

ANTICOMPETITIVE DIRECTORS

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Antitrust scholars have virtually ignored the question of who controls corporations by sitting on their boards of directors. We show that the problem of who sits on boards of directors is considerably greater than previously believed. Drawing on a new dataset spanning both public and private companies across multiple industries, we find evidence that individual board members sit simultaneously on boards of competitors throughout the economy, despite such “interlocking directorates” being illegal under antitrust law. Many of these individuals are senior directors at private equity, venture capital, and other firms investing in the competing firms on whose boards they sit. We rely on a proprietary dataset used by investment firms that identifies actual competitors, rather than just adjacent firms in the same industry.

But the same individual sitting on two competing boards isn’t the only problem. We are the first to show the prevalence across public and private companies of a related problem—two different individuals sitting on competitors’ boards while simultaneously working at the same investment fund. We show that such investor-level interlocks are more common than individual interlocks, yet their prevalence was, until now, unknown. About 13% of the companies for which we have the best board data had either an individual or investor-level interlocking board.

Individual and investor-level interlocking boards can harm competition and innovation. We propose either applying existing antitrust laws more vigorously or reforming the law to reach these investor interlocks.

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"The practice of interlocking directorates is the root of many evils. It offends laws human and divine."

— Justice Louis Brandeis.¹

INTRODUCTION

Antitrust law prohibits competing corporations from sharing board members (so-called "interlocking directorates") and has for more than a century.² The main idea is that if the same person serves on the boards of two competing companies, they may discourage one of their companies from competing vigorously against the other, and the information and connections they have make it easier for those companies to collude.³ So we prohibit people from serving on the boards of companies that compete even in part.⁴ It's a simple rule—one that is easy to observe—and violating it is one of the few things antitrust declares illegal *per se*, with no opportunity to explain or justify the interlock.⁵

We show that large numbers of companies are directly violating that law and that the problem goes well beyond simply breaking the law. Using

1. Louis D. Brandeis, *Interlocking Directorates*, in *Other People's Money and How the Bankers Use It* 51, 51 (1914).

2. Clayton Antitrust Act of 1914, ch. 323, § 8, 38 Stat. 730, 732–33 (codified as amended at 15 U.S.C. § 19 (2018)).

3. See Julian O. von Kalinowski, Peter Sullivan & Maureen McGuirl, 2 *Antitrust Laws and Trade Regulation* § 35.02[1] (2d ed. 2024) (noting the primary rationale for prohibiting interlocking directorates was that Congress viewed them as stifling competition; additional rationales included eliminating potential conflicts of interest among directors and creating business opportunities for individuals).

4. See 15 U.S.C. § 19(a) ("No person shall, at the same time, serve as a director or officer in any two corporations . . . that are . . . engaged in whole or in part in commerce; and . . . competitors . . .").

5. See *United States v. Sears, Roebuck & Co.*, 111 F. Supp. 614, 616–17, 621 (S.D.N.Y. 1953) (holding no anticompetitive effect need be shown to establish section 8 liability under the Clayton Antitrust Act).

a dataset that enables us to provide the first analysis of board members on both public and private companies—rather than just public companies⁶—we find 2,309 instances of individuals sitting on the boards of two companies that are direct competitors. The extent of interlocks is so great that for those companies for which we have data on at least five board members, 8.1% had an individual interlock.

Showing that director interlocks occur in private and smaller companies is important because private companies account for 99% of all businesses⁷ and 87% of all businesses earning more than \$100 million annually.⁸ Our broad view of the economy reveals that overlapping directorates are particularly common in the innovation-rich information technology (IT) and life sciences industries.⁹ In pharmaceutical and biotech companies, for instance, among those for which we have the best board data, 18.2% have at least one board director who also sits on the board of another firm that is identified as a direct competitor.¹⁰ Among IT software companies, 10.5% had an interlocking board member.¹¹ This view of private companies underscores the high stakes of interlocking boards for innovation and the economy.

Besides showing that board interlocks are more widespread than public-company data would indicate, we contribute new evidence indicating several reasons why the problem of interlocking boards is more concerning than previously realized. First, we provide the first data about who these directors are in their day jobs outside of their occasional board meetings. About 65% of the individual interlocking directors we identified are leaders of private equity, venture capital, and other investment funds that invest in the very companies on whose boards these directors sit. Companies in anticompetitive industries earn greater profits and thus provide greater returns for investors. Partners of investment firms receive

6. Prior work necessarily focused only on publicly traded companies due to data limitations. See Anoop Manjunath, Nathan Kahrobai, Mark A. Lemley & Ishan Kumar, *Illegal Interlocks Among Life Science Company Boards of Directors*, J.L. & Biosciences, Jan.–June 2024, at 1, 9 [hereinafter Manjunath et al., *Illegal Interlocks*] (acknowledging the dataset limitation to publicly traded companies); Yaron Nili, *Horizontal Directors*, 114 Nw. U. L. Rev. 1179, 1208 (2020) (same).

7. Hal Weitzman, *Is the US Economy ‘Going Dark’?*, Chi. Booth Rev., Summer 2023, at 26, 28.

8. Torsten Sløk, *Many More Private Firms in the US*, Apollo Acad.: Daily Spark (Apr. 20, 2024), <https://www.apolloacademy.com/many-more-private-firms-in-the-us/> [https://perma.cc/VRE2-KZGR].

9. One study examining solely biotech had, however, found that biotech companies had high levels of interlocking boards, but without empirically comparing those figures to other industries. See Manjunath et al., *Illegal Interlocks*, supra note 6, at 4 (finding that “between 10 and 20% of biotech companies have interlocked directorates”); infra Part I (discussing limitations on prior studies).

10. See infra Appendix A.

11. See infra Appendix A.

a share of investment profits.¹² Consequently, many interlocking board members are controlled by investors with strong financial incentives to promote anticompetitive conduct in the industry, so the directors have strong personal financial incentives to promote anticompetitive conduct. We are thus the first to show that many individual interlocking directors form part of an investment-industrial complex that did not exist when lawmakers made such interlocks illegal and that provides additional incentives for anticompetitive conduct.

Second, one of the great challenges in antitrust law is defining the market in a way that shows two firms are competitors rather than merely participating in the same industry.¹³ Although prior studies of interlocking boards in public companies have begun to construct more careful classification systems for markets, they all rely on proxies for competition.¹⁴ Our data, by contrast, relies on classifications used by investment funds themselves to identify competitors.¹⁵ Thus, by providing a view of market definitions as industry itself defines competition, our Article adds weight to the conclusion that interlocking directors are indeed sitting on the boards of competitors.

Finally, the problem of interlocking boards extends well beyond individual directors serving on competitors' boards. We show that the practice of investors having two or more employees serving on competitors' boards is widespread throughout the economy.¹⁶ This practice is even more common than individual interlocks, reaching 2,927 different companies and 9.9% of the companies with at least five board members in our dataset.¹⁷

12. See *infra* Part III (noting that interlocking directors are partners at investment funds who personally share in those funds' profits, creating direct financial incentives to favor anticompetitive outcomes).

13. See Thomas B. Nachbar, *Qualitative Market Definition*, 109 Va. L. Rev. 373, 374 (2023) ("Few aspects of antitrust are more central, and more controversial, than the role of market definition.").

14. Prior studies mostly rely on measures widely criticized by scholars as too broad to reliably reflect competition. Compare, e.g., Nili, *supra* note 6, at 1209 (relying on Standard Industrial Classification (SIC) codes), with Gerard Hoberg & Gordon Phillips, *Text-Based Network Industries and Endogenous Product Differentiation*, 124 J. Pol. Econ. 1423, 1427 (2016) (summarizing the limits of SIC code classifications). Some studies have improved upon the SIC codes used by Nili, but themselves face limits. See Manjunath et al., *Illegal Interlocks*, *supra* note 6, at 4, 9–10 (discussing their biotechnology-specific methodology and noting its limits); *infra* Part I.

15. See *infra* Part II (explaining the dataset used).

16. It is known that venture capitals appoint directors on the boards of startups in which they invest and that sometimes those appointments are for companies in the same industry. See Ofer Eldar & Jillian Grennan, *Common Venture Capital Investors and Startup Growth*, 37 Rev. Fin. Stud. 549, 550–52, 570–76 (2023) (finding that venture capital directors who sit on the board of startups sit on the boards of multiple startups in the same industry). But Eldar and Grennan do not provide evidence that the directors sit on competitors' boards. Nor do they indicate how widespread such practices might be across the economy, as they only looked at venture capital startups.

17. *Infra* Tables 2, 10.

Again, most of these board members are senior-level employees sharing in the investor's profits, who therefore have the opportunity and motivation to collude.¹⁸ Once combined, individual and investor-level interlocks reach 13.4% of all companies—including 30.1% of pharmaceuticals and biotechnology companies and 16.9% of all IT and software companies.¹⁹

Beyond these direct empirical contributions, we also bring into the legal literature a synthesis of important, recent research from other fields. The totality of our data and that other research suggests that interlocks raise significant anticompetitive concerns. Common directors offer boards expertise and other value that must be considered in determining the net impact of interlocking boards on society.²⁰ But there is evidence that interlocking boards lead to higher prices, fewer new product offerings, and—in the case of investor-level interlocks, at least—companies staying away from competitors' markets.²¹ It is illegal under antitrust law to collude on prices or divide the economy into territories to avoid competition.²² Yet interlocks may provide a widespread mechanism to push their firms away from pursuing competing research agendas or to coordinate the raising of higher prices. Even if there is no collusion, the overlap between board members may dampen incentives to compete vigorously.

Given these stakes, it is remarkable that the rule against interlocking directorates has received little attention from antitrust scholars or (until very recently, and only mildly) from antitrust enforcers. Most cases brought against interlocking directorates are decades old,²³ though there has been a resurgence²⁴ in the wake of a smaller empirical study one of us coauthored showing the extent of the problem.²⁵ We were unable to find a single major law review article written in recent years focusing on the antitrust implications of interlocking directors.²⁶

That inattention is particularly noteworthy because antitrust scholars have in recent years devoted volumes to a different corporate governance

18. *Infra* section III.B.

19. *Infra* Table 4 and Appendix A.

20. *Infra* section III.A.2.

21. *Infra* Part III.

22. *Infra* notes 173, 202 and accompanying text.

23. See *infra* Part I.

24. See *infra* notes 72–78 and accompanying text.

25. Manjunath et al., *Illegal Interlocks*, *supra* note 6, at 1.

26. Only one recent law review article addresses the issue in a sustained manner, but it was more focused on corporate rather than antitrust law. See Nili, *supra* note 6, at 1186–87, 1239–48 (“[This] Article presents a set of potential reforms to address both antitrust and corporate governance concerns, calling for better corporate disclosure, the revision of director independence requirements, and regulatory and legislative reforms.”). We don’t mean to dismiss Nili’s important contribution, which gave us valuable new data. But most of the citations to Nili’s article are from corporate law articles. More to the point, none of the articles citing to Nili’s article focus on the antitrust implications of interlocking directors. We discuss Nili’s article in depth below. See *infra* notes 94–103 and accompanying text.

issue: common ownership.²⁷ Common ownership refers to the same institutions, such as BlackRock and Vanguard, owning shares in competitors. A vibrant body of antitrust scholarship has debated whether antitrust should respond to the precipitous increase in partial common ownership in light of empirical evidence suggesting that such ownership is linked to reduced competition.²⁸

To be clear, we see the common ownership literature as valuable.²⁹ But overlapping share ownership is not itself illegal. Nor have scholars established a clear mechanism by which those common institutional owners harm competition.³⁰ After all, financial institutions like BlackRock and Vanguard do not actively manage the companies they own shares in.³¹ Instead, they tend to passively hold shares of most publicly traded companies. So it is heavily contested whether and how broad-based ownership might be undermining competition.³²

27. Cf. Konstantinos Charistos & Konstantinos G. Papadopoulos, *Cartel Reporting Under Passive Common Ownership*, *Econ. Letters*, July 2022, at 1, 1 (arguing that common ownership reduces the incentive to blow the whistle and take advantage of antitrust leniency programs, an argument which should be stronger with common directorship). See generally Einer Elhauge, *The Causal Mechanisms of Horizontal Shareholding*, 82 *Ohio St. L.J.* 1 (2021) [hereinafter Elhauge, *Causal Mechanisms*] (explaining different channels through which horizontal shareholding can harm competition and urging solutions in antitrust law); Einer Elhauge, *Horizontal Shareholding*, 129 *Harv. L. Rev.* 1267 (2016) [hereinafter Elhauge, *Horizontal Shareholding*] (defining “horizontal shareholding” and arguing that common ownership in concentrated industries raises prices); C. Scott Hemphill & Marcel Kahan, *The Strategies of Anticompetitive Common Ownership*, 129 *Yale L.J.* 1392 (2020) (developing a typology for how common ownership can harm competition); Thomas A. Lambert, *Mere Common Ownership and the Antitrust Laws*, 61 *B.C. L. Rev.* 2913 (2020) (arguing that mere common ownership should not be condemned under section 1 of the Sherman Act or section 7 of the Clayton Act).

28. See Elhauge, *Horizontal Shareholding*, *supra* note 27, at 1273–78 (showing that shareholder cross-ownership is associated with reduced competition); Hemphill & Kahan, *supra* note 27, at 1399–402 (same).

29. Indeed, we believe that interlocking boards have a potentially meaningful connection to common ownership. See *infra* section III.A.1.

30. See Elhauge, *Causal Mechanisms*, *supra* note 27, at 34 (summarizing Hemphill and Kahan’s argument that the effects of causal mechanisms either lack empirical testing, or if tested, are implausible). One partial mechanism is that ownership can drive cartel participation. See Vincent Abraham, Florian Ederer & Catarina Marvão, *Common Ownership and Collusion 2–4* (July 17, 2025) (unpublished manuscript), <https://ssrn.com/abstract=5290001> [<https://perma.cc/4CD2-XKLQ>] (investigating the relationship between overlapping ownership and cartel participation).

31. See, e.g., Dorothy S. Lund, *The Case Against Passive Shareholder Voting*, 43 *J. Corp. L.* 493, 495 (2018) (explaining that index funds lack financial incentives to participate in corporate governance because “passive funds tend to have very large portfolios, and therefore, an investment in improving governance at a single firm is especially unlikely to enhance the fund’s overall performance”).

32. See Jonathan B. Baker, *Overlapping Financial Investor Ownership, Market Power, and Antitrust Enforcement: My Qualified Agreement With Professor Elhauge*, 129 *Harv. L. Rev. Forum* 212, 223–32 (2016), https://harvardlawreview.org/wp-content/uploads/2016/03/vol129_Baker-2.pdf [<https://perma.cc/98Y7-T47F>] (cautioning that current antitrust doctrine may not suffice to combat common ownership concerns); Patrick Dennis,

In contrast, interlocking directors are more concretely problematic as a matter of influence and law. Unlike passive shareholders, the very purpose of board members is to actively participate in the governance of firms. Moreover, we show that these interlocking board members are often employed by an investor that does not simply passively hold shares but is instead a private equity or venture capital firm, groups known to aggressively intervene as investors. Most famously, private equity companies regularly take over and shut down or pare down companies.³³ And while evidence of anticompetitive harm would be needed to convict common owners for violating the law,³⁴ the mere existence of common directors at competing firms is already per se illegal, meaning no such evidence of harm is required.³⁵ And while investor-level board interlocks are of questionable legality,³⁶ they present similar mechanisms for collusion or other reductions in competition.

Thus, scholars have devoted volumes of research to a corporate governance practice whose mechanism for anticompetitive behavior and illegality are uncertain. But they have yet to turn their sustained attention to interlocking directors despite a tangible mechanism for anticompetitive behavior and an undisputed status of illegality. We seek to change that.

Our findings have important policy implications. One is obvious: Both companies and enforcers need to pay attention to and enforce the law. Now that the evidence exists to conclude that board interlocks may have significantly anticompetitive implications, there should be greater motivation to apply the law on the books. We show how authorities can do this under existing law even beyond the prohibition of individual interlocks. We argue that a case can be made for seeing “investor-level interlocks”—two or more of an investor’s employees sitting on competitors’ boards—as

Kristopher Gerardi & Carola Schenone, *Common Ownership Does Not Have Anticompetitive Effects in the Airline Industry*, 77 J. Fin. 2765, 2768 (2022) (reexamining airline data and finding that prior common ownership and price correlation may be explained by measurement choices and market share); George S. Dallas, *Common Ownership: Do Institutional Investors Really Promote Anti-Competitive Behavior?*, Harv. L. Sch. F. on Corp. Governance (Dec. 2, 2018), <https://corpgov.law.harvard.edu/2018/12/02/common-ownership-do-institutional-investors-really-promote-anti-competitive-behavior/> [<https://perma.cc/89X9-8NFK>] (arguing that evidence of the anticompetitive effects of common ownership is inconclusive and the harms of combating common ownership outweigh the potential benefits).

33. See, e.g., Robert Thorpe, *List of Stores Closing After Being Taken Over by Private Equity*, Newsweek (Feb. 28, 2025), <https://www.newsweek.com/stores-closing-after-being-taken-over-private-equity-firms-2037523> [<https://perma.cc/L679-K6YZ>] (last updated Mar. 3, 2025) (documenting that 7,325 retail stores shut down after being acquired by private equity firms).

34. See Elhauge, *Horizontal Shareholding*, *supra* note 27, at 1308 (noting that courts require proof of actual anticompetitive effects before liability attaches to passive common ownership).

35. See *infra* note 59 and accompanying text.

36. See *infra* notes 64–71 and accompanying text.

acting as agents under control of the investor. Thus, such arrangements are already arguably illegal under section 8 of the Clayton Act.³⁷

The problem with relying solely on section 8, for both individual and investor-level interlocks, is that it fails to eliminate incentives because the typical remedy is simply removing the board member—meaning that the companies earn the gains from any anticompetitive conduct until they are caught and forced to stop. Consequently, we propose that courts view both individual and investor-level interlocking board members as adding evidence of collusion when there are signs of anticompetitive outcomes. In such cases, two employees working for a profit-maximizing investor have the opportunity and motivation to collude. That legal shift would allow for large financial penalties and criminal sanctions, thus providing meaningful deterrence under existing law.

Structural reforms might further reduce illegal board conduct, whether accidental or purposeful. As one example, whenever firms above a certain value threshold merge, they must submit a report to the FTC for approval.³⁸ A similar reporting requirement might be appropriate whenever a sufficiently sizable company adds a director who is also on the board of another company in the same industry.

We also think the remarkable disconnect between what the law requires and what companies do raises the question of whether a universal ban on interlocks is appropriate. In areas in which there are simply too few real experts, such as some emerging industries, the benefits of board expertise for early-stage companies may outweigh the risks of anticompetitive influence. If that is true, it would have implications for antitrust law because it would suggest that in some contexts the *per se* rule against interlocking boards should be relaxed. What little scholarship there is focuses on the benefits and not the harms of interlocks, contributing to the notion that antitrust law is out of touch with modern corporate governance.³⁹

Our study should help shift the emphasis away from interlocking directors' expertise to their influence and incentives. Previously, it would have been easier to portray these interlocking board members as simply high-in-demand, valuable board members whose very busyness simply hap-

37. See *infra* section IV.B.1.

38. See *infra* note 191 and accompanying text.

39. Nili, for instance, understandably did not integrate the empirical evidence from other fields on how interlocking directors harm competition—because such evidence did not yet exist or was just emerging—but integrates considerable evidence on the importance of busy directors for firms. See Nili, *supra* note 6, at 1193 (“The primary value of having a busy director on a company’s board comes from a combination of a director’s experience, connections, and insider expertise, all of which less experienced and less networked directors may be unable to provide.”); see also Eldar & Grennan, *supra* note 16, at 581 (“We observe that having more [venture capital] directors, especially those with additional directorships, is associated with more growth and successful exits.”); *supra* note 26 and accompanying text; *infra* Part I, section III.A.

pens to inadvertently create many innocent interlocks.⁴⁰ By providing insights into who these directors are and the broader investment infrastructure in which they sit, we show that such a generally optimistic view of interlocking directors is unwarranted. Antitrust law has not necessarily grown out of step with corporate governance. Corporate governance and the modern era of investment funding have combined to provide new ways of doing what the Clayton Act long ago sought to prohibit.

Indeed, there may be reason to expand the reach of the ban on interlocking directorates. First, many companies engage in conduct that is not currently a violation of the rule against interlocking directorates but that seems to have similar economic effects. The rule against interlocking directorates applies only to companies that are current competitors that draw revenue from the same market.⁴¹ In the biotech industry, the process of regulatory approval takes years, and companies plan business strategies not only with respect to current competitors but vis-à-vis companies they can see have filed for approval of a new drug, even if the release of that drug is years away.⁴² Common directors can influence business strategy in a way that restricts future competition, something a law written long before the FDA was created does not address.⁴³ We may want to expand the prohibition of interlocking directors to encompass pre-revenue companies with a realistic possibility of future competition, and there is a plausible argument that the statute was intended to encompass potential competitors.

Second, although we think that investor-level and not just personal interlocks should be seen as violations of the Clayton Act under existing law,⁴⁴ if they are not currently illegal, there may be reason to expand the prohibition against interlocking directorates. The laws prohibiting interlocks were written at a time when private equity and venture capital did not exist as we now know them, as incredible forces steering large portions

40. See, e.g., Nili, *supra* note 6, at 1192–94 (“Busy directors, and the interlocks they create, are a natural byproduct of corporate culture. ‘Because many companies seek operational and executive experience in their board nominees in order to raise investor confidence in the board,’ the pool from which companies elect directors is fairly limited.” (quoting Yaron Nili, *Beyond the Numbers: Substantive Gender Diversity in Boardrooms*, 94 *Ind. L.J.* 145, 158 (2019))).

41. Clayton Antitrust Act of 1914, ch. 323, § 8, 38 Stat. 730, 732–33 (codified as amended at 15 U.S.C. § 19 (2018)).

42. See Avinash Kumar Vivekanand Mishra & Anand Agrawal, *Competitive Intelligence in Biotech Start-Ups: Strategies for Capturing and Leveraging Market Insights*, 4 *J. Informatics Educ. & Rsch.* 4101, 4103–04 (2024) (noting that biotech companies can use regulatory filings to gain insight into competitors’ market strategies).

43. See *infra* section IV.B.2. Other scholars have proposed greater attention to acquisitions of nascent competitors. See, e.g., C. Scott Hemphill & Tim Wu, *Nascent Competitors*, 168 *U. Pa. L. Rev.* 1879, 1909 (2020) (“The acquisition or exclusion of unproven innovators is properly regarded as a core concern of antitrust law.”).

44. See *infra* sections III.B, IV.B.2.

of the economy.⁴⁵ But even if the same person doesn't sit on the boards of competing companies, if partners of the same venture capital fund sit on competing boards, that raises similar concerns that animate the law against interlocking directorates.

Third, boards of directors have broadly failed to extend membership to women and minorities.⁴⁶ Multiple boards hiring the same people can exacerbate that problem. Thus, perhaps stronger antitrust law in this area would encourage not only innovation but also board diversity.

Finally, the surprising prevalence of common directors at both the individual and investor levels may help explain some of the otherwise puzzling economic effects of common ownership. Our data provides a basis for active investment funds, rather than solely passive investors, contributing to anticompetitive effects of common ownership. Active investors are also owners, albeit a different class of owners than those that were the focus of the common ownership literature. Further research is needed at the intersection of investors and interlocks to better understand the relationship to common ownership.

At a minimum, the complex analysis of whether interlocking directors are economically beneficial should be more explicit and informed by the sea of emerging evidence that it is problematic. Either companies need to follow the law, or policymakers should change that law if it is out of step with good policy. It is time to reexamine whether boards of directors can better serve competition with a healthier balance between norms and laws.

In Part I, we explain the history and doctrine of the law against interlocking directorates and how it fell into disuse in the past several decades before a recent revival. Part II introduces our empirical evidence and shows that potentially illegal board interlocks are widespread. In Part III, we discuss the effects of those interlocks on competition. Part IV suggests potential changes to the law and ways to encourage better compliance with it.

45. See *infra* section III.B.

46. See, e.g., Deborah L. Rhode & Amanda K. Packel, Diversity on Corporate Boards: How Much Difference Does Difference Make?, 39 Del. J. Corp. L. 377, 379–80 (2014) (“According to the most recent data, women hold only 16.9% of the seats on Fortune 500 boards. . . . Among the Standard and Poor’s (S&P) 200, 13% of the companies have no minorities on their boards . . .”).

I. THE BAN ON INTERLOCKING DIRECTORATES

A. *The Law of Interlocking Directorates*

Congress passed the Sherman Antitrust Act in 1890 to target the problem of “trusts”—institutions that individually or collectively controlled large sectors of the new industrial economy.⁴⁷ But courts initially resisted the broad sweep of the Sherman Act, reading a “rule of reason” into the language of the statute in 1899⁴⁸ and creating a variety of limits and exceptions to its reach.⁴⁹ Businesses responded by looking for loopholes, including ways they could be nominally separate but still coordinate their action without forming an explicit cartel.

Congress responded in 1914 by enacting the Clayton Act and the Federal Trade Commission Act.⁵⁰ The express purpose of these acts was to strengthen antitrust enforcement and to close various loopholes Congress perceived the courts to have created.⁵¹

One of those loopholes concerned efforts by erstwhile competitors to avoid the reach of the Sherman Act’s prohibition on monopoly. While courts broke up some big monopolies in the early part of the twentieth century,⁵² too often those monopolies were replaced by tight oligopolies of companies that had the incentive and ability to avoid competing. One way those oligopolies avoided vigorous competition was to put directors on each other’s boards. That gave them a means for sharing information and facilitating a cartel, as well as an economic interest in the success of their competitors. Congress was well aware of this problem, having

47. 15 U.S.C. § 1 (2018) (“Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.”).

48. See *United States v. Addyston Pipe & Steel Co.*, 85 F. 271, 288 (6th Cir. 1898) (Taft, J.) (“[C]ontracts having no purpose but to restrain competition and maintain prices, *if reasonable*, will be held valid . . .” (emphasis added)), *aff’d* on other grounds, 175 U.S. 211 (1899).

49. See *Henry v. A.B. Dick Co.*, 224 U.S. 1, 35–36 (1912) (applying the rule of reason); *Standard Oil Co. v. United States*, 221 U.S. 1, 62 (1911) (same); *Bement v. Nat’l Harrow Co.*, 186 U.S. 70, 93–95 (1902) (same).

50. Clayton Antitrust Act of 1914, ch. 323, 38 Stat. 730 (codified as amended at 15 U.S.C. §§ 12–27, 29 U.S.C. §§ 52–53 (2018)); Federal Trade Commission Act of 1914, ch. 311, 38 Stat. 717 (codified as amended at 15 U.S.C. §§ 41–58).

51. See Amy Klobuchar, *Antitrust: Taking on Monopoly Power From the Gilded Age to the Digital Age* 117 (2021) (“[T]he Clayton Act closed Sherman Act loopholes, prohibited sellers from entering into exclusive arrangements with purchasers or product distributors, and allowed for the recovery of treble damages against violators of the antitrust laws.”).

52. See, e.g., *Standard Oil Co.*, 221 U.S. at 77–78 (1911) (applying a remedy “as will effectually dissolve the combination found to exist in violation of the statute”).

commissioned two investigations that showed that banks, manufacturers, and railroads were all linked by interlocking directors.⁵³

Phillip E. Areeda and Herbert Hovenkamp explain the basic problems with overlapping directorates:

When an individual is a director or officer of two companies, each of which does business with or competes with the other, fiduciary responsibility to one company might conflict with fiduciary responsibility to the other. Such dual, or interlocking, positions might also lead to exchanges of information, joint ventures, parallel behavior, foreclosure of rivals, or a number of other activities that might affect competition adversely.⁵⁴

Put simply, we want competitors to compete vigorously, and we can't be confident they will do so if they have economic incentives—or even legal obligations—to help their competitors. They may be less motivated to compete and more motivated to collude.⁵⁵

Section 8 of the Clayton Act prohibits these interlocking directorates. Since 1914, the Clayton Act has made it unlawful for competitors to share directors (and since 1990, to share officers).⁵⁶ This rule applies to companies with more than \$51.4 million in assets of any type as of 2025.⁵⁷ It contains only minor exemptions for companies that have less than \$5.14 million in sales or when the competitive overlap between the companies is less than 2% of their sales.⁵⁸

Interlocking officers and directors among competing firms are illegal *per se*—that is, we condemn them without any inquiry into whether the companies actually restrained competition because of their overlapping interests.⁵⁹ The rationale for this rule is to prevent officers and directors

53. For a discussion of the reports and the legislative history, see ABA, *Interlocking Directorates Under Section 8 of the Clayton Act* 3–10 (1984).

54. Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 1300 (5th ed. Supp. 2025).

55. For an interesting suggestion that competitors should sometimes be required to do the opposite—to invest in the failure of their rivals—see Ian Ayres, C. Scott Hemphill & Abraham L. Wickelgren, *Shorting Your Rivals: Negative Ownership as an Antitrust Remedy*, 86 *Antitrust L.J.* 317, 320–21 (2024).

56. Clayton Antitrust Act of 1914, ch. 323, § 8, 38 Stat. 730, 732–33 (codified as amended at 15 U.S.C. § 19 (2018)); see also Antitrust Amendments Act of 1990, Pub. L. No. 101-588, sec. 2, 104 Stat. 2879, 2879 (codified as amended at 15 U.S.C. § 19).

57. See 15 U.S.C. § 19(a)(1)(B), 19(a)(5) (giving the FTC the authority to annually publish inflation-adjusted thresholds for the interlocking directorates requirement); Press Release, FTC, *FTC Announces 2025 Jurisdictional Threshold Updates for Interlocking Directorates* (Jan. 10, 2025), <https://www.ftc.gov/news-events/news/press-releases/2025/01/ftc-announces-2025-jurisdictional-threshold-updates-interlocking-directorates> [<https://perma.cc/E43F-UPGM>] [hereinafter FTC, 2025 Jurisdictional Threshold Updates] (calculating inflation-adjusted thresholds for 2025).

58. 15 U.S.C. § 19(a)(2)(A)–(B); FTC, 2025 Jurisdictional Threshold Updates, *supra* note 57.

59. See, e.g., *TRW, Inc. v. Fed. Trade Comm'n*, 647 F.2d 942, 947 (9th Cir. 1981) (“[P]roof that the interlock has an actual anticompetitive effect is not required [in Clayton

who have fiduciary responsibilities to both corporations from resolving that conflict of interest by encouraging collusion or discouraging vigorous competition.⁶⁰ By contrast, section 8 does not prevent interlocks among companies in a vertical relationship (such as buyers and sellers), though some similar risks of distorting competition exist.⁶¹ Some courts have—wrongly, in our view—extended that rule permitting vertical interlocks to conclude that companies were not subject to section 8’s prohibition when they themselves did not compete, even though their subsidiaries did.⁶²

Other interlocks do not involve the same people sitting on boards but instead occur at the entity level. For example, a venture capital firm might fund two direct competitors and put one (or more) of its partners on each

Act section 8].”); *Protectoseal Co. v. Barancik*, 484 F.2d 585, 589 (7th Cir. 1973) (explaining the “simple objective criteria” of Clayton Act section 8 in contrast with section 7, including that section 8 prevents a potential frustration of competition, not necessarily an actual one); *United States v. Sears, Roebuck & Co.*, 111 F. Supp. 614, 616 (S.D.N.Y. 1953) (“[W]hat Congress intended by § 8 was to nip in the bud incipient violations of the antitrust laws by removing the opportunity or temptation to such violations through interlocking directorates.”); *Areeda & Hovenkamp*, supra note 54, ¶ 1302a (explaining that there is a per se rule against horizontal interlocks); cf. Benjamin M. Gerber, *Enabling Interlock Benefits While Preventing Anticompetitive Harm: Toward an Optimal Definition of Competitors Under Section 8 of the Clayton Act*, 24 *Yale J. on Regul.* 107, 110, 132 (2007) (proposing to analyze interlocks under the quick-look standard, a less costly quantitative analysis than the current high-cost quantitative analysis in section 8). *Contra Jicarilla Apache Tribe v. Supron Energy Corp.*, 728 F.2d 1555, 1561 (10th Cir. 1984) (stating in dicta that interlocking directors are a “technical violation[]” of the Clayton Act but doubting it was a per se violation).

In dicta, the Seventh Circuit has stated that courts would only prohibit an interlock if they would also prohibit a merger between the companies. *Robert F. Booth Tr. v. Crowley*, 687 F.3d 314, 317 (7th Cir. 2012). But that statement contradicts not only the literal language of the statute but also ignores the fact that Congress in 1990 rejected just such a standard. See Michael E. Jacobs, *Combating Anticompetitive Interlocks: Section 8 of the Clayton Act as a Template for Small and Emerging Economies*, 37 *Fordham Int’l L.J.* 643, 666–67 (2014) (discussing the legislative history).

60. *Areeda & Hovenkamp*, supra note 54, ¶ 1300. We explore some potential procompetitive justifications for the practice in Part III, *infra*.

61. *Areeda & Hovenkamp*, supra note 54, ¶¶ 1302b, 1303.

62. See *Kennecott Copper Corp. v. Curtiss-Wright Corp.*, 584 F.2d 1195, 1205 (2d Cir. 1978) (“[We decline to adopt the] general rule that section 8 prohibits interlocking directorships between parent companies whose subsidiaries are competitors.”); *Paramount Pictures Corp. v. Baldwin-Montrose Chem. Co.*, 1966 U.S. Dist. LEXIS 10596, at *24 (S.D.N.Y. Jan. 24, 1966) (“Subsidiary or parent corporations of those corporations in which there is an allegedly infringing interlocking directorate are not to be considered in determining whether competition exists between the directed corporations.”). *Contra United States v. Crocker Nat’l Corp.*, 656 F.2d 428, 450–51 (9th Cir. 1981) (“Whether for the purposes of Section 8 the business of a subsidiary is to be attributed to a parent in determining if the parent competes with another corporation with which it is interlocked, turns upon the extent of the control exercised by the parent over the subsidiary’s business.”), *rev’d on other grounds sub nom.*, *Bankamerica Corp. v. United States*, 462 U.S. 122 (1983) (holding that, by its terms, the statute does not apply to banks and discussing in what circumstances parent corporations are in competition as a result of subsidiary competition). For criticism of *Kennecott*, see *Areeda & Hovenkamp*, supra note 54, ¶ 1130f.

of their boards. The competitive risks here are similar to those with individual interlocks. As Areeda and Hovenkamp explain, when “[company] C has a director on the boards of [companies] A and B, serious anticompetitive consequences could arise if C has an interest in limiting A–B competition.”⁶³

The law on investor-level interlocks is less settled. A 1975 case, *United States v. Cleveland Trust Co.*, provided an early example of indirect interlocks from different members of financing firms.⁶⁴ There, the court found the question of whether the bank itself was a director sitting on both boards through its agents a “novel theory” that the court could not decide on summary judgment because it required a full examination.⁶⁵ The key deciding factor would be the extent of control by the bank over the two employees.⁶⁶ The Supreme Court has refused to decide the issue,⁶⁷ but in 1994, the DOJ obtained a final judgment on a consent decree under the theory that a labor union violated section 8 of the Clayton Act by having two of its members on the boards of competing airlines.⁶⁸ A 2003 decision allowed an indirect theory under section 8 as long as the directors were acting as agents of a joint corporate person—in this case an investment firm.⁶⁹ The FTC and DOJ have also endorsed the investor-level interlock theory.⁷⁰ Thus, while the law is unsettled, the cases and antitrust policy provide an avenue for seeing investor interlocks as violating antitrust law.⁷¹

The rule against interlocking directorates (individual or investor-level) has not been widely enforced in recent decades.⁷² One commentator characterized enforcement as “a few bursts of mild activity . . . followed by

63. Areeda & Hovenkamp, *supra* note 54, ¶ 1304.

64. 392 F. Supp. 699, 711–13 (N.D. Ohio 1974), *aff'd*, 513 F.2d 633 (6th Cir. 1975).

65. *Id.*

66. *Id.* at 712.

67. *United States v. W.T. Grant Co.*, 345 U.S. 629, 634 n.9 (1953).

68. *United States v. Int'l Ass'n of Machinists & Aerospace Workers*, No. 94 0690, 1994 U.S. Dist. LEXIS 20224, at *1 (D.D.C. Mar. 31, 1994).

69. *Reading Int'l, Inc. v. Oaktree Cap. Mgmt. LLC*, 317 F. Supp. 2d 301, 308, 326–32 (S.D.N.Y. 2003).

70. See *Pocahontas Supreme Coal Co. v. Bethlehem Steel Corp.*, 828 F.2d 211, 217 n.2 (4th Cir. 1987) (noting that the DOJ has advanced the “deputization” theory in other litigation (internal quotation marks omitted)); *Borg-Warner Corp.*, 101 F.T.C. 863, 932 (1983) (final order & opinion) (outlining the FTC’s view that the relevant inquiry under section 8 is whether an interlocked director is able to exercise control or substantially influence decisionmaking so as to diminish competitive relationships), *rev'd* on other grounds *sub nom.*, *Borg-Warner Corp. v. Fed. Trade Comm'n*, 746 F.2d 108 (2d Cir. 1984).

71. We elaborate on these cases *infra* section IV.C.

72. See J. Randolph Wilson, *Unlocking Interlocks: The On-Again Off-Again Saga of Section 8 of the Clayton Act*, 45 *Antitrust L.J.* 317, 317 (1976) (documenting the history of enforcement); Shafkat Rakib, Note, *Inter(lock)down: The Need for Stricter Enforcement of Section 8 of the Clayton Act*, 41 *Cardozo L. Rev.* 1141, 1165–71 (2020) (same). Even in the rule’s heyday, lawsuits were rare. Robert Preminger finds fewer than twenty-five cases filed by the government in the first fifty years of the statute. Robert Jay Preminger, Note, *Deputization and Parent-Subsidiary Interlocks Under Section 8 of the Clayton Act*, 59 *Wash. U. L.Q.* 943, 952 n.41 (1981).

long periods of benign neglect.”⁷³ But that may be changing. In 2009, the FTC famously⁷⁴ challenged Google’s CEO sitting on Apple’s board, prompting his resignation from the board.⁷⁵ The head of the FTC Bureau of Competition called attention to the issue in 2019,⁷⁶ and the head of the DOJ Antitrust Division did so in 2022.⁷⁷ Both the DOJ and the FTC required the resignations of interlocking directors in actions brought in the fall of 2022 after empirical work by one of us called attention to the issue.⁷⁸ That enforcement continued through the Biden Administration.⁷⁹ And the former chair of the FTC has sought to reinvigorate antitrust enforcement more generally,⁸⁰ including by filing a report in the closing days of the Biden Administration flagging problems with a director sitting on the boards of both Microsoft and OpenAI.⁸¹ It remains to be seen whether this newfound interest will continue in the second Trump Administration.

73. Wilson, *supra* note 72, at 317.

74. Well, famous to antitrust lawyers, anyway.

75. Press Release, FTC, Statement of Bureau of Competition Director Richard Feinstein Regarding the Announcement that Google CEO Eric Schmidt Has Resigned From Apple’s Board (Aug. 3, 2009), <https://www.ftc.gov/news-events/news/press-releases/2009/08/statement-bureau-competition-director-richard-feinstein-regarding-announcement-google-ceo-eric> [https://perma.cc/Z844-WZ3F]. For discussion of the Google–Apple interlock, see Jacobs, *supra* note 59, at 677–79; Rakib, *supra* note 72, at 1142–44.

76. See Michael E. Blaisdell, Interlocking Mindfulness, FTC (June 26, 2019), <https://www.ftc.gov/enforcement/competition-matters/2019/06/interlocking-mindfulness> [https://perma.cc/C9BN-YA98] (noting transaction scenarios with heightened risk of interlocking violations).

77. Jonathan Kanter, Assistant Att’y Gen., DOJ, Opening Remarks at 2022 Spring Enforcers Summit (Apr. 4, 2022), <https://www.justice.gov/archives/opa/speech/assistant-attorney-general-jonathan-kanter-delivers-opening-remarks-2022-spring-enforcers> [https://perma.cc/U7KJ-H5L9] (“For too long, our Section 8 enforcement has essentially been limited to our merger review process. We are ramping up efforts to identify violations across the broader economy, and we will not hesitate to bring Section 8 cases to break up interlocking directorates.”).

78. Manjunath et al., *Illegal Interlocks*, *supra* note 6, at 4. High-profile statements by Biden Administration officials also called attention to the issue. See, e.g., Blaisdell, *supra* note 76; Press Release, DOJ, Directors Resign From the Boards of Five Companies in Response to Justice Department Concerns About Potentially Illegal Interlocking Directorates (Oct. 19, 2022), <https://www.justice.gov/opa/pr/directors-resign-boards-five-companies-response-justice-department-concerns-about-potentially> [https://perma.cc/VF9Y-WNBK] [hereinafter DOJ Press Release, Directors Resign].

79. See, e.g., Hailey Konnath, Warner Bros. Directors Resign Amid DOJ Antitrust Concerns, *Law360* (April 1, 2024), <https://www.law360.com/articles/1819907/warner-bros-directors-resign-amid-doj-antitrust-concerns> [https://perma.cc/6W7C-X6LN] (describing the resignation of corporate executives after a DOJ investigation into suspected violations of section 8).

80. Memorandum from Lina M. Khan, Chair, FTC, to Comm’n Staff & Comm’rs (Sep. 22, 2021), https://www.ftc.gov/system/files/documents/public_statements/1596664/agency_priorities_memo_from_chair_lina_m_khan_9-22-21.pdf [https://perma.cc/5QXL-D2FT].

81. FTC, *Partnerships Between Cloud Service Providers and AI Developers 2–4* (2025), https://www.ftc.gov/system/files/ftc_gov/pdf/p246201_aipartnerships6breport_redacted_0.pdf [https://perma.cc/NF8Z-5WX2].

Government enforcement actions against interlocking directorates are normally resolved by one or both companies dismissing the compromised directors.⁸² But private as well as government plaintiffs can enforce the Clayton Act.⁸³ When they do, it may not be sufficient to simply dismiss the director. Doing so prevents a continuing violation of the law, but it does not necessarily eliminate liability for past violations.⁸⁴ The Supreme Court has held that resignation of the conflicted director does not automatically moot the case.⁸⁵ Rather, the question is whether the “defendant is free to return to his old ways.”⁸⁶ And at least one commentator has called for criminal penalties for interlocking directorates.⁸⁷

Most of the cases involving interlocking directorates are decades old. The last reported decisions we found are at least twenty years old.⁸⁸ That may well be because of the *per se* nature of the offense and the ease of fixing the problem, which mean that companies rarely take cases to reported decision, especially if they can just dismiss the director instead.⁸⁹

The scholarly literature is similarly sparse and a bit dated. But some more recent scholarship has begun to pay attention to the phenomenon. Several authors have turned their empirical attention to the question, showing that interlocking directorates are surprisingly common in narrower contexts than the one we study.⁹⁰ Some have argued for eliminating the

82. See Areeda & Hovenkamp, *supra* note 54, ¶ 1305 (“[T]he FTC has often dismissed an interlock case on the prompt resignation of the offending director.”). That is what happened in the fall 2022 enforcement efforts. The FTC does now “insist[] on a formal order against the corporation, which dissolves the interlock and restricts future director elections.” *Id.*; see also *SCM Corp. v. Fed. Trade Comm’n*, 565 F.2d 807, 811 (2d Cir. 1977) (holding that section 8 applies to corporations as well as to individual directors).

83. There have been only a few private enforcement cases. See, e.g., *Cia. Petrolera Caribe, Inc. v. ARCO Caribbean, Inc.*, 754 F.2d 404, 406 (1st Cir. 1985) (noting that a private party brought suit in this case); *Kennecott Copper Corp. v. Curtiss-Wright Corp.*, 584 F.2d 1195, 1198 (2d Cir. 1978) (same); *Paramount Pictures Corp. v. Baldwin-Montrose Chem. Co.*, 1966 U.S. Dist. LEXIS 10596, at *2–4 (S.D.N.Y. Jan. 24, 1966) (same).

84. Areeda & Hovenkamp, *supra* note 54, ¶ 1305.

85. *United States v. W.T. Grant Co.*, 345 U.S. 629, 632 (1953).

86. *Id.*

87. See Rakib, *supra* note 72, at 1182–83 (proposing the use of fines and imprisonment for section 8 violations).

88. The most recent case appears to be *Reading Int’l, Inc. v. Oaktree Cap. Mgmt. LLC*, 317 F. Supp. 2d 301, 308 (S.D.N.Y. 2003). A 2012 Seventh Circuit decision addressed a shareholder derivative suit under section 8, but the court held that it was forfeited for procedural reasons and did not reach the merits. *Robert F. Booth Tr. v. Crowley*, 687 F.3d 314, 319–20 (7th Cir. 2012).

89. See Jacobs, *supra* note 59, at 664 (“Section 8 has generated remarkably little jurisprudence during its nearly one hundred-year history. That is likely the result of the federal courts having adopted a *per se* construction of section 8 . . .” (footnote omitted)).

90. See Manjunath et al., *Illegal Interlocks*, *supra* note 6, at 3 (noting the prevalence of interlocked directorates in the life sciences industry); Nili, *supra* note 6, at 1208–21 (analyzing interlocked directorates in S&P 1500 companies); Eric N. Fischer, Note, *Serving More Than One Master: A Social Network Analysis of Section 8 of the Clayton Act*, 41 J.

per se rule,⁹¹ discussed its extension to vertical or indirect interlocks,⁹² or suggested its application outside the United States.⁹³

B. *Empirical Evidence on Interlocking Directorates*

There are several significant contributions to the empirical literature on interlocks, but they have important limitations. First, Yaron Nili studied interlocks among boards of directors of the S&P 1500—the largest publicly traded companies in the United States. He found a surprisingly high prevalence of interlocking horizontal directors, which he defined as directors serving on the boards of more than one of his member companies in the same industry.⁹⁴ He identified 2,180 director overlaps in that group in 2016. Further, he showed that the number of horizontal interlocks was increasing significantly over time.⁹⁵ Nili’s findings are pathbreaking and important. But he limited his analysis to only the largest public companies, a relatively small and unrepresentative sample of the corporate world.

Second, Nili only identified Standard Industrial Classification (SIC) code overlaps.⁹⁶ The fact that two companies are in the same four-digit SIC code doesn’t mean they are competitors in antitrust’s narrower sense of the word.⁹⁷ A company that makes only sinks and a company that makes only toilets are both in the plumbing supplies industry, but they aren’t competitors. Nor are a pizza parlor in Chicago and one in Los Angeles. For this reason, other empiricists have sought narrower measures of competition in studying interlocks.⁹⁸ This isn’t a problem for Nili’s scholarly contribution, because his main focus and subsequent citations are on

Corp. L. 313, 320–23 (2015) (attempting to document a relationship between board overlaps and corporate performance).

91. Fischer, *supra* note 90, at 340; Rakib, *supra* note 72, at 1177–79; cf. William C. MacLeod, *Interlocks at the Federal Trade Commission: Room for Reason in a “Per Se” Statute?*, 53 *Antitrust L.J.* 1077, 1081 (1985) (containing the recommendation of the author—the FTC regional director—that prosecutorial discretion might consider procompetitive benefits).

92. James T. Halverson, *Interlocking Directorates—Present Anti-Trust Enforcement Interest Placed in Proper Analytical Perspective*, 21 *Vill. L. Rev.* 393, 393 (1976).

93. See Jacobs, *supra* note 59, at 684 (suggesting that Hong Kong and Chile may also seek to regulate interlocking directorates).

94. See Nili, *supra* note 6, at 1186 (describing the relevant dataset).

95. *Id.*

96. *Id.* at 1196.

97. See Hoberg & Phillips, *supra* note 14, at 1426, 1429 (discussing how the similarities of competing firms are not captured by SIC and North American Industry Classification System classifications).

98. See Manjunath et al., *Illegal Interlocks*, *supra* note 6, at 5–6 (employing a narrower understanding of what constitutes a competitor); Radhakrishnan Gopalan, Renping Li & Alminas Žaldokas, *Board Connections, Firm Profitability, and Product Market Actions 3–4* (Eur. Corp. Governance Inst., Finance Working Paper No. 996/2024, 2024), <https://ssrn.com/abstract=4053853> [<https://perma.cc/MC6P-E2SV>] (using geographic distribution of sales, sales price, and similarity in products sold as measures of competition).

corporate governance, not on antitrust.⁹⁹ But it means that not all the interlocks he identifies are ones the law would condemn.

Manjunath and his coauthors address some of the limitations in Nili's paper. They study one industry in particular—biotechnology—in more detail. They evaluate every publicly traded company in that industry—2,241 in total.¹⁰⁰ They find that more than 20% of all public biotech companies have had interlocked directors and that that number increases with the highest revenue companies.¹⁰¹ They also find, like Nili, that interlocks are increasing, from 107 high-revenue companies in 2011 to 256 in 2020.¹⁰² Like Nili, they start with high-level industry overlaps. But they also identify two more specific indicators of overlap between companies—(1) the fact that they have both filed applications with the FDA to sell drugs treating the same disease and (2) the fact that they identify the other company as a core competitor in their SEC filings.¹⁰³ They find interlocks in both categories, including dozens of companies that shared a director with a company with overlapping FDA applications over the period of their study.¹⁰⁴

Manjunath and his coauthors improved upon Nili's study by looking at all publicly traded companies in the biotech industry, not just the biggest ones. They also developed means of more precisely identifying true competitors. But their paper, too, has important limitations. First, it is limited to a single industry and may not generalize to other industries. Second, even in that industry, it is limited to publicly traded companies. Third, while they employ better methods of identifying competitors, Manjunath and his coauthors' FDA approval mechanism doesn't necessarily reflect actual market competition, is specific to the life sciences, and can't be replicated in other industries that lack such precise measures of competition. And their strongest measure—self-identification of competitors—is underinclusive, identifying relatively few interlocks, and works only for public companies that file with the SEC. Self-identification of competitors undercounts overlaps because companies are not required to provide an exhaustive list and have some incentives to avoid listing competitors when doing so may give away information about strategic plans.¹⁰⁵

99. See *supra* note 26 and accompanying text.

100. Manjunath et al., *Illegal Interlocks*, *supra* note 6, at 4.

101. *Id.* at 4, 9.

102. *Id.* at 8–9.

103. *Id.* at 5–6.

104. *Id.* at 5; Anoop Manjunath, Nathan Kahrobai, Mark A. Lemley & Ishan Kumar, *Illegal Interlocks Among Life Science Company Boards of Directors: Supplementary Data, J.L. & Biosciences*, Jan.–June 2024, at fig. 1, <https://academic.oup.com/jlb/article/11/1/lsae005/7643376#supplementary-data> (on file with the *Columbia Law Review*).

105. Manjunath et al., *Illegal Interlocks*, *supra* note 6, at 6.

Subsequent literature has emerged aiming mostly to explore the implications of interlocking directors for competition.¹⁰⁶ That literature improved on the original SIC code reliance by, for instance, identifying competing companies by looking at the textual similarity of their public SEC filings.¹⁰⁷ Its findings are discussed in greater depth below.¹⁰⁸ This literature focused only on public companies, however, and did not look at investor or employment data.¹⁰⁹

In this Article, we set out to overcome those limitations and get a comprehensive picture of interlocking directorates—one that more accurately identifies all organizational forms of competitors, not just public ones. We also sought to better understand the relationship between investment and interlocking boards, most immediately by seeing how often investment firms employ and invest in individual interlocks. We also considered whether there was a missing category of interlocks—competitors linked not by a single individual but by an investment fund that employs two individuals on each competitor’s board. We describe our methodology and results in Part II.

106. See, e.g., Guglielmo Barone, Fabiano Schivardi & Enrico Sette, *Interlocking Directorates and Competition in Banking* 1–2 (Università di Bologna Dep’t of Econ., Working Paper DSE No. 1173, 2022), https://ssrn.com/abstract_id=4153387 [<https://perma.cc/38TD-3H6T>] (finding a decrease in interest rates offered to consumers after interlocking boards for banks were prohibited in Italy); Taylor A. Begley, Peter Haslag & Daniel Weagley, *Directing the Labor Market: The Impact of Shared Board Members on Employee Flows* 1–8 (Olin Bus. Sch. Ctr. for Fin. & Acct., Working Paper No. 2024/20, 2025), https://ssrn.com/abstract_id=4530518 [<https://perma.cc/2GZL-EMGE>] (showing that the introduction of an interlocking board member decreases employee flows between those two firms and “facilitate[s] anti-competitive behavior in the labor market”); Heng Geng, Harald Hau, Roni Michaely & Binh Nguyen, *Does Board Overlap Promote Coordination Between Firms?* 19–22 (Eur. Corp. Governance Inst., Finance Working Paper No. 803/2021, 2022), https://www.ecgi.global/sites/default/files/working_papers/documents/boardfinal2_0.pdf [<https://perma.cc/LH8T-UZ67>] (showing that interlocking directors lead to reduced product similarity between competitors, enhanced market power, and higher firm profits); Gopalan et al., *supra* note 98, at 3–4 (finding different effects on competitive behavior between firms with directors on direct competitors’ boards and firms with directors on indirect competitors’ boards); Alejandro Herrera-Caicedo, Jessica Jeffers & Elena Prager, *Collusion Through Common Leadership* 2–4 (Nat’l Bureau of Econ. Rsch., Working Paper No. 33866, 2025), https://www.nber.org/system/files/working_papers/w33866/w33866.pdf [<https://perma.cc/GR4Z-4S6P>] (finding that shared directors or officers increase the probability of collusion between firms by 12%); Roma Poberejsky, *Interlocking Directorates, Competition, and Innovation* 1–6 (Aug. 5, 2024) (unpublished manuscript), https://ssrn.com/abstract_id=4944799 [<https://perma.cc/8MVS-QLHG>] (finding that interlocking directors lead to more market segmentation and an increase in firm profitability).

107. See Gopalan et al., *supra* note 98, at 1 (mentioning the Hoberg–Phillips model of competition). For an in-depth discussion of that framework, which analyzes product descriptions in a company’s 10-K filing with the SEC, see Hoberg & Phillips, *supra* note 14, at 1424.

108. See *infra* Part III.

109. See *infra* Part III (discussing the literature).

II. DATA AND ANALYSIS

A. *Methodology*

Our study represents the most comprehensive assessment ever undertaken of interlocking board directorship. We rely on a proprietary dataset from PitchBook, the world's leading provider of data on investments in companies.¹¹⁰ We have acquired data from PitchBook on all companies with at least one office in North America, totaling more than seventy-five thousand public and private companies.

PitchBook data offers several advantages over other data sources previously used in the interlocking directorate literature. First, it includes not only publicly traded companies but also private companies and startups. No other study on interlocks has included data about private companies. Second, it includes both a name-disambiguated list of members of the boards of directors of those companies (including advisory or observer board members) and the role those individuals play outside the company. That allows us to identify not only situations in which the same person serves on multiple boards but also those instances in which two partners at, say, the same venture capital firm serve on boards of potential competitors. Third, just because two companies are in the same industry doesn't mean they are competitors. PitchBook generates a list of competitors for each company based on its proprietary methodology.¹¹¹ That means we do

110. About: Company, PitchBook, <https://pitchbook.com/about> (on file with the *Columbia Law Review*) (last visited Aug. 13, 2025). Because this is a proprietary dataset licensed to Stanford, we are unable to follow customary best practice and release all the raw data. See Robin Feldman, Mark A. Lemley, Jonathan S. Masur & Arti K. Rai, Open Letter on Ethical Norms in Intellectual Property Scholarship, 29 Harv. J.L. & Tech. 339 (2016) (proposing a norm of open access to data in empirical research projects). But we are happy to share the particular groups and methods we use within the PitchBook database with PitchBook licensees upon request.

111. Here is how PitchBook describes its methodology for identifying competitors:

We tag competitors using information from three different places: manual tagging by our Data Operations team, utilizing external data, and vector representations of the companies.

While the vector representations help find similar companies, we rely heavily on the other two sources of information to find competitors. Our Data Operations team does independent research to match companies with their competitors. We also utilize external sources of data. Our team has agreements with another company to pull company competitor lists. Competitor data also is sourced using search engine volume. For example, when searching "Uber vs.," a list of suggested competitors will be generated based on search volume. This data is leveraged as part of developing the list of competitors for the company.

Similar Companies are comprised of both tagged competitors and similar companies that are not classified as competitors. There's no guarantee that because Company A is a similar company to Company B, Company B competes with Company A. Defining a competitor is incredibly complex. Competitor tagging goes beyond our similar companies' algorithm and assesses whether companies genuinely

not need to use outside-in proxies for competition, as Nili, Manjunath and his coauthors, and others were forced to do.¹¹² Instead, this data allows for an internal industry perspective on whether individuals are serving on the boards of two competing companies.

While the PitchBook data is best in class, it does come with limitations that may affect some of our results. First, its record of boards of directors is incomplete, particularly for small startups and for companies that have since gone out of business.¹¹³ That means that our data should be viewed as a floor on the number of interlocks; there may well be interlocks that we cannot see with the data we have. To mitigate this issue and as a robustness check, we run several alternative specifications—one with all companies with at least one listed board member, one with companies that have at least three listed board members, and one limited to companies that have at least five or more listed board members.

Second, because the PitchBook competitor list is proprietary, we cannot independently evaluate its accuracy. Furthermore, the list of competitors is not always bilateral.¹¹⁴ That makes sense, as the fact that a startup views Google as a chief competitor does not mean that Google feels the same way about the startup (or is even aware of it at all). We have treated two companies as competitors if either company appears on the other's competitor list, as we think the problems of board overlaps are triggered if even one of the companies is seen as a competitor of the other.

After excluding companies on which we have no data (that is, no known board members or no identified competitors), we are left with a database of 75,028 companies (with an office in North America) that form the heart of our analysis. We also include 454,334 investors and over three million people with various roles in companies or investment funds.¹¹⁵

compete with each other. Thus, not all “similar companies” are competitors.

Email from PitchBook to Lane Miles, Rory Van Loo & Mark Lemley (Oct. 29, 2024) (on file with the *Columbia Law Review*) (emphasis omitted).

112. See *supra* note 14 and accompanying text.

113. For example, some of the records to which we had access show zero or only one director.

114. See *supra* note 111 (explaining how PitchBook's tagging process can lead to situations in which a company is classified as a competitor of a similar company, but not vice versa).

115. Many of the investors and people are associated only with companies we exclude from our study because the data for those companies either didn't include board members or didn't include identified competitors.

TABLE 1. THE NUMBER OF COMPANIES, INVESTORS, AND PEOPLE IN DATASET

Object Type	# in Dataset
Companies	75,028
Investors	454,334
People	3,825,847

We gathered a wide variety of information from this database. For each company, we record whether it is public or private, the particular industry it is in,¹¹⁶ the size of the company, its annual revenue, a full list of its competitors, a list of members of its board of directors (including advisory board members), and the roles those board members have outside the company (including partnerships in venture capital or other funding entities).

B. Results

We find a significant number of individual interlocks among direct competitors, and an even higher rate of investor-level interlocks.

In our largest dataset, one that includes all companies for which we have identified at least one director, we find that 3.1% of companies share a director with an identified competitor. When we include overlaps by investor entities, the share of companies with an overlap extends to 5.4%, or 4,018 total companies.

TABLE 2. INTERLOCK FREQUENCY AND PROPORTION AMONG ALL COMPANIES, BY INTERLOCK TYPE

Interlock Type	# of Interlocks	# of Companies in 1+ Interlock	% of Companies in 1+ Interlock
Person Interlocks	1,777	2,309	3.1%
Investor Interlocks	4,632	2,927	3.9%
All Interlocks	6,409	4,018	5.4%

Finding that between 3% and 6% of companies are violating the law is itself quite significant. But we think those numbers substantially understate the magnitude of corporate interlocks. Companies don't generally have only one board member. The average publicly traded company has

116. We use PitchBook's proprietary classification of industries and focus only on each company's "primary" industry assignment.

10.8 board members, and even small companies have an average of 7.9 directors.¹¹⁷ In contrast, our dataset has an average of 3.5 directors per company. Because our list of board members for some companies is incomplete, we are likely missing some board member overlaps in our largest dataset.¹¹⁸

To address this problem, we run alternative specifications limited to companies for which we have verified identities for at least three board members and have verified at least five board members. We report the results in Table 3.¹¹⁹

TABLE 3. INTERLOCK FREQUENCY AND PROPORTION, BY MINIMUM KNOWN BOARD SIZE

Known Board Size	# of Companies	Average # of Board Members	# of Companies Involved in 1+ Interlock	% of Companies Involved in 1+ Interlock
1+ Board Members	75,028	3.5	4,018	5.4%
3+ Board Members	38,902	5.5	3,559	9.1%
5+ Board Members	21,294	7.3	2,848	13.4%

The share of companies with board overlaps grows significantly, to 9.1% among companies with three or more identified board members and to 13.4% when we only consider companies with five or more identified board members. Again, even that number likely understates the share of companies that have a board interlock since most boards are larger than five.

117. These figures are drawn from the Russell 3000, a broad equity index with exposure to approximately 96% of U.S. stocks; small companies are those with annual revenues under \$100 million. See Matteo Tonello, Recent Trends in Board Composition and Refreshment in the Russell 3000 and S&P 500, Harv. L. Sch. F. on Corp. Governance (Dec. 7, 2023), <https://corpgov.law.harvard.edu/2023/12/07/recent-trends-in-board-composition-and-refreshment-in-the-russell-3000-and-sp-500/> [<https://perma.cc/9PNP-8CR8>].

118. The numbers in Table 3 are an indication of the extent of the undercount. Companies with five or more identified directors are only 28% of the companies in our study but account for 70.9% of companies involved in an overlap.

119. In these specifications, we report the share of companies with five or more directors that have at least one overlap with any company in our total dataset, not just overlaps with other companies with five or more identified directors. Thus, if a company has five directors, and one of them is also on the board of a company for which we have only one identified board member, it is included in this specification.

Not all those interlocks are necessarily illegal under current law.¹²⁰ The Clayton Act clearly prohibits only interlocks in which the same person is on the board of two competitors.¹²¹ Our data show that 1,730 companies, or 8.1% of the companies for which we have data on five or more directors, have a board member who also sits on the board of a direct competitor.¹²² In addition, we show that 2,109 companies, or 9.9% of the five-plus direct-or set, have an investor-level overlap—that is, they have a board member who is a partner and fiduciary of another person who sits on a competing board. The legality of those investor overlaps is less clear, as we discuss in Part I, but they present many of the same concerns as illegal interlocks.¹²³

To be illegal, an interlock must also involve competing companies that have a minimum revenue of \$5.1 million (tied to inflation).¹²⁴ But as we show in Table 4, for companies with at least five board members in our dataset, those that generate at least \$5 million in revenue are more likely to have an overlap (14.6%) than those with \$0 to \$4.9 million in revenue (11.4%).

TABLE 4. INTERLOCK FREQUENCY AND PROPORTION, BY REVENUE CATEGORY, AMONG COMPANIES WITH FIVE OR MORE BOARD MEMBERS

Last Reported Revenue (in Millions)	# of Companies	# of Companies Involved in 1+ Interlock	% of Companies Involved in 1+ Interlock
\$5M+	10,842	1,585	14.6%
\$0M - \$4.999M	2,924	332	11.4%
No Data	7,528	931	12.4%
Total	21,294	2,848	13.4%

120. For instance, a small portion of the interlocks identified in our data set occurred between a parent company and a wholly owned subsidiary, in part because former competitors sometimes merged. Those overlapping board members are not prohibited by antitrust law. Our data did not allow us to distinguish between wholly owned subsidiaries and companies that have majority owners that do not fully own the company. Thus, to ensure that the parent–subsidiary matching was not heavily skewing our findings, we ran a specification removing all majority-owned subsidiaries, which shrank our universe of companies with five or more board members from 21,294 to 19,576. This meant that if those subsidiaries had illegal interlocks with wholly independent competitors, those illegal interlocks would also be omitted. Under these specifications, the percentage of companies with five or more board members and any kind of interlock dropped slightly, from 13.4% to 12.9%.

121. Clayton Antitrust Act § 8, 15 U.S.C. § 19 (2018).

122. Nili found even higher numbers among publicly traded companies, but that is because his definition of overlap is broader, including companies in the same industry but that do not necessarily compete. Nili, *supra* note 6, at 1182, 1210.

123. See *infra* section III.B.

124. FTC, 2025 Jurisdictional Threshold Updates, *supra* note 57.

Interlocks are disproportionately common among public companies. Nearly 9% of all public companies had board interlocks, compared with only 4.6% of private companies, though this may in part be an artifact of the dataset, because we have greater information about the directors of public companies. Among the subset of companies for which we have information on five or more directors, Table 5 shows even more dramatic overlap. 14.7% of publicly traded companies have overlaps, compared with 12.7% of private companies.

TABLE 5. INTERLOCK FREQUENCY AND PROPORTION, BY OWNERSHIP STATUS, AMONG COMPANIES WITH FIVE OR MORE BOARD MEMBERS

Ownership Status	# of Companies	# of Companies Involved in 1+ Interlock	% of Companies Involved in 1+ Interlock
Publicly Held	7,199	1,057	14.7%
Privately Held	14,095	1,791	12.7%
Total	21,294	2,848	13.4%

We also show in Table 6 that board interlocks are concentrated in certain sectors of the economy. Interlocks are a notable feature of technology companies. They are most common in the healthcare and IT sectors. Among companies with five or more identified directors, 20.5% of companies in the healthcare industry and 16.9% of companies in the IT industry have interlocks, compared with only 7.9% of companies in other sectors. And a large fraction of these are illegal personal overlaps, not just investor overlaps. 9.5% of IT companies and 12.6% of healthcare companies have personal overlaps. The numbers get even higher in particular subsectors of the industry. More than 30% of all companies in the “pharmaceuticals and biotechnology” subsector have board interlocks with direct competitors.¹²⁵ As before, a large fraction of those are individual and not just investor overlaps: 18.2% of companies in that subsector share an individual board member with a competitor.

125. For a complete subsector breakdown of the healthcare and IT industry sectors, see *infra* Appendix A.

TABLE 6. INTERLOCK FREQUENCY AND PROPORTION, BY PITCHBOOK INDUSTRY SECTOR, AMONG COMPANIES WITH FIVE OR MORE BOARD MEMBERS

PitchBook Industry Sector	# of Companies	# of Companies Involved in 1+ Interlock	% of Companies Involved in 1+ Interlock
Healthcare	4,983	1,020	20.5%
IT	5,985	1,012	16.9%
Energy	938	94	10.0%
Financial Services	2,387	215	9.0%
Materials and Resources	1,042	90	8.6%
Consumer Products and Services	2,756	196	7.1%
Business Products and Services	3,201	221	6.9%
Unknown	2	0	0.0%
Total	21,294	2,848	13.4%

III. IMPLICATIONS

The widespread presence of interlocking boards suggests a significant gap between antitrust law as written and as practiced. Simply put, large numbers of companies are violating the law. That gap raises the question of whether antitrust law should be enforced more vigorously, or, on the other hand, whether the law should change to allow for interlocks, which industry seems to have decided permit more effective corporate governance.¹²⁶ Without evidence that interlocking boards harm competition, prohibiting interlocks might do more harm than good—especially if those board members provide essential expertise needed for innovation. The lack of evidence may explain why antitrust enforcers were, for so long, reluctant to actively prosecute interlocking boards. It also likely explains

126. Some have proposed relaxing the rule against interlocks given their prevalence in the industry. See, e.g., Nili, *supra* note 6, at 1244 (exploring a possible ex ante design to interlock regulation in which directors could apply for waivers before taking a horizontal directorship).

why the legal literature has yet to make the full normative case for why interlocking boards matter for competition and has instead focused on legality.¹²⁷

At the same time, there is a sea of evidence—albeit contested vigorously among academics—indicating a steep decline in competition in recent decades.¹²⁸ Aside from a greater number of markets becoming increasingly concentrated, as discussed above,¹²⁹ margins have increased considerably.¹³⁰ In 1980, businesses set prices at an average of 21% above their costs.¹³¹ By 2016, they set those prices at 61% above costs.¹³² Higher margins do not necessarily mean higher prices or lower consumer welfare, but the rise in markups is linked to increased market power.¹³³ Moreover, regardless of the historical trend, there is considerable evidence that markets fall considerably short of the level of competition that would bring the greatest gains to society.¹³⁴ Since boards of directors ultimately control the private sector, ensuring that they do not undermine competition should be a top priority. This Part shows why the existing empirical evidence, coupled with our new data, now provides a stronger basis for devoting more attention and scarce antitrust enforcement resources to the problem. We first discuss the implications of individual board interlocks and then consider investment funds' interlocks.

127. The legal literature has faced limitations in terms of the empirics it's produced. See *supra* notes 94–109 and accompanying text. Past legal literature also came before or missed much of the most important empirical evidence in other fields beginning to suggest that interlocking boards harm competition. For instance, the key study by Gopalan et al., *supra* note 98, was not cited by legal scholars previously covering interlocking boards. See, e.g., *supra* notes 6, 106. Empirical studies outside of legal scholarship do not apply their findings in any sustained manner to the law, as that is not the focus of that literature. Moreover, even the literature in other fields has yet to provide several key empirical connections offered in this Article. See *supra* notes 94–109 and accompanying text.

128. For a collection of evidence, see Mark A. Lemley, *Free the Market: How We Can Save Capitalism From the Capitalists*, 76 U.C. L.J. 115, 120–23 (2024).

129. See *supra* text accompanying note 102.

130. Jonathan B. Baker, *The Antitrust Paradigm: Restoring a Competitive Economy* 19–20 (2019).

131. Jan De Loecker, Jan Eeckhout & Gabriel Unger, *The Rise of Market Power and the Macroeconomic Implications*, 135 Q.J. Econ. 561, 562 (2020).

132. *Id.*

133. *Id.* at 563.

134. See *id.* at 562 (“In addition to lowering consumer well-being, market power decreases the demand for labor and dampens investment in capital, it distorts the distribution of economic rents, and it discourages business dynamics and innovation.”); Rory Van Loo, *Broadening Consumer Law: Competition, Protection, and Distribution*, 95 Notre Dame L. Rev. 211, 228–31 (2019) (summarizing evidence of market failures related to consumer law); Rory Van Loo, *Inflation, Market Failures, and Algorithms*, 96 S. Cal. L. Rev. 825, 828 (2023) (summarizing the literature on market failures related to consumer law, antitrust, and governmental licensing restrictions).

A. Individual Board Interlocks

An emerging body of research from other fields has begun to indicate competitive harm from interlocking boards. Earlier work relied on a coarse metric for assessing competitors—SIC codes that were first published in 1938 for governmental accounting purposes other than competition.¹³⁵ Using updated codes, scholars in other fields have improved upon those coarse industry classifications and studied the link between interlocking boards and companies likely to be closer in market space. That research indicates that when competitors (even coarsely defined by industry segment) move from no direct interlocking connections to interlocking boards, consumer prices increase substantially.¹³⁶ Competitors with interlocking boards are also more than three times—and perhaps as many as ten times—more likely to be later found to have engaged in illegal collusion than competitors without interlocks.¹³⁷ Moreover, one study found that removing interlocking bank boards lowered the interest rates that banks charged customers on loans.¹³⁸

Our first contribution to that literature is to show that the problem is far bigger than previously realized. While prior work has pointed to potentially unlawful interlocks among public companies, that literature was limited by outside-in proxies for markets.¹³⁹ Because we analyze a proprietary dataset that investment firms and financial advisors use, our classifications at least reflect how astute industry actors view competition. Given the inherent limitations of prior classifications constructed by academics, our findings of so many interlocks among competing public companies using a leading market participant's classification system add more weight to the claim that interlocking directors are indeed widely sitting on competing public companies.

More importantly, the prior literature was by necessity limited to public companies. We are the first to show that interlocking boards are common in private companies, and thus in the business form that accounts for most of the economy.

Our data also offers insight on two important policy issues that bear on the potential harm of interlocking directorates. The first is the puzzle of how common shareholding by institutions is linked to lower levels of

135. See Hoberg & Phillips, *supra* note 14, at 1427 (describing the limitations of SIC codes in measuring competition); Classifying Businesses, U.S. Census Bureau, <https://www.census.gov/about/history/historical-censuses-and-surveys/census-programs-surveys/economic/classifying-businesses.html> [<https://perma.cc/KXF3-AAHK>] (last updated Sep. 3, 2024) (noting that SIC codes were first published in 1938).

136. Gopalan et al., *supra* note 98, at 3.

137. See *id.* at 4 (finding a three-fold increase in collusion); Herrera-Caicedo et al., *supra* note 106, at 2–5 (finding that the probability of collusion between two firms increases from 1.2% to about 13% when the firms share directors or officers).

138. Barone et al., *supra* note 106, at 1.

139. See *supra* text accompanying notes 107–109.

competition.¹⁴⁰ The second is the relationship between interlocks and innovation.

1. *Common Ownership*. — A vibrant literature in recent years has linked common ownership—holding minority shares in competitors or companies in the same industry—to anticompetitive prices.¹⁴¹ Yet that literature has yet to show the precise causal mechanism for why passive share ownership might lead to anticompetitive results. Our data may point to such a mechanism, at least for some owners.

The existing literature has shown that common owners vote actively in board elections, meaning they can use their voting power to install interlocking boards.¹⁴² Firms that have high levels of common ownership are also more likely to have interlocking boards.¹⁴³ Yet outside the narrow context of venture capital-funded startups, this literature has offered evidence of neither the common owners pushing for the interlocking boards nor of the common owners having the ability to influence those interlocking directors once they exist.

We show that investors with an ownership stake in an industry often have their own employees on competing companies' boards. In 44.8% of the individual overlaps we found, or a total of 797 instances, the interlocking board member was employed by an investor that invested in at least one of the competing companies. Moreover, in 36% of the total individual overlaps we found, or 640 instances, the investor invested in both competitors. In light of these investments, the investor has a vested interest in the employee pushing the industry toward higher profits even at the expense of competition. Notably, this investment by the employer of the interlocking board members was not identified by previous studies, which lacked investor data and information about the employment status of the interlocking board members.

140. See *supra* note 27 and accompanying text.

141. See Elhauge, Horizontal Shareholding, *supra* note 27, at 1269 (explaining that common ownership leads to an “anticompetitive incentive” against lowering product prices).

142. See José Azar, Common Shareholders and Interlocking Directors: The Relation Between Two Corporate Networks, 18 J. Competition L. & Econ. 75, 76, 97 (2022) (“The evidence presented . . . supports the hypothesis that institutional shareholders have influence on the board of directors.”); see also, e.g., Nathan Shekita, Interventions by Common Owners, 18 J. Competition L. & Econ. 99, 115 (2022) (“BlackRock voted in 79,572 proposals relating to the election of directors . . .”).

143. Azar, *supra* note 142, at 97.

TABLE 7. INVESTOR INVESTMENT IN INTERLOCK COMPANIES, FOR INDIVIDUAL INTERLOCKS

Individual's Investor Employment Status	Employer's Investments	# of Individual Interlocks	% of All Individual Interlocks
Not Employed	n/a	579	32.6%
Employed	Both Companies	640	36.0%
Employed	One Company	157	8.8%
Employed	Neither Company	401	22.6%
Total		1,777	100%

In addition, our data suggests that some owners are directly influencing the appointment of interlocking boards and that those owners can later influence the interlocking board members. In 65.7% of cases for which we have complete historical data, we find that the private equity or venture capital fund invested in the company before, or on exactly the same day as, their employee became a board member. It is routine for investment funds to reserve the right to control a board seat in the investment contract.¹⁴⁴ An investor would have some soft influence over the company. Another 25.3% of the time, the investor's employee became a board member, and the investor thereafter invested in the company. In those situations, one possible explanation is that the company accommodates the investor's request for a board member to attract the investment. In those instances, the subsequent investment comes at a median of 183 days after the board seat occurs, which suggests that many subsequent investments may be linked to the board seat. Thus, in a substantial number of interlocks, an owner may have played a role in the interlock occurring.

These findings have potentially profound implications. They show that many common owners have a more direct means to influence boards toward anticompetitive conduct than previously identified in the literature. After all, if common owners only pushed for board members who happened to be on competitors' boards—as previously hypothesized but not proven—the owners would still lack a means of ensuring that the board member acted anticompetitively. Owners would need to hope or perhaps rely on a tacit understanding.

Our data suggests that many owners do not need to merely hope the companies will limit competition. They can instead install their employees

144. See Natee Amornsiripanitch, Paul A. Gompers & Yuhai Xuan, *More Than Money: Venture Capitalists on Boards*, 35 J.L. Econ. & Org. 513, 517 (2019) ("On average, venture capitalists receive a board seat 43.9% of the time."); Steven N. Kaplan & Per Strömberg, *Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts*, 70 Rev. Econ. Stud. 281, 287 (2003) ("The rights to control or make corporate decisions are provided in board rights and in voting rights.").

on competing firms' boards. A partner at a private equity or venture capital firm has a fiduciary duty to that firm.¹⁴⁵ When that partner sits on a single corporate board, their interest and the venture capital's interest are generally aligned—to help the company make money. But when partners of the same venture capital firm sit on the boards of two competing firms, their interests may conflict. The venture capital wants both firms to make money, but companies in an industry generally succeed at the expense of their competitors, meaning that one company's success may hurt the venture capital's investment in the other company. Collusion, by contrast, allows both companies to succeed, albeit illegally, at the expense of consumers. Putting an investor's fiduciaries on both boards provides both a motive to collude and the opportunity to do so.

We cannot establish, based on the data alone, that the investors are instructing their employees to engage in anticompetitive conduct. Nor can we show that the employees are engaging in anticompetitive conduct. The data from other industries does, however, suggest that interlocking boards lead to anticompetitive results.¹⁴⁶ And our data may help explain why.

Further studies would be needed to determine how much of the link between common ownership and lower competition is explained by investors employing board members. There are likely multiple contributors to that relationship.¹⁴⁷ Additionally, private equity and venture capital funds—the focus of our data—are less involved in large public companies, meaning that our story may have less importance for those companies.¹⁴⁸ On the other hand, each of the big institutional investors—BlackRock, Vanguard, and Fidelity—has either a private equity or venture capital fund.¹⁴⁹ Given the role of interlocking boards in potentially steering

145. See Christine Hurt, *Startup Partnerships*, 61 B.C. L. Rev. 2487, 2507 (2020) (explaining that partners in a “general partnership . . . owe fiduciary duties to the entity and each other”).

146. See *supra* note 27 and accompanying text.

147. See, e.g., Hemphill & Kahan, *supra* note 27, at 1419–29 (exploring the many potential mechanisms linking common ownership to anticompetitive effects).

148. Eileen Appelbaum & Rosemary Batt, *Private Equity at Work: When Wall Street Manages Main Street 57* (2014) (“The greatest opportunities for strategic and operational improvements occur in small and midmarket companies[,] . . . which often lack professional management . . .”).

149. See BlackRock, *BlackRock Private Investment Funds 1* (2025), <https://www.blackrock.com/us/individual/literature/investor-guide/bpif-investor-guide.pdf> [<https://perma.cc/U3W3-HVYV>]; Darby Nielson, Vipul Gautam, John Conway & Sumit Sharma, *Fidelity Invs., Integrating Private Equity With Traditional Portfolios: Manager Dispersion Favors a Diversified Approach 5* (2024), <https://institutional.fidelity.com/app/proxy/content?literatureURL=/9918763.PDF> [<https://perma.cc/M6Q3-HCPM>]; Michael Rabinovich & Matthew Schweitzer, *Vanguard, The Case for Private Equity at Vanguard 13* (2025), <https://personal1.vanguard.com/pdf/case-for-private-equity-at-vanguard-june-2025.pdf> [<https://perma.cc/4FXS-F7KZ>]. We do not investigate whether and how those funds operate independently of their institutional parents.

companies away from industries,¹⁵⁰ in theory, these investors could invest in potential challengers to concentrated industries and sometimes steer them away from directly challenging the concentrated industries. But we can't prove that with anything beyond anecdotal evidence. At a minimum, the connection between large passive institutional investors and private equity and venture capital funds' interlocking boards is an area worthy of further research.

Our data nonetheless provides a potential missing piece to the central puzzle in the debate about why common ownership is linked to less competition. For some subset of owners, across large portions of the economy, there is a more direct mechanism for ownership to erode competition than previously identified in the literature. That mechanism is an investor's control of its own employees who sit on the boards of competitors that the company owns.

2. *Innovation.* — The story of interlocking directorates is bound up with innovation.¹⁵¹ We demonstrate that interlocks are particularly common in two of the highest-innovation sectors—healthcare and IT. Moreover, small and medium-sized companies have been missing from prior studies, which focused on publicly traded companies with high market capitalizations.¹⁵² Our findings indicate that interlocks are also common among small and medium businesses. That is important for innovation because businesses make crucial decisions early in their life cycle about what products to pursue. Entry by new competitors wielding innovative ideas is crucial for competition.¹⁵³ Consequently, private company boards in high-tech industries play a meaningful role in shaping the direction of innovation. Our findings thus underscore how interlocks may disproportionately affect innovation, a connection that has gone largely overlooked in the legal literature.

150. See Mark A. Lemley & Matthew T. Wansley, *Coopting Disruption*, 105 B.U. L. Rev. 457, 480 (2025) (arguing that investor interlocks are one way that incumbent firms co-opt potentially disruptive entrants and preserve their monopolies).

151. The closest discussions are in passing and not on point. For instance, Nili only observes that biotech companies are important for life-saving innovation and that diverse boards spread legal innovations, neither of which is the subject of this section. See Nili, *supra* note 6, at 1227 ("Interlocks have also been found to spread legal innovation, even in an otherwise information-rich environment."). Manjunath and his coauthors only mention, at a high level of abstraction, the relationship between antitrust and innovation, not how boards play any particular role in innovation. See Manjunath et al., *Illegal Interlocks*, *supra* note 6, at 2 ("Antitrust law is designed to reduce prices and encourage innovation by ensuring that companies compete rather than collude.").

152. For example, Nili focuses on the S&P 1500. Nili, *supra* note 6, at 1208. To qualify for the S&P, a company must have a market capitalization of at least \$1.1 billion. S&P Dow Jones Indices, S&P U.S. Indices: Methodology 9 (2025), <https://www.spglobal.com/spdji/en/documents/methodologies/methodology-sp-us-indices.pdf> (on file with the *Columbia Law Review*).

153. See, e.g., Lemley & Wansley, *supra* note 150, at 496–97 (explaining why new entrants are important for competition).

The question then becomes whether that role is positive or negative. The existing literature generally suggests a potential positive role for interlocks among startups, perhaps by bringing greater expertise, but the picture is complicated. For instance, evidence suggests that having a board with industry expertise helps CEOs to make better decisions on what research to pursue, but only up to a point.¹⁵⁴ One study found that at the highest levels of industry expertise on boards, innovation declined compared to more moderate levels of expertise.¹⁵⁵

Board members may play a particularly important role in shaping the innovation strategies of private small and medium companies.¹⁵⁶ This raises a difficult policy question, because smaller companies generally stand to benefit more in terms of company valuation from board members who are on multiple boards, since they bring experience other board members might lack.¹⁵⁷ Venture capital-appointed directors on startups are also associated with various measures of success, such as a greater likelihood of the startup having an initial public offering.¹⁵⁸ One might therefore think that interlocking boards can improve knowledge even more, since the board members have industry-specific knowledge of competitive conditions. If so, interlocking boards may be desirable in the tech industry, or at least have benefits that must be weighed against the harm they cause.

But another potential explanation for that higher valuation of companies with board members sitting on multiple boards is that interlocking boards push the companies toward anticompetitive outcomes.¹⁵⁹ Mark Lemley and Matthew Wansley show that when corporate funders of startups put their employees on boards, even as advisers, those board members can act to steer the startup away from competing with the funder and can funnel competitive intelligence back to the incumbent.¹⁶⁰ And Eric Posner and Ruth Zheng have shown that interlocking directors were responsible

154. See Fabrizia Sarto & Sara Saggese, Board Industry Expertise and Innovation Input: Evidence on the Curvilinear Relationship and the Moderating Effect of CEO, 25 *Eur. J. Innovation Mgmt.* 775, 777 (2022) (concluding from the results of a study of privately held Italian medium and large high-tech companies that “innovation input improves up to a certain level of board industry expertise”).

155. *Id.* at 788–89.

156. M. Alix Valenti, Clifton O. Mayfield & Rebecca A. Luce, What Attracts Directors to Boards of Small- and Mid-Sized Companies?, 21 *J. Small Bus. Strategy* 65, 66 (2010) (noting that the strategic roles of boards “become particularly relevant” for small companies since boards exercise substantial influence on small companies by implementing formal management processes).

157. Laura Field, Michelle Lowry & Anahit Mkrtchyan, Are Busy Boards Detrimental?, 109 *J. Fin. Econ.* 63, 63–64 (2013).

158. See Eldar & Grennan, *supra* note 16, at 582 (finding that startups with venture capital directors were more likely to have IPOs and less likely to fail).

159. See Gopalan et al., *supra* note 98, at 4 (finding evidence of anticompetitive effects from interlocking boards).

160. Lemley & Wansley, *supra* note 150, at 478.

for the vast (and illegal) conspiracy among Silicon Valley companies not to hire each other's employees.¹⁶¹

Importantly, none of the innovation studies, or the studies about interlocking boards, have suggested that interlocking board members improve product innovation.¹⁶² To the contrary, one study has found that interlocking boards lead to leakage of intellectual property, potentially diminishing the motivation to invest in research and development.¹⁶³ Felipe Cabezón and Gerard Hoberg find that companies with overlapping directors reduce their product differentiation and are more likely to "herd" with others, reducing innovation.¹⁶⁴ Others have suggested that board overlaps (and even board observers) can be a way for incumbent monopolists to keep tabs on potential new competitors, steering startups away from challenging them and providing the incumbents an opportunity to buy them should they become a competitive threat.¹⁶⁵ And while public companies with interlocks have better stock performance, that could be a sign of either anticompetitive conduct or additional value contributed by interlocking board members due to their superior expertise.

Ultimately, our data can't resolve that question, though we are skeptical of claims that interlocks improve innovation rather than simply reducing competition in innovative industries. But we do show that interlocks are common in some of the most innovative industries and affect startups in those industries, making resolution of the issue particularly important and highlighting the need for further research on the question.

B. *Investment Funds' Interlocks*

Our second major contribution concerns the role of investment funds as the entities that link competing boards. Such investor-level interlocks have been absent from the antitrust literature about interlocks, which focuses on the same individual sitting on two firms' boards. And as we note in Part I, investor-level interlocks' legal status is ambiguous. But there is reason to think that they are harmful, and addressing them could be

161. Eric A. Posner & Ruth Zheng, *The Silicon Valley No-Poach Conspiracy* 18 (Univ. of Chi. Coase-Sandor Inst. for L. & Econ., Working Paper No. 25-18, 2025), https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=2702&context=law_and_economics [<https://perma.cc/58D2-YCXM>] ("Further, the government argued that the cartel was enabled and maintained by executives and board members.").

162. The only kind of innovation found to be improved by interlocking board members is legal innovation. See, e.g., Michal Barzuza & Quinn Curtis, *Board Interlocks and Corporate Governance*, 39 *Del. J. Corp. L.* 669, 685–86 (2015) (explaining how "interlocks were associated with . . . firms' responses to a surprising Delaware court decision").

163. Felipe Cabezón & Gerard Hoberg, *Leaky Director Networks and Innovation Herding 1* (June 3, 2024) (unpublished manuscript), <https://ssrn.com/abstract=4158977> [<https://perma.cc/2WK7-MACU>].

164. *Id.*

165. See Lemley & Wansley, *supra* note 150, at 477–82 (discussing how corporate venture capitals assess and respond to competitive startup threats).

important for preventing harms from interlocking boards moving forward. At the very least, they are an important—and previously untold—part of the story.

No direct research exists about the implications for competition. One study is related, however. It looked at what happens when two board members of competing firms are also on the same board at another firm, even if that firm is not a competitor of the two competing firms.¹⁶⁶ We call this an intermediated overlap. In other words, if Vice President Al Gore (who has sat on Apple's board)¹⁶⁷ and John Hennessy (the former president of Stanford University, who has sat on Google's board)¹⁶⁸ were hypothetically to sit on the board of a completely unconnected pharmaceutical company, what effects would that have on Google and Apple?

Radhakrishnan Gopalan, Renping Li, and Alminas Žaldokas found that such intermediated overlaps have some of the same effects as if Gore were simultaneously on the boards of both Google and Apple.¹⁶⁹ That is, two competitors' board members joining a third board is associated with an increase in consumer prices charged by the firms, albeit at about one-fourth the magnitude as if it were the same person.¹⁷⁰ The firms with such an intermediated overlap also subsequently introduced fewer new products—a crucial source of consumer value creation—at about half the drop in magnitude as was found if it were the same person on the boards.¹⁷¹ Moreover, in terms of head-on competition, the two competing firms subsequently grew further apart geographically in their product market offerings, meaning that they began to compete head-on far less, something that was not true of direct same-person interlocks.¹⁷² Since antitrust law prohibits companies from dividing up territories or customers, if firms were to do that explicitly it would be illegal.¹⁷³ Finally, Gopalan and his coauthors found that competitors linked by indirect board interlocks were three times more likely to be convicted of collusion than businesses that have no overlap.¹⁷⁴ In short, having indirectly interlocking boards has been

166. Gopalan et al., *supra* note 98, at 3.

167. Kif Leswing, *Apple Says Longtime Directors Al Gore and James Bell Are Retiring From the Board*, CNBC (Jan. 11, 2024), <https://www.cnbc.com/2024/01/11/apple-longtime-directors-al-gore-and-james-bell-retiring-from-board.html> [<https://perma.cc/WV9N-HRQK>].

168. Biography: John L. Hennessy, Stan. U., <https://hennessy.stanford.edu/biography> [<https://perma.cc/T23F-HZGP>] (last visited Sep. 4, 2025).

169. Gopalan et al., *supra* note 98, at 3.

170. *Id.*

171. *Id.* at 4.

172. *Id.*

173. See, e.g., *Palmer v. BRG of Ga., Inc.*, 498 U.S. 46, 49–50 (1990) (per curiam) (holding territorial market division illegal per se); Herbert Hovenkamp, Mark D. Janis, Mark A. Lemley, Christopher R. Leslie & Michael A. Carrier, *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law* § 7.01 (3d ed. Supp. 2024) (noting that agreeing to divide product markets is illegal per se).

174. Gopalan et al., *supra* note 98, at 3. This was slightly higher than the likelihood of collusion for competitors with a direct interlock.

found to have similar effects on competition as do directly interlocking boards, with sometimes greater and other times lesser magnitude.

The intermediated overlaps Gopalan and his coauthors studied didn't necessarily involve much interaction between board members. Board meetings bring together the two directors typically twelve times a year for the largest companies, and perhaps fewer than eight times per year for smaller companies.¹⁷⁵ In those board meetings, directors share strategies to direct that third company. It is possible that the board members could influence one another's strategies by example. But the intermediated overlaps in Gopalan and his coauthors' paper were through unrelated companies.¹⁷⁶ That linked participation does not inherently push the two directors to coordinate on their other board seats, since the third company presumably would gain nothing by noncompeting companies improving their anticompetitive profits.

In contrast, our study focuses on an institutional link that is much more direct: an investment fund with a financial interest in one or both companies' success. In 77.7% of the entity interlocks we document, the investor invested in at least one of the two companies. In 56.8% of the investor-level interlocks, the investor invested in both of them. Consequently, the two board members share an institutional identity that has strong motivation for anticompetitive conduct to occur. Moreover, since most investor employees serving on boards are senior, they typically receive at least some of the investor's profits.¹⁷⁷ And as Table 8 shows, virtually all of the investor interlocks are composed of the partners, principals, officers, or directors of the investment fund, so they have a fiduciary obligation to the investor for which they work as well as to the companies on whose boards they serve.

175. Matteo Tonello, Board Leadership, Meetings, and Committees, Harv. L. Sch. F. on Corp. Governance (Aug. 30, 2022), <https://corpgov.law.harvard.edu/2022/08/30/board-leadership-meetings-and-committees/> [<https://perma.cc/24JY-8WWA>].

176. Gopalan et al., *supra* note 98, at 3.

177. See Private Equity Salary Guide: Career Insights & Compensation, U.S. Priv. Equity Council (Apr. 12, 2024), <https://www.uspec.org/blog/private-equity-salary-guide-career-insights-and-compensation> [<https://perma.cc/4J3G-AE8D>] (explaining that a fund's carried interest, or capital gain on successful investments, is allocated to senior investment professionals within the fund).

TABLE 8. THE FREQUENCY AND PROPORTION OF EMPLOYEE POSITION LEVELS¹⁷⁸ IN INVESTOR INTERLOCKS¹⁷⁹

Position Level	# of Occurrences in Entity Interlocks	% of Occurrences in Entity Interlocks
Partner	1,916	20.7%
Managing Director	1,532	16.5%
Founder	1,080	11.7%
Venture Partner	693	7.5%
Chief Executive Officer	635	6.9%
General Partner	555	6.0%
Managing Partner	511	5.5%
Executive	228	2.5%
Operating Partner	184	2.0%
Principal	171	1.8%
Chairman	160	1.7%
Board Member	160	1.7%
Chief Financial Officer	138	1.5%
Director	110	1.2%
Senior Vice President	107	1.2%
Senior Managing Director	104	1.1%
Vice President	99	1.1%
Vice Chairman	95	1.0%
Other	786	8.5%
Total	9,264	100%

Additionally, the ties among employees of an investment fund are known to be tight. They have holiday parties together and may have worked together for many years.¹⁸⁰ Unlike board members sitting on a

178. Position Level is a PitchBook-defined attribute. It maps each employee's actual job title to a standardized set of roles to make inter-investor comparison easier. See Position Departments, Position Levels, and Position Titles, PitchBook (Sep. 10, 2024) (on file with the *Columbia Law Review*).

179. Each investor interlock involves two people, so there are 9,264 position levels across our 4,632 investor interlocks.

180. See, e.g., Lawrence Delevingne & Olivia Oran, Wall Street Holiday Parties Are Back . . . But Don't Tell Anyone, Reuters (Dec. 22, 2016), <https://www.reuters.com/article/us-usa-wall-street-parties/wall-street-holiday-parties-are-back-but-dont-tell-anyone-idUSKBN14B0FI/> [<https://perma.cc/73JW-BWPK>].

third board that meets quarterly, many investor employees work together in the same office daily.¹⁸¹

In short, belonging to the same investment fund provides additional financial incentives, touchpoints, and close relationships that would help with collusion. And it provides a strong incentive to do so, since investors in both companies stand to benefit if those companies agree to share supracompetitive profits rather than competing them away. Some investors may actively push employees to collude. Even if they don't, they serve as a conduit for informal information about the company's plans and strategies, which can easily be passed to a competitor in a social or work setting. And even if neither thing is true, an investor who sits on the board of a company may not encourage that company to aggressively target a competitor if doing so means that the investor would lose money on another investment.

Ultimately, it is unknown how these variables play out. Interlocked boards may not be able to influence markets if the companies don't have significant market power. Nonetheless, it is reasonable to worry that belonging to the same private equity firm could be as concerning as direct interlocks and more concerning than indirect interlocks linked by a third noncompeting board.

Additionally, there are two reasons why investor interlocks may be a greater problem in the future. First, investors are becoming larger, meaning that the number of board members that would have investor-level overlap would, even if solely by chance, be expected to increase as fewer and fewer investors employ a larger share of the private sector.¹⁸² Second, although enforcement of board overlap has been limited, it is possible that laws prohibiting direct interlock deter some more cautious companies from appointing interlocking individual board members.¹⁸³ Moreover, authorities are paying greater attention to this issue, meaning that there may be greater deterrence of individual interlocking boards moving forward—at least under administrations likely to enforce the antitrust laws.¹⁸⁴

181. Cf. Kaja Whitehouse & Michelle Abrego, From Citadel to JPMorgan, How Wall Street Does RTO, *Bus. Insider*, <https://www.businessinsider.com/return-to-office-rto-banks-hedge-funds-private-equity-2023-9> [<https://perma.cc/4WX4-QV64>] (last updated Jan. 9, 2025) (explaining how many companies are asking employees to return to the office for five days a week).

182. See John Coates, *The Problem of Twelve: When a Few Financial Institutions Control Everything* 70 (2023) (“In addition to becoming more concentrated, private equity funds increasingly cooperate rather than compete.”).

183. Nili, *supra* note 6, at 1244 (“This uncertainty may lead companies to refrain from nominating a prospective director, or nominate the director but risk a violation of the [Clayton] Act.”).

184. *Id.* at 1184. While Republican administrations have traditionally been more hesitant to enforce the antitrust laws than Democratic ones, there is some reason to think that will not be true in the second Trump Administration. See Cecilia Kang, Trump to Nominate Gail Slater to Lead Justice Department's Antitrust Efforts, *N.Y. Times* (Dec. 4, 2024), <https://www.nytimes.com/2024/12/04/us/politics/trump-gail-slater-antitrust-justice->

Companies wanting the benefits (procompetitive or anticompetitive) of interlocking directors without risking the same legal repercussions may thus increasingly turn to investor-level interlocks.¹⁸⁵

In short, despite the lack of direct evidence studying the effects of investor-level interlocks, the existing empirical evidence and theory support a working hypothesis that such interlocks are a substantial societal concern. They have the potential to significantly undermine competition, especially with respect to innovation. At a minimum, investor-level interlocks deserve far more attention than they have received.

IV. PROPOSED LEGAL REFORMS

As we show in this Article, individual interlocks are surprisingly common despite their illegality. And investor-level interlocks, which the law and literature have almost completely neglected, are even more common. In this Part, we offer a number of suggestions to improve antitrust treatment of interlocks.

A. *Predisclosure*

One problem is information. Perhaps companies violate the law against interlocking directorates because they don't know it is a law, given decades of nonenforcement, though that is less likely than it used to be as a result of some high-profile government cases in the Biden Administration.¹⁸⁶ But government is also limited in its ability to enforce the law because it doesn't know when interlocks happen. That is particularly true of the two sorts of interlocks for which we provide new information—interlocks among private companies and investor-level interlocks. Neither is publicly disclosed, so the government must rely on private reporting or happenstance to know that the law is being violated.¹⁸⁷

department.html (on file with the *Columbia Law Review*) (last updated Dec. 6, 2024) (reporting that the nominee for assistant attorney general for the Antitrust Division would vigorously pursue enforcement actions against Big Tech companies); see also Jamillia P. Ferris, Maneesha Mithal, Maureen Ohlhausen & Rebecca Weitzel Garcia, FTC Appoints New Bureau Directors: What to Expect From Directors Christopher Mufarrige and Daniel Guarnera, Wilson Sonsini (Feb. 13, 2025), <https://www.wsgr.com/en/insights/ftc-appoints-new-bureau-directors-what-to-expect-from-directors-christopher-mufarrige-and-daniel-guarnera.html> [<https://perma.cc/TY8S-KH36>] (reporting that Bureau of Competition Director Daniel Guarnera's experience "with the lawsuits against major technology companies[] may well prepare him to advance [the FTC Chair's] goal of ending 'Big Tech's vendetta against competition and free speech'" (quoting FTC Chair Andrew Ferguson (@AFergusonFTC), X (Dec. 10, 2024), <https://x.com/AFergusonFTC/status/1866641731892154546> [<https://perma.cc/WGF6-B4CU>])).

185. Whether that will work is another matter. As noted above, section 8 of the Clayton Act may well reach investor-level interlocks, at least among fiduciaries or agents of the entity, as almost all of the ones we identify are. See *supra* notes 64–71 and accompanying text.

186. DOJ Press Release, Directors Resign, *supra* note 78.

187. The FTC does insist on continuing oversight over board composition once a violation has been proven, however. See *SCM Corp. v. Fed. Trade Comm'n*, 565 F.2d 807, 812

Nili proposes a mechanism by which companies can obtain preapproval from antitrust authorities before appointing interlocking board members.¹⁸⁸ Nili's motivation for the proposal is to help corporations gain clarity about whether it is acceptable to appoint interlocking board members.¹⁸⁹ His primary concern is that corporations will miss out on beneficial interlocking board members.¹⁹⁰

We agree with this move from *ex post* enforcement—prosecuting only after finding an interlocking board—to *ex ante* enforcement. We think the motivation and design of an *ex ante* regime, however, should be not only to provide clarity but also to discourage problematic interlocking boards across large swaths of the economy.

Thus, rather than giving *corporations* the option of preapproval to benefit them, we propose giving antitrust *enforcers* the option of preapproval. Any board that is thinking of appointing someone who might be an interlocking director should be required to submit the proposal to the FTC or DOJ—perhaps only in instances when one of the boards is of a company over a certain size or both are in high-innovation industries. The appointment would not be effective during a waiting period unless the government approves it. Antitrust authorities already use a similar system for mergers over a certain size, so our proposal would be in line with the institutional design of antitrust enforcement.¹⁹¹ Early notification also makes sense given that the remedy for a violation in almost all cases is

(2d Cir. 1977) (affirming the FTC's power to continue evaluating the necessity of a cease and desist order for section 8 violations regardless of the defendant board member's resignation); Areeda & Hovenkamp, *supra* note 54, ¶ 1305 (discussing the FTC's continuing supervision).

188. See Nili, *supra* note 6, at 1244 (suggesting the FTC could enforce a waiver program granting preapproval for horizontal interlocks). Note that for *ex post* enforcement purposes, Nili explores the possibility of companies notifying the FTC about board appointments—though without preapproval. *Id.* at 1246.

189. See *id.* at 1244 (recognizing that *ex post* enforcement procedures don't give companies notice about whether a board nominee is illegal).

190. See *id.* at 1246–47 (explaining that, with greater disclosure, shareholders could more accurately assess the benefits a potential horizontal director would provide).

191. See FTC Premerger Notification Off., Hart-Scott-Rodino Premerger Notification Program: Introductory Guide I, at 2 (rev. 2024), <https://www.ftc.gov/sites/default/files/attachments/premerger-introductory-guides/guide1.pdf> [<https://perma.cc/FT7X-8H4V>] (“The review of transactions under the Program enables the FTC and the DOJ to determine which acquisitions are likely to be anticompetitive and to challenge them prior to consummation . . .”). As part of the forms submitted for a proposed merger, the acquiring company must list any of its officers or directors who is also an officer or director of a company in the same industry as the target company. See FTC, 2025 HSR Form Updates: What Filers Need to Know (2025), https://www.ftc.gov/system/files/ftc_gov/pdf/HSR-Form-Updates-FINAL-POSTED-01-02-25.pdf [<https://perma.cc/96MF-54YE>] (requiring that the acquiring company in a merger identify any directors or officers who also serve as a director or officer of an entity in the same industry as the target company). But this requirement only applies to mergers, would miss directors appointed later, and would not catch fund-level interlocks.

simply to dismiss the director.¹⁹² If all the government is likely to do is to stop the ongoing violation, waiting until after the violation has happened to do something would not deter future violations.¹⁹³

An early notification system would also allow the government to calibrate enforcement. Right now, personal interlocks are illegal per se if the companies are of at least modest size and have more than \$5.1 million in revenue, while investor-level interlocks are of uncertain legal status.¹⁹⁴ Some interlocks might be desirable, however. The most compelling cases for approving interlocks would be when industries face a shortage of expertise and when the industry is unconcentrated enough that collusion seems unlikely.¹⁹⁵ The government could permit certain interlocks even if they might otherwise violate the law by sending a “no action” letter, as the SEC and the Antitrust Division do.¹⁹⁶ Conversely, an early notification system would allow the government to potentially expand enforcement in other problematic cases that aren’t covered by current law by applying the rule of reason. We discuss some examples in the next section.

B. *Expanding Interlock Prohibitions*

Some have suggested that the prevalence of interlocks means that it is the law, not the practice, that is out of step with reality. Nili proposes reforming antitrust law to restrict the prosecution of interlocking directors to only concentrated industries, rather than enforcing the laws more broadly.¹⁹⁷ In other words, the prohibition would be enforced only in industries that already exhibit anticompetitive behavior.¹⁹⁸ Besides the problem that concentration is no longer viewed as a sufficient measure of competition, this proposal reflects Nili’s emphasis on preserving what he sees as the corporate governance benefits of interlocking board members.¹⁹⁹

We think the opposite may be needed. Antitrust law should operate to prevent problematic concentration, not only seek to constrain already-

192. Areeda & Hovenkamp, *supra* note 54, ¶ 1301c.

193. While there is no prohibition on damages for an interlocking directorate, the government has not sought such remedies, and the rare private cases that involve interlocks have not resulted in a damages award. See *infra* note 232 (citing a DOJ press release collecting the few private cases).

194. See *infra* notes 211–214 and accompanying text (discussing cases involving investor interlocks).

195. See Nili, *supra* note 6, at 1243 (arguing that interlocks should be permitted in unconcentrated industries).

196. See, e.g., Sec. Indus. & Fin. Mkts. Ass’n, SEC Staff No-Action Letter, 2024 WL 4999469 (Dec. 5, 2024); Wilmer Hale, SEC Staff No-Action Letter, 2023 WL 2479930 (Mar. 13, 2023); Equiniti Tr. Co., SEC Staff No-Action Letter, 2021 WL 3260502 (July 29, 2021); Fidelity Mgmt. & Rsch. Co., SEC Staff No-Action Letter, 2020 WL 2539089 (May 19, 2020).

197. Nili, *supra* note 6, at 1242–44.

198. *Id.*

199. *Id.*

concentrated industries. Collusion is a potentially big problem for the economy, and the evidence indicates that interlocked boards are more likely to collude,²⁰⁰ steer companies away from direct competition, and cause them to introduce fewer new products.²⁰¹ Indirectly, interlocking directors may thereby divide up the economy among the companies on whose boards they sit—or among the companies owned by their investor. Territorial and product–market division are themselves illegal per se.²⁰² But even more subtle nudges are problematic. Board members who discourage a startup from taking on an incumbent firm where they (or their partners) also invest don’t just prevent current competition; they reduce the likelihood of future competition. And once an industry is concentrated, it is extremely difficult for antitrust to change the existing structure.²⁰³

Consequently, we think that it is worth considering not just enforcing that law but expanding it. First, we would expand who is covered by the law to include investor-level rather than just individual interlocks. Second, antitrust enforcement should be expanded to reach not just current competitors but pre-revenue companies or companies in adjacent markets that are potential future competitors. We discuss each in turn.

1. *Directors as Investors’ Agents.* — We believe that courts should view investor-level interlocks as a violation of section 8 of the Clayton Act²⁰⁴ in many—but not all—cases. The standard for determining if section 8 applies is whether the two board members are acting as agents of the shared employer.²⁰⁵ Section 8 of the Clayton Act states that “[n]o person shall, at the same time, serve as a director or officer in any two [competing] corporations.”²⁰⁶ The Act explicitly defines “person” as including corporations.²⁰⁷ In *Reading International v. Oaktree Capital Management*, the

200. See Lemley & Wansley, *supra* note 150, at 521 (discussing the role connected board members play in steering startups away from competing with the connected member’s employer).

201. See *supra* section III.A.2, note 171 and accompanying text.

202. See *Palmer v. BRG of Ga., Inc.*, 498 U.S. 46, 49–50 (1990) (per curiam) (holding that a territorial division agreement wherein two companies agree not to compete in each other’s territories is “unlawful on its face”); Market Division or Customer Allocation, FTC, <https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/dealings-competitors/market-division-or-customer-allocation> [<https://perma.cc/L7WHJKUP>] (last visited Aug. 14, 2025) (“Plain agreements among competitors to divide sales territories or assign customers are almost always illegal.”).

203. See, e.g., Thomas Philippon, *The Great Reversal: How America Gave Up on Free Markets* 91–96 (2019) (discussing the growth in U.S. market concentration).

204. 15 U.S.C. § 19 (2018).

205. See *Reading Int’l, Inc. v. Oaktree Cap. Mgmt. LLC*, 317 F. Supp. 2d 301, 331 (S.D.N.Y. 2003) (explaining that, to establish a claim, plaintiffs must show not only that the board members work for the same company but also that they are serving on another board as “puppets or instrumentalities of the[ir] corporation’s will” rather than in their individual capacities).

206. 15 U.S.C. § 19.

207. *Id.* § 12.

Southern District of New York illustrated why a director can be seen as the corporation with the following hypothetical:

A powerful director of Corporation A—call him Gepetto—wishes to be a director of competing Corporation B, and is in a position to influence the election of directors. Mindful of section 8, however, he knows that he cannot openly take a seat on Corporation B's board. Instead, he enlists a trusted associate—Pinocchio—and engineers his election as a director of Corporation B. It is expressly agreed that Pinocchio will vote as directed by Gepetto on all matters arising before the board; indeed, we can even imagine that Pinocchio will wear a secret radio device that will permit Gepetto to hear everything that goes on at Corporation B's board meetings, and instantaneously transmit instructions to Pinocchio. In such a situation, plaintiffs ask, can it not be said that Gepetto actually “serves as a director” of both Corporation A and Corporation B, where he sits *de facto* in Pinocchio's seat?

... To hold that Gepetto in this hypothetical has not violated section 8 would be to elevate form over substance; in any meaningful sense, someone who controls a board seat through such an agent or deputy “serves” on the board.²⁰⁸

This is not to say that all employees of a corporation are serving as agents in such a capacity. To make out a violation, plaintiffs must show that serving on the boards “is not in their individual capacities, but as the deputies” of the common employer.²⁰⁹ In general, when determining whether the employee was acting as a deputy or agent, courts weigh a number of factors, none of which is decisive.²¹⁰ Although the test's indeterminacy has caused scholars and jurists considerable consternation in employment and corporate law,²¹¹ the most determinative factor in context of investor interlocks is the right or power to control.²¹² As the *Reading International* court put it, plaintiffs need to establish that the employees

208. *Reading Int'l*, 317 F. Supp. 2d at 327. The legislative history of section 8 also supports Congress's concern with competitors' board seats being occupied by agents sharing a common interest, not just the same person. See *supra* note 53 and accompanying text.

209. *Reading Int'l*, 317 F. Supp. 2d at 331.

210. Restatement (Second) of Agency § 220(2) (A.L.I. 1958).

211. See, e.g., Deanna N. Conn, When Contract Should Preempt Tort Remedies: Limits on Vicarious Liability for Acts of Independent Contractors, 15 Fordham J. Corp. & Fin. L. 179, 180 (2009) (discussing the scope of agency in tort law); Michael C. Harper, Fashioning a General Common Law for Employment in an Age of Statutes, 100 Corn. L. Rev. 1281, 1295–96 (2015) (discussing the scope of agency in employment law).

212. See *United States v. Cleveland Tr. Co.*, 392 F. Supp. 699, 711–13 (N.D. Ohio 1974) (explaining that whether the policies or subsidiaries are directed or controlled by the parent company determines whether a corporation may be deemed a director under section 8), *aff'd*, 513 F.2d 633 (6th Cir. 1975). This prioritization of control reflects broader agency law beyond antitrust. See, e.g., *Meyer v. Holley*, 537 U.S. 280, 286 (2003) (establishing the right to control as a determinative element of agency); *Moorehead v. District of Columbia*, 747 A.2d 138, 143 (D.C. 2000) (asserting that “the determinative factor” is most commonly “the power to control” (internal quotation marks omitted) (quoting *District of Columbia v. Hampton*, 666 A.2d 30, 38–39 (D.C. 1995))).

were “acting as the puppets or instrumentalities of the corporation’s will.”²¹³ Control can, in turn, be roughly broken down into three main components: the ability to monitor, provide instructions, and punish.²¹⁴

The investor’s ability to provide instructions to and punish the two directors is pretty straightforward, since those are routine powers employers have over employees. Since the boards only meet occasionally, while the employees are employed full-time at the investor, the investor can regularly give instructions. The investor can also punish the employee through termination from a typically very lucrative position.

Monitoring is somewhat less straightforward, in the sense that the investor will not necessarily have the ability to know precisely what the employee said in the board meetings, which are private.²¹⁵ Yet monitoring does not require continual surveillance and can be satisfied more generally by an ability to assess the output of the agent’s conduct.²¹⁶ Investors can monitor the output of the employee-director indirectly by assessing the extent to which the employee is succeeding, as board member, in steering the company in the direction desired by the investor. Additionally, the literature on private equity companies and venture capital firms emphasizes how active monitoring of the companies invested in is one of the primary functions of these investors.²¹⁷ In any case, since control is determined by multiple factors, two of which are undeniable and the other strong, it would be sensible for courts to find that control exists.

Additional elements that may be weighed in determining agency are the nature of the work performed and its relation to the principal’s business, the agent’s authority to represent the principal, and the extent

213. *Reading Int’l*, 317 F. Supp. 2d at 331.

214. See, e.g., *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1174 (9th Cir. 2007) (“Google lacks the practical ability to police the infringing activities of third-party websites.”); *A&M Recs., Inc. v. Napster, Inc.*, 239 F.3d 1004, 1023 (9th Cir. 2001) (“Napster had the right and ability to police its system and failed to exercise that right to prevent the exchange of copyrighted material.”); Restatement (Third) of Agency § 1.01 cmt. f(1) (A.L.I. 2005) (outlining the elements of monitoring, instructions, and punishment as elements of policing).

215. See, e.g., Bob Tricker, *Corporate Governance: Principles, Policies, and Practices* 419 (3d ed. 2015) (“A professional chairman will not assume that the information needs of all directors can be met by a standard set of routine board papers, however comprehensive.”).

216. See Joseph A. McCahery, Zacharias Sautner & Laura T. Starks, *Behind the Scenes: The Corporate Governance Preferences of Institutional Investors*, 71 *J. Fin.* 2905, 2913–14 (2016) (describing survey results indicating that nearly half of institutional investors exerted control over portfolio companies through a combination of private discussions with board members and threatened exits based on poor performance or poor corporate governance).

217. See, e.g., Darian M. Ibrahim, *Debt as Venture Capital*, 2010 *U. Ill. L. Rev.* 1169, 1193 (2010) (“[Venture capitals] monitor through strong control rights that they include in the terms of their investment contracts and accumulate as their control of the start-up’s board of directors increases with each round of funding.”); William Magnuson, *The Public Cost of Private Equity*, 102 *Minn. L. Rev.* 1847, 1860 (2018) (“[P]rivate equity firms do a particularly good job of monitoring management, both directly and indirectly.”).

of the employee's integration into the principal's organization.²¹⁸ These factors are not all required and may be weighed differently by different courts.²¹⁹ The integration into the investor's organization seems straightforward, especially given that almost all of our investor interlocks were among people in senior positions at the firm, most commonly partners, managing directors, founders, and chief executive officers of the investor. These employees are by nature central to the investor as they are its leaders. And they likely owe a fiduciary duty to the investor, which certainly suggests that they are (or should be) acting as the investor's agents.

For the nature of the work, information that would be useful is whether serving on the board is viewed as tolerated outside activity or is considered part of the job at the investor. Is it the sort of thing that is identified as a contribution the agent made to the investor? The case will be strongest when the investor has invested in at least one of the competing firms. In such instances, the employer has a direct financial interest in not only the employee serving on the board but also in the employee engaging in anticompetitive behavior. In such instances, the investor would earn greater returns on its investments as a result of the employees' anticompetitive conduct. The purpose of investment funds is to maximize returns on investment, so the employee would be engaged in work that is central to the investor's mission. And indeed, the funds generally seek to place their partners on the boards of companies they have invested in for that very reason.²²⁰

Our data show that in 77.7% of the investor-level interlocking board seats, the investor invested in one or both of the companies—and usually before its employee became a board member.²²¹ Again, investment funds routinely reserve a right to a board seat in their investment contracts.²²² These factors thus will in many cases strongly weigh in favor of viewing the employee as the investor's agent.

218. Howard Bennett, *Principles of the Law of Agency* 1–19 (2d ed. 2024).

219. See *id.* at 3 (“A key feature of agency is . . . its flexibility . . .”).

220. See Amornsiripanitch et al., *supra* note 144, at 533 (“[B]oard members of private, venture capital-backed companies are viewed as adding value to the company.”).

221. In 67.2% of investor-level interlocking boards for which employment and investment-timing data were available, or 5,102 board seats, the employees became board members after or on the same day as the fund invested.

222. Kaplan & Strömberg, *supra* note 144, at 287.

TABLE 9. INVESTMENT IN INTERLOCK COMPANIES, FOR INVESTOR INTERLOCKS

Investor Invested In . . .	# of Investor Interlocks	% of All Investor Interlocks
Both Companies	2,632	56.8%
One Company	968	20.9%
Neither Company	1,032	22.3%
Total	4,632	100%

A plausible case could also be made that the employee-directors are acting as agents even when the investor is not investing in either company, as long as the investor invests in that industry or in a potential competitor. The employees would still have the potential to steer the competitors away from the companies in which the investor invests, thereby increasing the investor's returns on investment. In our dataset, in 9% of the 1,032 instances in which the investor invested in neither of the competing companies on which its employees sit, the investor nonetheless invested in a competitor shared by both companies in the interlock.

By contrast, it is less clear that there is a doctrinal basis for applying section 8 to two investor employees serving on competing boards when the investor does not invest in the current or potential competitors. Serving on boards is still in the nature of the investor's business, in the broad sense of seeking to maximize corporate profits. The investor could also want the employee to serve on the board to decide whether to invest in that industry. In such situations, however, an argument could be made that the employees are serving in their capacities as individuals because serving on the board would not necessarily advance their employers' interests.

Again, however, control is the primary factor.²²³ It is arguably a straightforward conclusion that a private equity or venture capital firm controls its employees when they're sitting on boards of companies in which the firm has invested.²²⁴ Finding employees serving on boards of companies in which the employer has invested as violating section 8 would cover more than 77% of the investor-level interlocks in our data, as mentioned above. Thus, a sensible application of existing law would allow for prohibiting a substantial number of the existing investor-level interlocks. Indeed, in light of the institutional realities of investor fund employees, and to avoid messy litigation, a sensible approach would be to move toward viewing investor-level interlocks as a per se violation of antitrust law.

223. See *supra* note 212 and accompanying text.

224. See *supra* notes 210–220 and accompanying text.

2. *Nascent Competitors.* — A second potential way to expand the scope of the rule against interlocking directorates is to extend it to companies that are not currently competing but may well do so in the future. The most significant such companies in our dataset are startups that haven't launched their product yet, biotech and pharmaceutical companies that are still in clinical trials, or companies that have launched a free product but not yet monetized that product. Table 10 shows that companies that do not yet generate revenue are more likely than revenue-generating companies to have board interlocks. That's true of both individual and investor-level interlocks.

TABLE 10. INTERLOCK PROBABILITY, BY BUSINESS STATUS AND INTERLOCK TYPE, AMONG COMPANIES WITH AT LEAST FIVE BOARD MEMBERS

Company Business Status	# of Companies	% Companies Involved in Any Interlock	% Companies Involved in Individual Interlock	% Companies Involved in Investor Interlock
Not Generating Revenue	1,222	23.2%	12.9%	19.4%
Generating Revenue	20,049	12.8%	7.8%	9.3%
Unknown	23	4.3%	4.3%	4.3%
Total	21,294	13.4%	8.1%	9.9%

Those interlocks are not currently illegal because the law applies only to companies with at least \$5.1 million in revenue.²²⁵ But we think these interlocks are important and pose significant potential risks to future competition. A board member who sits on both an incumbent company and a startup that plans to compete with it can monitor the risk of competition for the incumbent. They can steer the startup away from competing with their other company, or alternatively they can engineer an acquisition of that company before it becomes a competitive threat. Lemley and Wansley have argued that putting employees or investors on the boards of startups in the industry is one of the major ways incumbents

225. FTC, 2025 Jurisdictional Threshold Updates, *supra* note 57.

can co-opt disruption, insulating themselves from the risk of future competition.²²⁶ Extending the law against interlocks to interlocks with likely future competitors would reduce that risk.²²⁷ Given boards' influence on whether companies enter new markets,²²⁸ an institutional expansion of the interlock prohibition would reflect the competitive reality of board influence on startups and nascent competitors.²²⁹

C. *Treating Interlocks as Evidence of Collusion*

One of the problems with interlocks is that there is currently insufficient deterrence. The FTC has historically taken little action to stop the widespread presence of interlocking boards, relying instead on "self-policing."²³⁰ Although it has recently stepped up enforcement, the cases have been small in number, and the remedy is typically only that the interlocking board member resigns.²³¹ Even if the FTC or DOJ were to bring a case to court, the remedy would be an injunction to force the removal of the board member.²³² While there is no prohibition against a damages

226. Lemley & Wansley, *supra* note 150, at 518–19. Current law holds that interlocks with nascent or potential competitors aren't illegal *per se*. See *Paramount Pictures Corp. v. Baldwin-Montrose Chem. Co.*, 1966 U.S. Dist. LEXIS 10596, at *26 (S.D.N.Y. Jan. 24, 1966) ("Section 8 has no application to corporations which are not or have not been competitors, but may be competitors in the future."). But Areeda and Hovenkamp suggest "an exception for the monopolist's director who sits on the board of a fringe or nascent rival. Such mergers should be condemned by antitrust policy, for the independence of a nascent rival is too important when the market in question is already subject to a dominant firm." Areeda & Hovenkamp, *supra* note 54, ¶ 1302c.

227. Lemley & Wansley, *supra* note 150, at 530 (arguing for this result).

228. See Linda A. Hill & George Davis, *The Board's New Innovation Imperative*, *Harv. Bus. Rev.*, Nov. –Dec. 2017, at 103, 104 (explaining that boards play a crucial role in pushing for, or hindering, initiatives that involve entering new territories, developing new products/services, or creating new business models).

229. See Robin C. Feldman & Mark A. Lemley, *Atomistic Antitrust*, 63 *Wm. & Mary L. Rev.* 1869, 1890 (2022) (discussing the challenges antitrust law has in protecting nascent competitors and the role of venture capital investment in driving acquisitions of those nascent competitors by incumbents); Hemphill & Wu, *supra* note 43, at 1881 (same); Lemley & Wansley, *supra* note 150, at 531–33 (same); Mark A. Lemley & Andrew McCreary, *Exit Strategy*, 101 *B.U. L. Rev.* 1, 43 (2021) (same).

230. Debbie Feinstein, *Have a Plan to Comply With the Bar on Horizontal Interlocks*, *FTC* (Jan. 23, 2017), <https://www.ftc.gov/news-events/blogs/competition-matters/2017/01/have-plan-comply-bar-horizontal-interlocks> [<https://perma.cc/PF23-UZDU>] ("The [FTC] has generally relied on self-policing to prevent Section 8 violations . . ."); see also Halverson, *supra* note 92, at 399 (arguing that enforcing section 8 violations was not worth the resources).

231. DOJ Press Release, *Directors Resign*, *supra* note 78; see also Feinstein, *supra* note 230 (describing a recent investigation in which the individual stepped down to solve the interlock); *supra* note text accompanying notes 73–82 (discussing recent cases).

232. Press Release, DOJ, *Justice Department's Ongoing Section 8 Enforcement Prevents More Potentially Illegal Interlocking Directorates* (Mar. 9, 2023), <https://www.justice.gov/archives/opa/pr/justice-department-s-ongoing-section-8-enforcement-prevents-more-potentially-illegal> [<https://perma.cc/VT32-S7NW>] (explaining, in a press

action, governments have historically not sought damages.²³³ Private suits for interlocks are rare,²³⁴ and proving that the interlock caused harm to a particular private plaintiff is challenging.

Consequently, companies thinking about appointing an interlocking board member have little incentive to avoid appointing them even if enforcers were to ramp up enforcement of section 8. If authorities fail to identify the overlap or prosecute, the worst-case scenario is that the board appoints another director. In the meantime, however, the company can reap any anticompetitive benefits.²³⁵

There is a way, however, that antitrust authorities can provide greater deterrence even without an early notification system or other legal reforms. In civil and criminal cases alleging collusion, antitrust doctrine often relies on indirect evidence.²³⁶ Plaintiffs can show economic evidence, such as prices staying high despite declining costs.²³⁷ Plaintiffs also can show evidence of parallel conduct, or firms behaving in the same way, such as raising prices in tandem or allocating the market amongst competitors.²³⁸ But as Christopher Leslie has shown, courts have been reluctant to infer collusion from indirect evidence even when it is the most plausible conclusion. As a result, they underenforce the antitrust laws and allow a significant amount of collusion to go unpunished.²³⁹

release highlighting four recent section 8 enforcement victories, that the end result was simply directors' resignations); see also *supra* note 187.

233. Brian Burke, John Fedele, Creighton Macy & Evan Harris, *United States: US Agency Scrutiny of Interlocking Directors Sparks Board Resignations*, Baker McKenzie (Sep. 19, 2025), https://insightplus.bakermckenzie.com/bm/antitrust-competition_1/united-states-us-agency-scrutiny-of-interlocking-directors-sparks-board-resignations [<https://perma.cc/M3SB-SKWC>] (noting that the "typical remedy" in cases brought by the federal government is injunctive relief).

234. See *id.* ("While private parties are also able to pursue Section 8 claims, there has been very limited private enforcement.").

235. One suggestion that this might change is the government's filing of a statement of interest in *Musk v. Altman* in which it took the position that "[s]ection 8 [c]laims [a]re [n]ot [m]ooted by [s]imply [u]nwinding an [i]nterlock." Statement of Interest of the United States and the Federal Trade Commission at 4, *Musk v. Altman*, No. 4:24-cv-04722-YGR (N.D. Cal. filed Jan. 10, 2025). But the fact that it was filed only ten days before Trump took office leaves it unclear whether that will continue to be the government's position.

236. See Christopher R. Leslie, *The Probative Synergy of Plus Factors in Price-Fixing Litigation*, 115 Nw. U. L. Rev. 1581, 1585–87 (2021) ("Most private plaintiffs rely on circumstantial evidence to prove their cases.").

237. *Id.* at 1604.

238. See William H. Page, *Direct Evidence of a Sherman Act Agreement*, 83 Antitrust L.J. 347, 351 (2020) (noting parallel conduct is unlawful if evidence demonstrates it followed complete verbal agreement).

239. See Leslie, *supra* note 236, at 1623 ("Despite the Supreme Court's directive that judges and juries should not compartmentalize or dismember an antitrust plaintiff's evidence, federal courts repeatedly isolate individual plus factors and improperly deprive them of their collective probative value.").

But our data about interlocks may help plaintiffs infer collusion. One of the key components of collusion is having an opportunity to collude.²⁴⁰ Trade association meetings, shared consultants, and other coordination mechanisms can show such an opportunity.²⁴¹ Interlocking boards, whether the same individual or through an investment fund, could be used as evidence of an opportunity to collude. That is particularly true when an individual or an investor sits on the board of two competitors accused of collusion and has a monetary interest in seeing them both succeed.

Unlike the penalties for a violation of section 8 of the Clayton Act, the penalties for collusion are substantial. Collusion is a criminal violation.²⁴² Individuals can be fined up to \$1 million per violation, and companies can be fined \$100 million or up to twice the amount gained from the illegal conduct.²⁴³ And private plaintiffs can sue for damages in the form of price overcharges and can recover triple the injury shown.²⁴⁴ Thus, even one successful case could provide substantial deterrence from appointing interlocking board members, sending a notice to industry that such conduct puts them at risk of substantial reputational and financial sanctions.

CONCLUSION

The problem of interlocking boards is far bigger than previously realized. We show that individuals sitting on competing boards are far more widespread across the economy than previously known, and that they exist even in private and smaller companies.

We also show that investor-level interlocks are a significant and growing problem. In large numbers of individual and investor-level interlocks, these employers of board members invest in the companies on whose boards their employees sit. Consequently, the investors have a financial interest in their employees using their board roles to increase anticompetitive profits.

Emerging economic literature indicates that ties among boards are detrimental to competition. There is evidence that interlocking boards raise consumer prices and slow innovation. There is also indirect empirical evidence that institutional connections among competitors' board members could facilitate anticompetitive results even when the institutional connection is not an investor or an employer. The problem is worse if the connection is an investment fund. As we show, the employees are typically partners and other equity holders in the investors, meaning that the

240. *Id.* at 1593.

241. *Id.* at 1593–94.

242. See 15 U.S.C. § 1 (2018) (outlining criminal penalties for violations of the Sherman Act).

243. *Id.*; 18 U.S.C. § 3571(d) (2018).

244. 15 U.S.C. § 15(a).

investors provide the board members with more regular contact and personal financial incentives to decrease competition.

By illuminating investors' role in interlocking boards, we provide a missing causal mechanism to help explain why investment funds' common ownership of firms is so consistently associated with declining competition. Scholars have long struggled to find an institutional mechanism because so many large owners are passive investors. Our data suggests that investors are often not passive owners but are instead in a position to push industries toward less competitive outcomes.

We offer several solutions. One solution is to more vigorously enforce current law. The FTC and DOJ can more actively prosecute firms for clear violations of antitrust law against individual interlocks. We suggest a regime of mandatory early notification of potential board conflicts, making the law easier to enforce and allowing the agencies to create exceptions as needed. Antitrust enforcers can also extend well-established doctrine by arguing that investor-level interlocks should be illegal. Lawmakers could extend the law to reach interlocks with startups and other nascent competitors that don't yet threaten incumbents but likely will in the future. Judges could also view board ties among competitors as evidence of collusion, thereby holding the investors, the competitors, and the individual board members liable.

APPENDIX A

Interlock frequency and proportion, by PitchBook industry subsector, among companies with five or more board members in the IT and healthcare industry sectors.

PitchBook Industry	# of Companies		% of Companies Involved in 1+ Interlock		
Sector Subsector	Total	Involved in 1+ Interlock	Either Kind	Individual Only	Investor Only
IT	5,985	1,012	16.9%	9.5%	13.7%
<i>Software</i>	4,534	857	18.9%	10.5%	15.6%
<i>Computer Hardware</i>	501	31	6.2%	2.0%	5.2%
<i>IT Services</i>	382	43	11.3%	8.6%	7.6%
<i>Communications & Networking</i>	364	40	11.0%	7.4%	9.3%
<i>Semiconductors</i>	203	41	20.2%	12.8%	11.8%
<i>Other</i>	1	0	0%	0%	0%
Healthcare	4,983	1,020	20.5%	12.6%	15.9%
<i>Pharmaceuticals & Biotechnology</i>	2,490	749	30.1%	18.2%	24.6%
<i>Healthcare Devices & Supplies</i>	1,151	117	10.2%	7.3%	6.1%
<i>Healthcare Technology Systems</i>	661	81	12.3%	7%	9.2%
<i>Healthcare Services</i>	680	73	10.7%	6.2%	7.1%
<i>Other</i>	1	0	0%	0%	0%