care about either their vote share or their odds of re-election, then theory predicts that voting by horizontal shareholders will incline managers to lessen competition.⁴⁹

Critics have pointed to the fact that most board elections are uncontested as evidence that voting in board elections is not a plausible causal mechanism. After all, why would a director feel insecure about his or her re-election odds if there are no alternative candidates? As it turns out, even in uncontested elections, the odds that a director will depart the board, lose key committee seats, and get fewer directorships at other firms significantly increases as the share of votes withheld from that director increases.⁵⁰ Thus, directors are likely to seek the approval of investors, who in turn can communicate their incentives, even in uncontested elections.

⁴⁴ *Ibid.*

⁴⁵ Mallow, Matthew J., and Jasmin Sethi. "Engagement: The Missing Middle Approach in the Bebchuck-Strine Debate." *NYUJL & Bus.* 12 (2015): 385.

⁴⁶ Elhauge, Einer, "The Causal Mechanisms of Horizontal Shareholding." *Ohio State Law Journal*, 2021, p. 22.

⁴⁷ State Street Global Advisors. "2022 Asset Stewardship Report: Effective Board Oversight."

<https://www.ssga.com/us/en/intermediary/etfs/insights/asset-stewardship-report/#a>. ("... we believe it is part of our duty to our clients to carefully monitor corporate governance practices of investee companies and engage with them on these matters"). Vanguard. "Quarterly Engagement Report (October 1, 2023 – December 31, 2023)." ("We believe that ongoing engagements with leaders of the Vanguard-advised funds' portfolio companies are a valuable supplement to voting at shareholder meetings and support effective corporate governance at the companies in which the Vanguard-advised funds invest").

⁴⁸ McCahery, Joseph A., Zacharias Sautner, and Laura T. Starks. "Behind the Scenes: The Corporate Governance Preferences of Institutional Investors." *The Journal of Finance* 71, no. 6 (2016): 2905-2932.

⁴⁹ Azar, Jose. "Portfolio Diversification, Market Power, and the Theory of the Firm. Unpublished manuscript (2017).

⁵⁰ Aggarwal, Reena. Sandeep Dahiya & Nagpurnanand R. Prabhala, The Power of Shareholder Votes: Evidence from Uncontested Director Elections, 133 *J. FIN. ECON.* 134, 135–36, 141–47 (2019)/

Horizontal shareholders may be incentivized to vote in favor of directors who also sit on the board for competing firm(s). Interlocking directorates are prohibited by Section 8 of the Clayton Act, which states that "no person shall, at the same time, serve as a director or officer in any two corporations that are ... by virtue of their business and location of operation, competitors, so that the elimination of competition by agreement between them would constitute a violation of the antitrust laws."⁵¹ Insofar as such interlocks may facilitate collusive behavior, they may also constitute a violation of Section 1 of the Sherman Act by establishing a "combination...in restraint of trade." Despite such regulatory risk, Azar (2012) shows that common ownership correlates with a higher likelihood of overlapping directors.⁵²

3. Horizontal shareholders vote on executive compensation methods.

The method through which executives are compensated creates incentives that guide their decision-making. Executive compensation is often based on performance incentives. Efficient incentive-based compensation would be based entirely on that firm's performance relative to competitors.⁵³ However, stock options are another common method of compensation for executives, the value of which, one paper estimates, are driven 70% by industry performance, and a mere 30% by their firm's performance.⁵⁴ Because their value is mostly tied to *industry* performance, executive compensation tied to stock options can incentivize managers to maximize *industry* performance. This is an efficient outcome for highly diversified institutional investors, such as index funds. Accordingly, as described above, a cross-industry study found that firms operating in industries with greater degrees of horizontal shareholding tended to adopt methods of compensation that incentivize managers to maximize industry performance, thereby reducing their incentive to compete.⁵⁵

Relatedly, horizontal shareholders (except index funds) may sell, or threaten to sell, shares of a firm's stock to express disapproval of managerial decision-making or performance. In a recent survey of institutional investors, 56% admitted they had attempted to influence managers by selling their shares to express dissatisfaction.⁵⁶ Such sales by institutional investors would have the effect of depressing stock prices and, thus, are undesirable to managers for whom stock options comprise a significant portion of their compensation package.⁵⁷

⁵¹ Clayton Act, Section 8.

⁵² Azar, Jose. "A New Look at Oligopoly: Implicit Collusion Through Portfolio Diversification." Dissertation, Doctor of Philosophy, Princeton University (2012).

⁵³ Elhauge (2021) at p. 13

⁵⁴ Bebchuk, Lucian et al. "Pay Without Performance: The Unfulfilled Promise of Executive Compensation" (2004).

⁵⁵ Anton, Miguel, Ederer, Florian, and Martin C. Schmalz. "Common Ownership, Competition, and Top Management Incentives." *Journal of Political Economy* 131, no. 5 (2023).

⁵⁶ McCahery, Joseph A., Zacharias Sautner, and Laura T. Starks. "Behind the Scenes: The Corporate Governance Preferences of Institutional Investors." *The Journal of Finance* 71, no. 6 (2016): 2905-2932.

⁵⁷ Elhauge (2021) at p. 20.

D. *Measuring Common Ownership*

An important question for economists and enforcers alike to address is how best to measure the presence and effect of common ownership in a particular setting. In this section, we discuss two common metrics that economists have proposed to quantify the extent of common ownership: The Modified Herfindahl-Hirschman Index (MHHI) and profit weights.

1. MHHI

A common tool used by antitrust practitioners to assess concentration in a particular market is the Herfindahl-Hirschman Index (HHI).⁵⁸ HHI is an attractive tool for antitrust analysis for many reasons. From an economic standpoint, HHI is straightforward as it is directly derived from the objective function of a profit maximizing firm under the assumption of Cournot competition. Intuitively, HHI in an industry is related to a firm's ability to profitably price above the competitive level. From a practical standpoint, HHI can be calculated easily and provides an accessible benchmark by which to measure concentration in a particular industry.⁵⁹

The Modified Herfindahl-Hirschman Index (MHHI) was first introduced in the context of joint ventures, where one or more competitors purchase a financial stake in another competitor, as a way to “modify the standard [HHI] analysis to account for the various financial interest and control mechanisms that might govern joint venture agreements.”⁶⁰ O'Brien and Salop (2000) adapt the MHHI metric and provide a generalized formula that can be used to “measure the competitive effects of partial ownership under a variety of assumptions about the degree of influence owners have over the management of firms in which they have an interest.” The generalized MHHI framework has been adopted by numerous studies to measure presence and potential anticompetitive effects of common ownership in various settings.⁶¹ MHHI is used in many of the papers discussed above in Section II.B.

In a joint venture or under common ownership, firms that themselves have a financial interest in a competing firm or firms who are owned by investors that have financial interests in competing firms may consider the profits of their competitors when making their own competitive decisions. Taking these incentives into account, Bresnahan and Salop (1986) and O'Brien and Salop (2000) use a slightly modified version of the Cournot profit maximization function as a starting point for the MHHI derivation. Instead of choosing an output quantity that maximizes a firm's own profit, the MHHI derivation begins with the assumption that each firm chooses a quantity that maximizes the profit that the firm or its common owners will receive across all competing firms in the industry.⁶² This results in an MHHI term that is “equal to the HHI plus a

⁵⁸ As described in the 2023 Merger Guidelines, “The Agencies generally measure concentration levels using the Herfindahl-Hirschman Index (“HHI”). 2023 Merger Guidelines, p. 5.

⁵⁹ For an example of the application of HHI and how to calculate it, see 2023 Merger Guidelines, Section 2.

⁶⁰ Bresnahan and Salom (1986), p. 158.

⁶¹ See Azar, Schmalz, and Tecu (2018), for example.

⁶² For a complete derivation of the MHHI, see O'Brien and Salop (2000), p. 610.

set of terms reflecting the competitive effects of cross-ownership within the industry.”⁶³ Formally, for each firm j , who has investors, i ,

$$MHHI = HHI + \sum_j \sum_{k \neq j} \left(\frac{\sum_i \gamma_{ij} \beta_{ik}}{\sum_i \gamma_{ij} \beta_{ij}} \right) s_k s_j$$

Where γ_{ij} represents the weight the manager of firm j places on investor i , β_{ik} represents the financial share of investor i in firm $k \neq j$, β_{ij} represents the financial share of investor i in firm j , and $s_{j,k}$ represents the market share of each firm.

There are three key inputs to the MHHI calculation that are useful to discuss:

First, calculating MHHI, like HHI, depends on defining a relevant market. As in traditional antitrust analysis, the principles of market definition, as outlined in the Merger Guidelines, are designed to make indirect measures of market power, such as market shares, HHI, and MHHI, as informative as possible. We discuss market definition in the context of common ownership in Section III below.

Second, the MHHI calculation depends on information about the financial ownership share of each investor. For some investors, including large institutional investors, this information is gathered by the SEC and is readily available to the researcher or practitioner.⁶⁴ For other investors, this information may be difficult to gather. However, in the context of an investigation by the antitrust agencies, information on a firm's shareholders and their ownership stakes is likely within the scope of a reasonable information request.

Finally, the MHHI calculation requires information on the weight a firm manager places on each individual investor's profit. This is likely the most difficult component of the equation to measure precisely. In fact, in most academic applications of MHHI, researchers have made assumptions about how firms weigh the profits of each investor. One common assumption is known as proportional control, which assumes that a firm manager places weight on each shareholder in proportion to the share of financial ownership that the investor controls.⁶⁵ While the weight managers place on different investors may be difficult to quantify and is often not publicly available, the agencies may be able to gather quantitative and qualitative information during the course of an investigation that sheds light on the topic and allows them to employ reasonable assumptions in calculating MHHI.

Responding to the widespread use of MHHI in studies on common ownership, researchers have pointed out certain shortcomings of the metric and challenged whether it is appropriate to rely on MHHI in order to establish a link between common ownership and anticompetitive

⁶³ O'Brien and Salop (2000), p. 610.

⁶⁴ The SEC requires large investors to report investment holdings in form 13(f). See <https://www.investor.gov/introduction-investing/investing-basics/glossary/form-13f-reports-filed-institutional-investment>

⁶⁵ See O'Brien and Salop (2000), p. 583.

outcomes.⁶⁶ These criticisms can generally be categorized into three areas: endogeneity between both investment decisions and market concentration and market outcomes, challenges of measuring key inputs to the MHHI calculation, and unrealistic empirical properties.

The most substantial criticism of MHHI relates to the endogeneity between market concentration, common ownership and market outcomes (price, quality, innovation, etc.). The idea that market concentration and market outcomes can be simultaneously determined based on a variety of supply and demand factors is well established in the context of HHI.⁶⁷ Because “both are equilibrium outcomes that are determined by demand, supply, and the factors that drive them,” economists generally disagree with the use of HHI to predict price and other market outcomes.⁶⁸ The idea behind this objection is straightforward. If a firm reduces costs and passes on some of the cost savings to consumers in the form of reduced prices, it may be able to gain market share by attracting customers from competitors. In this situation, both prices and HHI would change. However, the causal link that drives both changes would not be directly related to concentration. Thus, an inference that the changed HHI *caused* the change in price would be misguided.

Similarly, the degree of common ownership in a market may also be correlated with concentration and market outcomes. For example, O’Brien and Waehrer (2017) illustrate how under certain standard assumptions, an increase in common ownership that results in an increase in one firm’s price may correspondingly result in either an increase or a decrease in HHI.⁶⁹ If, for example, a large firm that competes with numerous smaller firms experiences an increase in common ownership and, as a consequence, raises price, that firm may lose market share. The price increase may be profitable from the perspective of a common owner who would benefit from the increased profits of the smaller firms who recapture some of the sales that the large firm would lose as a result of the price increase. Accordingly, common ownership would increase, prices would increase, yet MHHI could either increase or decrease depending on the relative size of the changes in concentration and common ownership. This is just one example of how prices, common ownership, and concentration may be simultaneously determined. Because of these complex relationships, O’Brien and Waehrer conclude that “the relationship between price and the MHHI by itself does not reliably indicate the magnitude or even the direction of the effects of common ownership on price.”⁷⁰

While MHHI is an imperfect metric that has been fairly criticized in certain contexts, it is not necessary to discard the metric, and the results of analyses based on the use of it, entirely. While work that attempts to predict anticompetitive outcomes based on MHHI alone should be viewed with skepticism, much in the same way economists tend to disagree with the use of HHI to predict outcomes, it can be useful in quantifying how common ownership impacts market structures and the incentives firms face. Importantly, as we discuss in more detail below, in a case involving common ownership, the agencies need not rely on the MHHI metric to demonstrate a

⁶⁶ See, e.g., Gerardi (2023), Lambert and Sykuta (2018), O’Brien and Waehrer (2017).

⁶⁷ Miller, et. al (2022).

⁶⁸ Miller, et.al (2022), p.3.

⁶⁹ O’Brien and Waehrer (2017), Section III.

⁷⁰ O’Brien and Waehrer (2017), p. 17. Other papers, including Gerardi (2023), reach similar conclusions.

relationship between concentration and anticompetitive effects. An ex-post evaluation of whether common ownership has caused anticompetitive effects in a particular industry does not require an analysis of concentration. Instead, the competitive effects analysis should focus on the ways a specific set of commonly held firms have abused their market power.

2. Profit Weights

O'Brien and Salop (2000) put forth another measure for quantifying the presence of common ownership: profit weights. Economists generally agree that the profit weights approach is a robust method of measuring common ownership between two or more firms.⁷¹ One appealing feature of the profit weight metric is its relatively straightforward interpretation: for any two firms, the profit weight refers to the weight that a firm places on one dollar of profit from a rival firm.

The profit weights approach has, *inter alia*, three significant advantages over the Modified Herfindahl-Hirschman Index (MHHI) metric. First, profit weight is calculated at the firm level and, thus, is a more granular measure of common ownership. As a result of this firm-level granularity, profit weight values do not vary depending on market definition. Second, profit weights can be decomposed into two different intuitively meaningful components, which disentangles the effects of the sources of variation in profit weights.⁷² Third, profit weights are not calculated using market shares and thus are not subject to the same endogeneity concerns as MHHI.

Similar to MHHI, the profit weights metric requires two key inputs that are often difficult for academic researchers to quantify: the weight a firm places on each of its investors, γ , and the share that each investor holds in each portfolio company, β . Often, researchers assume that the weight a firm places on each of its investors' profits is proportional to the investors' cash-flow rights. The agencies are in a unique position to use their investigative authority to gather information that shines light on whether such an assumption reflects market realities. Furthermore, the agencies may demand access to complete information on investor shareholdings.

The profit weight metric is derived from the firm's objective function and has a strong theoretical basis. Below, we will explain how the profit weight is mathematically derived, using the notation of Backus, Conlon, and Sinkinson (2021).

Assumption: shareholders maximize the weighted sum of profits for their entire portfolio.

For all shareholders $s \in S$, suppose shareholder s has cash flow rights (denoted β_s) equal to the fraction of a firm f that they own. The profit of shareholder s (denoted ν_s) is given by the sum of profits across all firms $f \in F$ (where F represents all firms f in a shareholder's investment portfolio), weighted by cash flow rights:

⁷¹ Backus, Matthew, Conlon, Christopher, and Sinkinson, Michael, "Common Ownership in America: 1980-2017." *American Economic Journal: Microeconomics*, 2021 [hereinafter "Backus, Conlon, and Sinkinson (2021)"].

⁷² Backus, Conlon, and Sinkinson (2021), p. 279-280.

$$v_s = \sum_{\forall s} \beta_{fs} \pi_{fs} \quad (1)$$

Assumption: firms maximize the pareto-weighted sum of their investors' profits.

For all firms $f \in F$, suppose firm f maximizes the pareto-weighted sum of their investors' profits, where the pareto weights are denoted by γ_{fs} .

$$Q_f = \sum_{\forall s} \gamma_{fs} v_s \quad (2)$$

Corollary: firms place non-zero weight on a competitor's profits when commonly held by a shareholder.

By substituting the expression from Equation (1) into Equation (2), we may simplify firm f 's objective function as follows:

$$\begin{aligned} Q_f &= \sum_{\forall s} \gamma_{fs} \beta_{fs} \pi_f + \sum_{\forall s} \gamma_{fs} \sum_{\forall g} \beta_{gs} \pi_g \\ &\propto \pi_f + \sum_{\forall g} \left(\frac{\sum_{\forall s} \gamma_{fs} \beta_{gs}}{\sum_{\forall s} \gamma_{fs} \beta_{fs}} \right) \pi_g \end{aligned} \quad (3)$$

where $g \in G$ represents each of the firms in shareholder s 's portfolio, except for firm f . As such, if F is an n -vector then G is an $(n-1)$ -vector. In words, the objective function Q_f implies that firm f maximizes some combination of its own profits and the profits of the other firms in each of their investors' portfolios. The weight that firm f places on the profits of an investor s 's portfolio firm g may be extracted from the objective function Q_f as follows:

$$\kappa_{fg} = \frac{\sum_{\forall s} \gamma_{fs} \beta_{gs}}{\sum_{\forall s} \gamma_{fs} \beta_{fs}} \quad (4)$$

We refer to this weight (denoted by κ_{fg}) as a profit weight. The common ownership hypothesis predicts $\kappa_{fg} > 0$ (whereas own-firm maximization predicts $\kappa_{fg} = 0$) when $(\gamma_{fs}, \beta_{fs}, \beta_{gs}) > 0$ for two firms f and g that operate in the same industry or market.

As described above, the common ownership literature typically assumes proportional control, meaning the weight a firm f places on a shareholder s 's profits is equal to the fraction of firm f that they own (or $\gamma_{fs} = \beta_{fs}$). Thus, we may rewrite κ_{fg} as:

$$\begin{aligned}\kappa_{fg} &= \frac{\sum_{\forall s} \gamma_{fs} \beta_{gs}}{\sum_{\forall s} \gamma_{fs} \beta_{fs}} \\ &= \frac{\sum_{\forall s} \beta_{fs} \beta_{gs}}{\sum_{\forall s} \beta_{fs} \beta_{fs}}\end{aligned}\tag{5}$$

II. Framework for Bringing an Antitrust Case

Existing monopolization case law provides sufficient support for the agencies to bring an antitrust case against horizontal shareholders. In this section, we outline how the agencies might bring such a case, with particular focus on the first case involving a common ownership theory of harm. We focus on how an enforcement action against a set of investors with common stock holdings can proceed naturally under Section 7 of the Clayton Act. The first such case should be brought against large holders in a concentrated industry where there is evidence that this horizontal shareholding has caused anticompetitive harm.

A. Foundation for Bringing an Antitrust Case Against Partial-Owner Investors

The Clayton Act, Sherman Act, and antitrust case law provide a strong foundation for the agencies taking action to protect against various forms of conduct that may reduce competition. However, enforcement is traditionally directed at specific actions that firm management can take to collude with competitors or illegally acquire or maintain monopoly power, or at mergers between firms. Addressing anticompetitive harm that stems from common ownership will require the agencies to adapt the widely accepted tools for antitrust enforcement to harm stemming from the shareholdings and actions of investors, rather than the actions of firm management alone. In this subsection, we will examine the case law that can support an antitrust case against commonly held firms and their investors.

We conclude that a case can be brought against a set of investors who collectively possess and abuse monopoly power through common ownership under Section 7 of the Clayton Act, which addresses acquisitions. A Section 7 challenge could take the form of a challenge to a particular share acquisition or to show that a series of share acquisitions in the past has tended to create a monopoly. Alternatively, in cases where owners take some action that evinces anticompetitive intent to acquire or maintain monopoly power, a case could proceed under Section 2 of the Sherman Act directly.

Clayton Act Theory:

Section 7 of the Clayton Act is the most natural tool for the agencies to use to intervene in situations where common ownership may cause anticompetitive effects. This is true both in regard to proactive challenges of specific stock acquisitions and retrospective challenges of one or more stock acquisitions that have occurred over time. In sum, partial acquisitions, including stock acquisitions, should be subject to the same antitrust scrutiny as full acquisitions under the Clayton Act.

First, Section 7 provides a clear framework to challenge acquisitions of stock by a common owner that are likely to reduce competition or that have reduced competition already. Section 7 of the Clayton Act prohibits the acquisition of stock or assets where “in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly.” Clayton Act § 7. Liability is

triggered by an *acquisition*, which includes the acquisition of a minority stake.⁷³ In that case, the Supreme Court held that “A company need not acquire control of another company in order to violate the Clayton Act.”⁷⁴ The Court has affirmed that holding.⁷⁵ There are a number of historical examples of the antitrust agencies reviewing and challenging acquisitions of partial shares of a company.⁷⁶ In this regard, challenging a stock acquisition, whether proactively or retroactively, would not be a novel action for the agencies.

In addition to covering partial acquisitions in isolation, the agencies have also already established that the Clayton Act covers a series of acquisitions, which may include partial acquisitions, that may be considered together for enforcement purposes.⁷⁷ Indeed, the 2023 Merger Guidelines explicitly note that a “firm that engages in an anticompetitive pattern or strategy of multiple small acquisitions in the same or related business lines may violate Section 7, even if no single acquisition on its own would risk substantially lessening competition or tending to create a monopoly.” Such a strategy permits enforcement against a series of acquisitions, which the Supreme Court has recognized can have serious anticompetitive effects.⁷⁸ Indeed, it was the intention of Congress when passing the Clayton Act to target the cumulative process of acquisitions that may foster a significant reduction in competition without reaching the level of monopolization or a combination in restraint of trade.⁷⁹ The Guidelines note that “[w]here one or both of the merging parties has engaged in a pattern or strategy of pursuing consolidation through acquisition, the agencies will examine the impact of the cumulative strategy under any of the other Guidelines.” Partial acquisitions, including stock acquisitions, should be treated no differently.

This is especially relevant because horizontal shareholding involves holdings in multiple firms, which requires multiple acquisitions. There may be different types of such series that enforcers could consider targeting, such as a single firm buying incremental shares in multiple competing firms or multiple firms buying similar positions in competing firms. Either can represent a challengeable trend toward concentration. Under the Clayton Act theory, the agencies should evaluate these acquisitions, separately or together, as akin to a traditional partial acquisition and should consider their cumulative effect on competition.

Antitrust enforcement against common ownership may at first proceed most naturally when targeting share acquisitions that have clearly resulted in anticompetitive outcomes. Such an ex-post evaluation would be akin to a challenge of a consummated merger. Section VII also reaches these consummated mergers, permitting enforcers to evaluate retrospectively acquisitions that did not necessarily, at the time, appear problematic.⁸⁰ The Supreme Court has recognized that post-

⁷³ *Denver & Rio Grande v. United States*, 387 U.S. 485, 504 (1967).

⁷⁴ *Id.*

⁷⁵ See e.g., *United States v. E. I. Du Pont De Nemours & Co.*, 353 U.S. 586 (1957); *American Crystal Sugar Co. v. Cuban-American Sugar Co.*, 152 F.Supp. 387 (D.C.S.D.N.Y. 1957), *aff'd*, 259 F.2d 524 (C.A.2d Cir. 1958).

⁷⁶ See O’Brien and Salop (2000), pp. 560-561.

⁷⁷ See *United States v. Pabst Brewing Co.*, 384 U.S. 546, 550-552 (1966).

⁷⁸ See *Brown Shoe*, 370 U.S. at 334 (1962).

⁷⁹ H.R. Rep. No. 1191, 81st Cong., 2d Sess. 12-13 (1950)

⁸⁰ See, e.g., *Chi. Bridge & Iron Co. N.V. v. FTC*, 534 F.3d 410, 420-21 (5th Cir. 2008); *Steves and Sons, Inc. v. Jeld-Wen, Inc.* 3:16-cv-545, 2020 WL 2161319 (E.D. Va 2020).

acquisition actions are governed by Section VII.⁸¹ In *Du Pont*, the Court held that the evaluation of the competitive effects of a partial acquisition must occur at the time of the suit, not the time of acquisition. In that case, the Court found that a merger violated the antitrust laws decades after the merger was consummated. Thus, enforcers should be capable of pulling completed acquisitions into their common ownership actions, even those that did not seem troublesome in isolation or at the time they were completed.

Finally, Section 7's "solely for investment" exception typically will not apply because common owners influence the companies in which they invest.⁸² The provision creates a relatively narrow exception for owners that do not intend to or actually lessen competition by voting or other means of influence.⁸³ Courts have interpreted this provision to exclude only investment that does not lessen competition, rendering it largely inapplicable as a defense.⁸⁴ Moreover, the fact that a buyer acquires less than a controlling stake is not dispositive – any form of influence over the company will nullify the exception. An investment acquisition is still subject to subsequent review if it is later used to reduce competition.⁸⁵ As discussed in Section II.C, common owners can and do exert control over firms. Such control places their acquisitions beyond the narrow scope of the investment exception.

Having shown that regulators can reach the acquisitions in question, it remains to be shown that the effect of the acquisitions "may be substantially to lessen competition, or to tend to create a monopoly." The Clayton Act does not require showing exactly how the acquisition will engender these effects; the Clayton Act reaches any acquisition which *may* lessen competition. As described above, a substantial body of academic literature has shown that common ownership *may* result in anticompetitive effects in certain industries. We believe this evidence may eventually prove strong enough to establish a presumption against common ownership in certain concentrated settings. Similarly, in a traditional merger case, a showing based on HHI (which correlates in theory and practice with a likelihood of anticompetitive effects) is sufficient to establish a burden-shifting presumption without showing specifically how a proposed transaction will lessen competition. This presumption has been successful because it relies on research that has shown that high HHI or a significant reduction in HHI is correlated with anticompetitive outcomes.⁸⁶ However, establishing such a presumption will likely only come after further research and case law have developed. Thus, in the earliest cases brought under a theory of common ownership, we recommend identifying cases where there is strong evidence of anticompetitive intent, action, and effect.

⁸¹ *United States v. E. I. du Pont de Nemours & Co.*, 366 U.S. 316 (1961).

⁸² Scott Morton & Hovenkamp (2018) <https://www.yalelawjournal.org/feature/horizontal-shareholding-and-antitrust-policy>.

⁸³ 15 U.S.C. § 18 (2012) ("This section shall not apply to persons purchasing such stock solely for investment and not using the same by voting or otherwise to bring about, or in attempting to bring about, the substantial lessening of competition.").

⁸⁴ See, e.g., *Golden Grain Macaroni Co.*, 78 F.T.C. 63, 172 (1971).

⁸⁵ *United States v. E. I. du Pont de Nemours & Co.*, 366 U.S. 316 (1961).

⁸⁶ 2010 Horizontal Merger Guidelines, Section 5.3. See, e.g., *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 716 (D.C.Cir.2001) ("Sufficiently large HHI figures establish the FTC's prima facie case that a merger is anti-competitive.").

B. Bringing the First Case

In general, when bringing a case under a theory of harm for the first time, it is helpful to have particularly strong evidence and a clear way of tying the new theory to existing antitrust case law. In this section, we will outline how the agencies can bring a strong first case under Section 7 and what kinds of evidence and arguments will be most helpful.

1. Against whom should agencies bring the case?

The first antitrust case involving common ownership should be brought in an industry in which there is a strong presence of common ownership. Empirical studies have identified many such industries.⁸⁷ We know from the academic literature that a firm's incentives to soften competition due to common ownership are associated with i) the degree of similarity of the holdings of all of the firm's investors and ii) the concentration of the firm's investors (this is the decomposition of the profit weight term).⁸⁸ We note, though, that further research is still necessary to develop an understanding of what characteristics, levels, and distribution of common ownership are more strongly indicative of anticompetitive effects. As a starting point, we recommend the agencies review the available data on stock holdings of institutional investors to identify industries where the established criteria are present.

An ideal setting would be characterized by a set of firms that are all commonly held (where the investor holdings are both similar and concentrated), and where the commonly held firms possess a substantial (or, quite possibly, 100%) share in one or more product markets. While this may appear at first to be a difficult set of criteria to meet, in fact, existing work has identified many such settings.

Moreover, in the first case brought under the Common Ownership theory, it will be beneficial to have an abundance of proof that shareholders intended to leverage their position to encourage firm managers to soften competition. Just as in *United States v. Microsoft*, pushing the boundaries of antitrust law calls for an extraordinary set of facts.⁸⁹ While it may be clear from academic work that common owners have the incentive and ability to encourage firm management to soften competition, it is important that the first case presents clear evidence of shareholder action in order to convince a potentially skeptical judge or jury. Ideally, subsequent cases may be able to rely on economic theory, a presumption, or a showing of incentive and ability just as is done for many well established antitrust theories of harm today.

The discussion of causal mechanisms above provides a roadmap for where the agencies may look to identify evidence of shareholders' intent to monopolize a particular industry through their common holdings. For example, the agencies should carefully review communications between firm management and investors. It may also be useful to point out any differences in voting patterns between common owners and non-common owners. The agencies should focus

⁸⁷ See Azar, Schmalz, Tecu (2018), Table 1, for example.

⁸⁸ Backus, Conlon, and Sinkinson (2021).

⁸⁹ 253 F.3d 34 (D.C. Cir. 2001)

on evidence of intent to encourage firm managers to behave in ways that seem inconsistent with unilateral profit-maximizing behavior. Finally, as Anton, Ederer, Gine, and Schmalz (2022) establish, changes in executive compensation structures may be particularly indicative of attempts by shareholders to influence firm management.

Finally, it will be useful to bring the first case in a setting where there is clear evidence of anticompetitive effects. Evidence of intent to leverage common ownership to soften competition alone may constitute an illegal attempt to monopolize under the Sherman Act. However, it would be useful to show a clear connection between increased common ownership and increased prices, reduced quantity, or foregone innovation in a particular product market.⁹⁰ This would provide clear proof of violation of Clayton Act, Section 7. And, as a matter of precedent, it is important that the agencies establish and courts recognize the causal link between common ownership and anticompetitive outcomes.

2. Defining the Product Market

Often, antitrust cases turn on market definition. Cases that challenge common ownership will similarly need to define a relevant market in which to show that common ownership may be causing anticompetitive effects. As with any case, the market definition exercise sets out to identify an “effective area of competition” such that elimination of competition among competing firms in the market will likely result in a worsening of terms for consumers.^{91,92} In the case of common ownership, this exercise should be straightforward.

In fact, market definition in a common ownership case may prove to be a less burdensome exercise for the agencies as compared to other types of cases. In merger and anticompetitive conduct cases, the agencies are often focused on the actual or potential anticompetitive behavior of one or two firms. As a starting point, the market definition exercise, in line with the narrowest market principle, tends to involve a burdensome review of the particular characteristics of the focal firm(s)’ product offerings in order to determine which competing firms are the closest substitutes from the perspective of consumers. Candidate markets are generally formed by including a reasonable set of these close substitutes.

By contrast, in a common ownership case that aims to evaluate the impact of common ownership of many firms across an industry, the agencies are not focused on one or two focal firms. Instead, common ownership often reaches all or nearly all firms in an industry.⁹³ Thus, the

⁹⁰ For the purposes of this paper, we are focusing on product market effects. Further work may demonstrate that common ownership has anticompetitive effects on labor markets or input markets.

⁹¹ 2023 Merger Guidelines, Section 4.

⁹² See 2023 Merger Guidelines, Section 4.4 for a discussion on the role of properly defined relevant antitrust markets in analyzing competitive effects. A properly defined market ensures that subsequent analyses of market power and concentration are as informative as possible. A market that is too narrowly defined will exclude relevant substitutes and overstate the competitive significance and market power of included firms. Likewise, a market that is too broadly defined will likely understate the competitive significance and market power of included firms.

⁹³ See Azar, Schmalz, and Tecu (2018), Table 1 on the technology, pharmacy, banking, and airline industries, for example.

agencies should use all of the commonly held firms as a starting point for identifying a candidate market and may not need to look any farther to define a relevant market.

Turning to the airline industry, for example, in a market definition exercise related to the proposed merger of two airlines, the agencies may begin by identifying the different products (routes) on which the two merging airlines compete.⁹⁴ A reasonable candidate market in which to evaluate the potential competitive impact of a merger between two airlines might be the flights between New York and Boston, for example, and, correspondingly, a reasonable candidate set of market participants would be the set of airlines that operate on that route. As part of a complete market definition exercise in this setting, the agencies would likely need to undertake the difficult exercise of identifying all the routes on which the two merging airlines compete. Then, within each of these routes, the agencies would need to identify key competitors and perform hypothetical monopolist tests or similar analyses to define relevant markets.⁹⁵

By contrast, in the common ownership setting, Azar, Schmalz, and Tecu (2018) find that there is a high degree of overlapping ownership between nearly all of the domestic U.S. airlines.⁹⁶ If nearly every domestic flight is operated by an airline whose top shareholders also own shares in their competitors, the agencies need not concern themselves with the burdensome exercise of evaluating close substitutes for the focal firms and determining cleanly-drawn candidate markets at the route level. In this scenario, a relevant market may simply be all U.S. domestic airline routes. While such a market would likely be unhelpful in evaluating the potential anticompetitive effects of a merger between two airlines who do not operate on every route and may face strong competition on certain routes, it may be useful in this context where it is nearly impossible for a consumer to substitute away from a commonly owned airline product. What may traditionally be considered an overly broad market in other types of cases could be an appropriate relevant market in a common ownership case.

⁹⁴ Commonly, relevant markets in the airline industry are defined at the individual route level because consumers may substitute across airlines within a given route, but are unlikely to substitute one route for another.

⁹⁵ As a part of this step, the agencies will likely have to undertake the difficult and somewhat subjective exercise of evaluating who the close competitors are to the focal (merging) firms in each relevant market. For example, if this were a hypothetical merger between American Airlines and Delta Airlines, the agencies may need to evaluate whether United Airlines is a closer substitute and, if one is included in the candidate market, whether the other should be included as well.

⁹⁶ Azar, Schmalz, and Tecu (2018), p.16. “To shed light on the extent of common ownership in the current U.S. airline industry, we list the top-10 shareholders and their ownership percentage as of the fourth quarter of 2016 for a sample of airlines in Table I. Note that American Airlines’ top-seven shareholders (who jointly control 49.55% of the stock) are also among the top-10 investors of Southwest Airlines and various other competitors. Similarly, each of Southwest’s top-six shareholders is among the top-10 shareholders of American and Delta, and five of them are among the top-10 holders of United as well.”

Table I
Illustrative Cases of Within-Industry Common Ownership Links.

This table shows the largest (institutional and non-institutional) beneficial owners and corresponding stakes for an illustrative sample of U.S. publicly traded natural competitors as of 2016Q2. The data source is *S&P Capital IQ*. Panel C corresponds to Azar, Raina, and Schmalz (2016). Berkshire's holdings in Bank of America (*) are warrants without voting rights. Panel D reflects holdings as of 2016Q4.

Panel A: Technology Firms					
<i>Apple</i>		<i>Microsoft</i>			
	[%]		[%]		
Vanguard	6.05	Vanguard	6.41		
BlackRock	5.72	BlackRock	5.80		
State Street	3.82	Capital Research	4.76		
Fidelity	2.34	- Steve Ballmer -	4.24		
Northern Trust Corporation	1.26	State Street	3.80		
		- Bill Gates -	2.54		
		T. Rowe Price	2.27		

Panel B: Pharmacies					
<i>CVS</i>		<i>Walgreens Boots Alliance</i>		<i>Rite Aid</i>	
	[%]		[%]		[%]
Vanguard	6.66	-Stefano Pessina-	13.06	Vanguard	7.24
BlackRock	6.02	Vanguard	5.58	BlackRock	4.20
State Street	4.00	BlackRock	4.55	Arrowgrass Capital	3.55
Fidelity	3.67	KKR	3.38	Franklin Resources	2.87
Wellington	2.37	State Street	3.34	Pentwater Capital	1.89
		T. Rowe Price	2.70		

Panel C: Banks					
<i>JPMorgan Chase</i>		<i>Bank of America</i>		<i>Citigroup</i>	
	[%]		[%]		[%]
Vanguard	6.28	Berkshire Hathaway*	6.90	BlackRock	6.43
BlackRock	6.28	Vanguard	5.94	Vanguard	5.96
State Street	4.12	BlackRock	5.94	State Street	4.04
Capital Research	3.68	State Street	4.01	Fidelity	3.00
Fidelity	2.10	Fidelity	2.37	Invesco	1.67

<i>Wells Fargo</i>		<i>PNC Financial</i>		<i>U.S. Bancorp</i>	
	[%]		[%]		[%]
Berkshire Hathaway	10.46	Wellington	8.34	BlackRock	6.51
Vanguard	5.67	Vanguard	6.30	Berkshire Hathaway	5.94
BlackRock	5.42	BlackRock	5.03	Vanguard	5.59
State Street	3.68	State Street	4.33	Fidelity	4.12
Wellington	2.55	Barrow Hanley	3.71	State Street	3.84

Source: Azar, José, Schmalz, Martin, and Tecu, Isabel, "Anticompetitive Effects of Common Ownership." *Journal of Finance* 73(4), 2018, Table 1.

Table I
Illustrative Cases of Within-Industry Common Ownership Links (continued)

Panel D: Airlines					
<i>Delta Air Lines</i>		<i>Southwest Airlines Co.</i>		<i>American Airlines</i>	
	[%]		[%]		[%]
Berkshire Hathaway	8.25	PRIMECAP	11.78	T. Rowe Price	13.99
BlackRock	6.84	Berkshire Hathaway	7.02	PRIMECAP	8.97
Vanguard	6.31	Vanguard	6.21	Berkshire Hathaway	7.75
State Street Global Advisors	4.28	BlackRock	5.96	Vanguard	6.02
J.P. Morgan Asset Mgt.	3.79	Fidelity	5.53	BlackRock	5.82
Lansdowne Partners Limited	3.60	State Street Global Advisors	3.76	State Street Global Advisors	3.71
PRIMECAP	2.85	J.P. Morgan Asset Mgt.	1.31	Fidelity	3.30
AllianceBernstein L.P.	1.67	T. Rowe Price	1.26	Putnam	1.18
Fidelity	1.54	BNY Mellon Asset Mgt.	1.22	Morgan Stanley	1.17
PAR Capital Mgt.	1.52	Egerton Capital (UK) LLP	1.10	Northern Trust Global Inv	1.02
<i>United Continental Holdings</i>		<i>Alaska Air</i>		<i>JetBlue Airways</i>	
	[%]		[%]		[%]
Berkshire Hathaway	9.20	T. Rowe Price	10.14	Vanguard	7.96
BlackRock	7.11	Vanguard	9.73	Fidelity	7.58
Vanguard	6.88	BlackRock	5.60	BlackRock	7.33
PRIMECAP	6.27	PRIMECAP	4.95	PRIMECAP	5.91
PAR Capital Mgt.	5.18	PAR Capital Mgt.	3.65	Goldman Sachs Asset Mgt.	2.94
State Street Global Advisors	3.45	State Street Global Advisors	3.52	Dimensional Fund Advisors	2.42
J.P. Morgan Asset Mgt.	3.35	Franklin Resources	2.59	State Street Global Advisors	2.40
Altimeter Capital Mgt.	3.26	BNY Mellon Asset Mgt.	2.34	Wellington	2.07
T. Rowe Price	2.25	Citadel	1.98	Donald Smith Co.	1.80
AQR Capital Management	2.15	Renaissance Techn.	1.93	BarrowHanley	1.52
<i>Spirit Airlines</i>		<i>Allegiant Travel Company</i>		<i>Hawaiian</i>	
	[%]		[%]		[%]
Fidelity	10.70	Gallagher Jr., M. J. (Chairman, CEO)	20.30	BlackRock	11.20
Vanguard	7.41	BlackRock	8.61	Vanguard	10.97
Wellington	5.44	Renaissance Techn.	7.28	Aronson, Johnson, Ortiz, LP	5.99
Wasatch Advisors Inc.	4.33	Vanguard	6.65	Renaissance Techn.	4.67
BlackRock	3.77	Fidelity	5.25	Dimensional Fund Advisors	3.17
Jennison Associates	3.49	Franklin Resources	4.52	State Street Global Advisors	2.43
Wells Capital Mgt.	3.33	Wasatch Advisors Inc.	4.39	PanAgora Asset Mgt.	2.22
Franklin Resources	2.79	T. Rowe Price	4.23	LSV Asset Management	2.22
OppenheimerFunds.	2.67	TimesSquare Capital Mgt.	3.91	BNY Mellon Asset Mgt.	1.84
Capital Research and Mgt.	2.64	Neuberger Berman	3.07	Numeric Investors	1.79

Source: Azar, José, Schmalz, Martin, and Tecu, Isabel, “Anticompetitive Effects of Common Ownership.” *Journal of Finance* 73(4), 2018, Table 1.

In general, when evaluating the market power of many commonly held firms (nearly the entire industry in this example), it may be appropriate to draw a relevant antitrust market around a large group of differentiated products (i.e. airline routes), understanding (as described by the Guidelines) that multiple underlying narrower relevant product markets could potentially be drawn as well.⁹⁷ Accordingly, if the first common ownership case is brought in an industry with pervasive common ownership, the agencies need not concern themselves with the burdensome questions of market definition that have complicated other types of antitrust cases. Furthermore,

⁹⁷ In some situations it may be necessary to precisely define these narrower markets as well. For the first case, it may be helpful to define both types of markets. In the airline example, the agencies could define the domestic U.S. airline route market as well as a smaller New York to Boston route, for example. It may be helpful to demonstrate that in this context, the share of the commonly held firms would be nearly identical (~100%).

in a broadly defined market (such as all U.S. domestic flights) the Hypothetical Monopolist Test should easily be satisfied.

After defining a relevant market, the agencies would need to demonstrate that the commonly held firms possess market power in that relevant market. This, too, should be no different than in a traditional antitrust case, but will likely be much less burdensome.⁹⁸ In a relevant market that predominantly includes commonly held firms, as described above, demonstrating market power among the commonly held firms should be straightforward. Azar, Schmalz, and Tecu, Table 1 outlines many industries that may be good candidates for the first case. For example, given that nearly all domestic airlines are commonly held, it would not be difficult to prove that the common owners collectively possess market power in a domestic airline market.

3. Identifying the Trend Towards Concentration

Any single purchase of shares that contributes towards common-ownership conditions is likely not large enough to trigger scrutiny. But agencies should consider the state of concentration and competition in a product market as a whole when identifying enforcement opportunities. As per the merger guidelines, “Mergers Should Not Entrench or Extend a Dominant Position.”⁹⁹ Via the Clayton Act, Congress sought “to permit intervention in a cumulative process when the effect of an acquisition may be a significant reduction in the vigor of competition....”¹⁰⁰ Thus, enforcement may follow a small purchase by a common owner even if their existing holdings were acquired too long ago to be challenged (though, of course, the laches defense is not available against suits brought by the United States Government). Nevertheless, this stated goal of avoiding entrenchment is clearly served in an action against a common owner that seeks to expand their holdings.

A key objective of the 2023 merger guidelines is to ensure that mergers do not “Further a Trend Toward Concentration.”¹⁰¹ The Supreme Court has explained that “a trend toward concentration in an industry, whatever its causes, is a highly relevant factor in deciding how substantial the anticompetitive effect of a merger may be.”¹⁰² As discussed above, it is appropriate for the agencies to consider a series of stock acquisitions in its entirety in a common ownership case.

4. Identifying Anticompetitive Effects

In the first case against common ownership, it will be particularly important for the agencies to demonstrate that common ownership has caused clear anticompetitive effects in one or

⁹⁸ As in other types of antitrust cases, direct evidence of market power, such as high markups or reduced quality, or market shares can be used to demonstrate the existence of market power in a relevant market.

⁹⁹ See, e.g., *FTC v. Procter & Gamble Co.*, 386 U.S. 568, 577-78 (1967).

¹⁰⁰ H.R. Rep. No. 81-1191, at 8 (1949)

¹⁰¹ See, e.g., *Gen. Dynamics*, 415 U.S. at 497-98; *United States v. Pabst Brewing Co.*, 384 U.S. 546, 552-53 (1966).

¹⁰² *Pabst Brewing* (1966)

more relevant markets.¹⁰³ Importantly, common ownership may manifest itself differently in different industries. A competitive effects analysis is likely to be specific to facts and locus of competition in that industry.

The research described above in Section II.B has demonstrated that increased common ownership is generally associated with anticompetitive outcomes. Much of this research on competitive effects has attempted to directly measure the impact of common ownership on competitive outcomes such as price, quantity, quality, and innovation. However, as we describe, these papers have often been subject to a variety of critiques that would likely be leveraged against the agencies in attempting to prove competitive effects in a common ownership case. There are a variety of strategies the agencies should employ in order to preempt these criticisms and provide robust evidence of the effect of common ownership in the first case:

- The agencies should rely on the profit weights measurement to quantify the extent of common ownership in a particular industry. This measurement is the most well accepted in the literature and is directly derived from a firm’s profit maximization function under a model of Cournot competition.¹⁰⁴
 - Through investigation, the agencies should gather case-specific information to inform assumptions about investor control and shareholdings.
- The agencies should use their investigatory powers and documents produced in discovery to provide clear evidence that certain well-accepted causal mechanisms are present in the particular setting at issue.
 - We outline these mechanisms above in Section II.C.
 - Particularly persuasive evidence may include adjustments to executive compensation packages that make them less performance sensitive or direct communication between investors and firm management.¹⁰⁵
- The agencies should demonstrate that firm managers have taken action consistent with the incentives of common owners to increase price, reduce quantity, or withhold quality improvements or innovation efforts. Strong evidence would include showing that such actions were inconsistent with the unilateral profit-maximizing incentives of commonly held firms.

So far, only the most recent academic research has been able to provide clear evidence that common ownership has directly *caused* anticompetitive outcomes in a specific market via particular causal mechanisms.¹⁰⁶ For the most part, research has approached the issue in pieces, either (i) demonstrating the presence of common ownership, (ii) showing that common ownership can be associated with anticompetitive outcomes, or (iii) proposing causal mechanisms through which

¹⁰³ With more research and a record of helpful case law, it may be possible to establish a presumption that common ownership causes anticompetitive effects. This may eventually ease the burden that the agencies will initially face in demonstrating on a case-by-case basis that common ownership has caused specific anticompetitive outcomes. The papers by Antón, Ederer, Giné, and Schmalz (2023) and others involving structural models are a good starting point in providing evidence that common ownership causes increased prices across various industries.

¹⁰⁴ See, e.g., Backus, et. al. (2021) and Antón, Ederer, Giné, and Schmalz (2023).

¹⁰⁵ See, e.g., Elhague (2017) and Antón, Ederer, Giné, and Schmalz (2023).

¹⁰⁶ As discussed above in Section II.B, one notable exception to this is Antón, Ederer, Giné, and Schmalz (2023).

common owners can communicate their incentives to firm management in theory. The literature has yet to connect all three components in a single setting, mostly due to the difficulty of gathering information necessary to demonstrate the presence of the proposed causal mechanisms. Information needed to understand whether certain causal mechanisms are at play is often private. For example, information such as the frequency and nature of communications between investors and firm management, details of executive compensation, information on costs, margins, and plans for productivity improvement and innovation are generally not publicly available. However, during the course of an investigation, the agencies should be able to gain access to this information. In this way, the agencies have an important role to play in advancing our understanding of common ownership by demonstrating a clear link between common ownership and anticompetitive effects via one or more specific causal mechanisms at play in a relevant market.

C. Additional Evidence and Arguments

In addition to the Clayton Act theory described above, the Sherman Act can also be a useful tool in a case involving common ownership.

1. Contracts, Combinations, and Conspiracies

While the Sherman Act, and antitrust laws in general, have been widely applied to prevent firms themselves conspiring with each other to reduce competition, the text of the Sherman Act does not clearly define the contracts, combinations, and conspiracies it is intended to cover. In fact, the history of the Sherman Act points to an understanding of these terms in the context of trusts, which are “relationship[s] in which one person holds title to property, subject to an obligation to keep or use the property for the benefit of another.”¹⁰⁷ In the modern day, a “trust” may more closely resemble a set of investors than a specific firm. The agencies can draw upon the history of the Sherman Act and the plain-language use of the word “trust” to motivate the law’s applicability to enjoining antitrust harm that stems from common ownership.

The Sherman Act is widely understood to have been passed in 1890 in response to the rise of trusts, which became increasingly popular towards the end of the 1800s. At this time, there was no federal law allowing for businesses to incorporate in multiple states.¹⁰⁸ As a result, corporations that operated in more than one state often had to incorporate separately in each state. Rockefeller himself is quoted complaining about the difficulty of doing so, stating that “Our federal form of government, making every corporation created by a state foreign to every other state, renders it necessary for persons doing business through corporate agency to organize corporations in some or many of the different states in which their business is located.”¹⁰⁹

¹⁰⁷ <https://www.irs.gov/charities-non-profits/definition-of-a-trust>

¹⁰⁸ “The modern form of jurisdictional competition, which results from businesses’ freedom to incorporate in any state, irrespective the location of their operations, did not exist in the antebellum United States.” Hilt (2016), “Corporation Law and the Shift toward Open Access in the Antebellum United States.”

¹⁰⁹ Chernow, Ron. “Titan.” p. 197.

Trusts were created in order to circumnavigate these difficulties. Standard Oil general solicitor Samuel C. T. Dodd is credited with drafting the Standard Oil 1882 Trust Agreement, which was designed to concentrate control of Standard Oil's multi-state businesses in the hands of Standard Oil's owners despite the lack of federal incorporation law.¹¹⁰ Historian Ron Chernow writes, "As Dodd noted, this elaborate stock swap would create a union **not of corporations but of stockholders**, ensuring that the companies could behave in concert without running afoul of the law. [emphasis added]."¹¹¹ Just as the trusts of the 1800s consisted of shareholders of various companies combining with the intent to organize and coordinate business across these companies, the "trusts" of today may consist of large, institutional investors seeking to align their various portfolio holdings in order to maximize profit across all of these firms.

2. Sherman Act Section 2

Section 2 of the Sherman Act deems it unlawful to "monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce." There are three offenses therein, monopolization, attempted monopolization, and conspiracy to monopolize. Under this theory, common owners could be held liable for monopolizing if: (i) courts deem common ownership to have facilitated anticompetitive effects, or (ii) some commonly owned firms take anticompetitive action to prevent the disruption of their monopoly power.¹¹²

The monopolization offense consists of "1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." *United States v. Grinnell Corp.*, 384 U.S. 563, 570--71 (1966). To satisfy the first element, a firm must have monopoly power in the market in question. As discussed earlier, it's likely that commonly held firms can be found to possess substantial market share in a variety of relevant markets. To satisfy the second, the firm must also have taken some anticompetitive action to either acquire or maintain this monopoly power.

To apply this theory to common ownership, the agencies will need to first show that common ownership creates monopoly power. This requires a reverse theory of monopoly. Rather than one firm holding a substantial share in a relevant market, a firm is owned (in significant part) by similarly-positioned investors who are also part owners in competing firms. Monopolization is not specifically defined in Section 2 and is not limited to a particular set of market participants. Thus, it can reasonably be construed to describe a monopoly that stems from investors with horizontal ownership should the commonly held firms exercise monopoly power.

The second requirement remains to be satisfied. Section 2 makes unlawful only monopoly power acquired by improper means or exercised in a way to prevent competition. To satisfy this element, the agencies must show that investors have taken some improper action that constitutes

¹¹⁰ Chernow, pp. 198-199.

¹¹¹ Chernow, p. 198.

¹¹² This may include buying shares of a maverick, non-commonly-held firm.

the “willful acquisition or maintenance” of that power to reduce competition. This could take the same form as many of the anticompetitive actions and effects discussed above, including altering executive compensation, exercising their voting rights while holding private information about other companies, or excluding a maverick (non-commonly held) firm that would stoke competition.

Under the Sherman Act, enforcers could similarly bring actions for an attempt to monopolize or a conspiracy to monopolize. To prove an attempt to monopolize, an enforcer must show “(1) that the defendant has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power.” *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993). A conspiracy charge could be brought as the result of common owners acting in concert because of their aligned interests. In the first case, which should have strong evidence of anticompetitive intent and effect, proving such a conspiracy may be straightforward.

3. Sherman Act Section 1

Finally, enforcers can also draw on Section I of the Sherman Act when targeting completed acquisitions that have already wrought anticompetitive effects. Section I prohibits any contract or combination in restraint of trade. However, it is not an incipiency statute – winning under Section I requires a showing of actual anticompetitive effect. Thus, even an attempt to nip common ownership in the bud is likely to occur after a substantial period of acquisition in order for common owners to acquire their positions. As discussed above, even if these partial acquisitions are initially unchallenged, they may be evaluated at a later date and as a series if anticompetitive effects arise.

III. Conclusion

In this paper, we have sought to outline what we currently know about common ownership and clarify the topic for antitrust enforcers and policymakers. In addition, we have laid out a framework for the agencies to bring the first case involving a common ownership theory of harm when appropriate. While we have provided detailed explanations and recommendations where possible, throughout the paper, we have also pointed out areas where further information is necessary. Just as they have done for other novel antitrust theories of harm, the agencies should use their investigative authority to further our understanding of the potential anticompetitive effects of common ownership.

Common ownership is an increasingly prevalent phenomenon in a variety of important industries throughout the U.S. economy. As academic research on the topic has developed and evolved, it has become clear that common owners may have the incentive and ability to enact anticompetitive outcomes that harm consumers. While further research is necessary to continue developing our understanding in this area, a lack of perfect information should not (and need not) prevent the FTC and DOJ from acting to protect consumers where necessary and appropriate. On the contrary, the rise of common ownership should lend urgency to the agencies' mandate to investigate potentially anticompetitive conduct and stop it where it exists.