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## Hub-and-Spoke Conspiracies: Can Big Data and Pricing Algorithms Form the Rim?

Bradley C. Weber  
*Locke Lord LLP*

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# Hub-and-Spoke Conspiracies: Can Big Data and Pricing Algorithms Form the Rim?

*Bradley C. Weber\**

## ABSTRACT

A hub-and-spoke conspiracy is a metaphor used to describe an antitrust cartel that includes a firm at one level of a supply chain—such as a buyer or supplier—who acts like the “hub” of a wheel. Vertical agreements up or down the supply chain act as the “spokes,” and a horizontal agreement among the spokes acts as the “rim” of the wheel. Courts have considered hub-and-spoke conspiracies for more than eighty years, and there is large body of case law that pertains to the evidence that is necessary for proving this type of antitrust conspiracy.

With the rise of modern digital technologies, firms have increased their reliance on “big data” and data-driven pricing algorithms to determine the prices for their products and services. Using big data, current pricing algorithms can quickly monitor market conditions, including the behavior of rival competitors, and adjust prices in near real-time. Analytical pricing tools that adjust prices based on supply-and-demand conditions and/or costs can create procompetitive benefits because they have the potential to increase efficiency. Anticompetitive effects can occur, however, when multiple competitors use the same pricing algorithm and data set supplied by a common service provider who acts as a hub.

This article will explain the history, structure, and characteristics of hub-and-spoke conspiracies. It also will discuss agreements among competitors to exchange confidential price information, which itself can result in antitrust violations under certain circumstances. Finally, the article will summarize and comment on a new wave of antitrust lawsuits that allege hub-and-spoke conspiracies based on competitors’ mutual use of big data and algorithms to set prices.

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\* Bradley C. Weber is a Partner and Co-Leader of the Antitrust Practice Group and the Artificial Intelligence Industry Group at Locke Lord LLP. He holds a B.S. degree in Engineering Science from Iowa State University and a J.D. degree from the University of Michigan School of Law. The views, comments, and opinions expressed in this article are those of the author and do not necessarily reflect those of his firm or any of its clients.

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## I. INTRODUCTION

“[A] rimless hub-and-spoke conspiracy is not a hub-and-spoke conspiracy at all (for what is a wheel without a rim?)”<sup>1</sup>

Courts have considered “hub-and-spoke” conspiracies in antitrust cases for more than eighty years, dating back to at least 1939 when the Supreme Court decided *Interstate Circuit, Inc. v. United States*.<sup>2</sup> A hub-and-spoke (or hub-spoke-and-rim) conspiracy is a metaphor used to describe the configuration of a horizontal conspiracy among competing firms that also includes a participant who is in vertical relationships with the conspiring competitors.<sup>3</sup> The classic structure of such a conspiracy includes a firm at one level of a supply chain—such as a buyer or supplier—who acts like the “hub” of a wheel.<sup>4</sup> Vertical agreements up or down the supply chain act as the “spokes” and, most importantly, a horizontal agreement among the spokes acts as the “rim” of the wheel.<sup>5</sup> The distinguishing feature of a hub-and-spoke conspiracy is the participation of the vertically-aligned hub in the middle of the horizontal agreement.<sup>6</sup>

Although some courts have recognized the existence of “rimless” hub-and-spoke conspiracies,<sup>7</sup> there is a significant difference between a rimless hub-and-spoke conspiracy (i.e., a collection of purely vertical agreements between the hub and each spoke) and a rimmed hub-and-spoke conspiracy (i.e., a collection of vertical agreements joined by a horizontal agreement as the rim).<sup>8</sup> Courts considering antitrust claims under Section 1 of the Sherman Act (“Section 1”)<sup>9</sup> analyze vertical agreements under the “rule of reason,” whereas the “per se rule” is applied to most horizontal agreements between

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1. *In re Musical Instruments and Equip. Antitrust Litig. (Guitar Center)*, 798 F.3d 1186, 1192 n. 3 (9th Cir. 2015).
  2. *Interstate Circuit v. United States*, 306 U.S. 208 (1939).
  3. HUB-AND-SPOKE ARRANGEMENTS—NOTE BY THE UNITED STATES (“*Note by the U.S.*”) ¶ 1 (Nov. 28, 2019), [https://www.ftc.gov/system/files/attachments/us-submissions-oecd-2010-present-other-international-competition-fora/oecd-hub\\_and\\_spoke\\_arrangements\\_us.pdf](https://www.ftc.gov/system/files/attachments/us-submissions-oecd-2010-present-other-international-competition-fora/oecd-hub_and_spoke_arrangements_us.pdf) [<https://perma.cc/S64M-T5BN>].
  4. *Id.*
  5. *Id.*
  6. *Id.*
  7. *See, e.g., Dickson v. Microsoft Corp.*, 309 F.3d 193, 203 (4th Cir. 2002) (“A rimless wheel conspiracy is one in which various defendants enter into separate agreements with a common defendant, but where the defendants have no connection with one another, other than the common defendant’s involvement in each transaction.”).
  8. *Id.*
  9. 15 U.S.C. § 1.

competitors.<sup>10</sup> As a practical matter, proving an antitrust violation under the per se rule is usually easier and more straightforward compared to the potential difficulty and costliness of proving an antitrust violation under the rule of reason.<sup>11</sup>

Establishing the existence of a horizontal agreement among competitors at the rim of a hub-and-spoke conspiracy often requires circumstantial evidence, as “[o]nly rarely will there be direct evidence of an express agreement” in conspiracy cases.<sup>12</sup> Even without direct evidence, an agreement may be inferred from circumstantial evidence,<sup>13</sup> but there are limits on the permissible inferences that may be drawn from circumstantial evidence if it is just as consistent with permissible competition as it is with an illegal conspiracy.<sup>14</sup> To establish a conspiracy under the antitrust laws, a plaintiff must prove more than the fact that competitors acted in a consciously parallel manner—it must prove that competitors did so pursuant to an agreement.<sup>15</sup>

In addition to evidence that competitors consciously acted in a parallel manner, courts typically require a plaintiff to prove additional facts and circumstances—often referred to as “plus factors”—to support the inference of a conspiracy.<sup>16</sup> Among the most important plus factors are those that tend to show that the conduct at issue would be in the parties’ self-interests only if they all agreed to act in the same way, but would be contrary to their self-

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10. *Antitrust Standards of Review: The Per Se, Rule of Reason, and Quick Look Tests*, BONA LAW (Aug. 10, 2018), <https://www.bonalaw.com/insights/legal-resources/antitrust-standards-of-review-the-per-se-rule-of-reason-and-quick-look-tests> [<https://perma.cc/85J7-WFMY>].
  11. *Id.*
  12. *United Mine Workers of Am. v. Pennington*, 381 U.S. 676, 720 (1965) (Goldberg, J., dissenting).
  13. *See, e.g., Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 765-66 (1984) (distributor’s newsletter detailing efforts to get the market in order was circumstantial evidence of an agreement to maintain prices).
  14. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 588 (1986).
  15. *Theatre Enters, Inc. v. Paramount Film Distrib. Corp.*, 346 U.S. 537, 541 (1954) (holding that parallel behavior, standing alone, is insufficient to prove a conspiracy); *see also Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 557 (2007) (plaintiff’s failure to plead more than parallel conduct (or conscious parallelism) was grounds for dismissing a claim under Section 1).
  16. *See, e.g., United States v. Apple, Inc. (eBooks)*, 791 F.3d 290, 315 (2d Cir. 2015) (“to prove an antitrust conspiracy, a plaintiff must show the existence of additional circumstances, often referred to as ‘plus’ factors, which, when viewed in conjunction with the parallel acts, can serve to allow a fact-finder to infer a conspiracy.”) (internal quote omitted).

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interests if they acted alone.<sup>17</sup> Evidence that multiple competitors abruptly made similar, unprecedented changes to their business practices or in how they structured their prices is also a significant plus factor.<sup>18</sup> Conversely, when each competitor has legitimate, rational business reasons that would cause it to independently engage in a new course of conduct, courts do not infer a conspiracy based solely on that conduct.<sup>19</sup>

With the rise of modern digital technologies, firms have increased their reliance on “big data” and data-driven pricing algorithms to determine the prices for their products and services.<sup>20</sup> Big data is a combination of structured, semi-structured, and unstructured data collected by organizations and used in machine learning projects, predictive modeling, and other advanced analytics applications.<sup>21</sup> It often is characterized by the three V’s: (1) large *volumes* of data; (2) wide *varieties* of data types; and (3) the *velocity* at which much of the data is generated, collected, and processed.<sup>22</sup> Although the term “big data” does not equate to any specific volume of data, big data applications often involve terabytes, petabytes, and even exabytes of data.<sup>23</sup>

At a high level, a “pricing algorithm” is a computer program that follows a specific set of rules or instructions to autonomously adjust prices based on current and past data related to variables such as demand, costs, and/or rivals’ prices.<sup>24</sup> An algorithm can include a virtually unlimited number of rules, conditions, and variables. This means that many extremely complex

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17. See *Interstate Circuit*, 306 U.S. at 222 (“without substantially unanimous action . . . there was a risk of substantial loss of business and good will . . . but . . . with it there was the prospect of increased profits.”).
18. See *In re Text Messaging Antitrust Litig. (Text Messaging)*, 630 F.3d 622, 628 (7th Cir. 2010) (“complex and historically unprecedented changes in pricing structure made at the very same time by multiple competitors, and made for no other discernible reason’ would support a plausible inference of conspiracy.”) (quoting *Twombly*, 550 U.S. at 557 n. 4).
19. See, e.g., *InterVest, Inc. v. Bloomberg, L.P.*, 340 F.3d 144, 165 (3d Cir. 2003) (insufficient evidence to infer a conspiracy when a legitimate business reason explained why the defendant “simply chose not to partner with a new company with unproven technology.”).
20. Bridget Botelho & Stephen J. Bigelow, *What is Big Data?*, TECHTARGET, <https://www.techtarget.com/searchdatamanagement/definition/big-data> [https://perma.cc/H489-ZRSQ].
21. *Id.*
22. Doug Laney, *3D Data Management: Controlling Data Volume, Velocity, and Variety*, META GROUP (Feb. 6, 2001), <https://studylib.net/doc/8647594/3d-data-management--controlling-data-volume--velocity--an> [https://perma.cc/VB4C-A4DS].
23. Botelho & Bigelow, *supra* note 20.
24. Zach Brown & Alexander MacKay, *Are Online Prices Higher Because of Pricing Algorithms?*, BROOKINGS (July 7, 2022), <https://www.brookings.edu/re->

and nuanced behaviors can be modeled in a set of detailed computer instructions.<sup>25</sup>

There are at least two key advantages to using computer algorithms for making certain kinds of decisions: speed and complexity. Computers can examine hundreds or even thousands of different variables in a fraction of a second and react almost instantaneously to changes in any one of those variables. Certain algorithms that employ “artificial intelligence” can increase accuracy over time, by identifying patterns in data and adjusting to those patterns.<sup>26</sup>

Using big data, current pricing algorithms can quickly monitor market conditions, including the behavior of rival competitors, and adjust prices in near real-time.<sup>27</sup> Initially, only a few industries used pricing algorithms.<sup>28</sup> With the rise of online markets, there has been a sea change in terms of the number and variety of markets affected by pricing algorithms, including gasoline and diesel fuel retailers, airlines, apartment and hotel operators, entertainment ticket distributors, and ridesharing services.<sup>29</sup> There also have been major investments made to improve the sophistication and accuracy of pricing algorithms along several dimensions.<sup>30</sup>

Economists largely agree that analytical pricing tools that are programmed to adjust prices based on supply-and-demand conditions and/or costs can create procompetitive benefits because they have the potential to increase efficiency.<sup>31</sup> Anticompetitive effects can occur, however, when multiple competitors use the same pricing algorithm and data set supplied by a common service provider, which can lead to a uniform pricing outcome that max-

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search/are-online-prices-higher-because-of-pricing-algorithms/ [https://perma.cc/M3EV-4QTS].

25. Maureen K. Ohlhausen, *Should We Fear The Things That Go Beep In the Night? Some Initial Thoughts on the Intersection of Antitrust Law and Algorithmic Pricing* at 1, FEDERAL TRADE COMMISSION (May 23, 2017), [https://www.ftc.gov/system/files/documents/public\\_statements/1220893/ohlhausen\\_-\\_concurrences\\_5-23-17.pdf](https://www.ftc.gov/system/files/documents/public_statements/1220893/ohlhausen_-_concurrences_5-23-17.pdf) [https://perma.cc/5WTQ-9WXM].
26. *Id.* at 1-2.
27. Brown & MacKay, *supra* note 24.
28. *Id.*
29. *Id.*
30. *Id.* (“Many retailers have invested heavily in pricing technology that updates prices at high speed.”); *id.* (“[T]he most sophisticated retailers can adjust prices within an hour.”); *id.* (“[T]he retailers with the fastest pricing also appear to have algorithms that autonomously respond to price changes by rivals.”).
31. *Id.* (“Information that may lead to a price change includes recent sales, inventories, or external features such as weather forecasts. The ability to adapt to rapidly changing conditions is what gives algorithms the potential to provide goods more efficiently than traditional pricing.”).

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imizes each competitor's profits.<sup>32</sup> The question then becomes: Is the use of the same data set and pricing algorithm alone sufficient circumstantial evidence to infer that a horizontal agreement to fix prices exists between the competitors at the rim of the wheel?

This article will explain the history, structure, and characteristics of hub-and-spoke conspiracies, including the types of "plus factor" circumstantial evidence that courts require to support an inference of a horizontal agreement around the rim. It also will discuss agreements among competitors to exchange confidential price information, which itself can result in a rule-of-reason violation under Section 1 or constitute circumstantial evidence of a per se price-fixing agreement. Finally, the article will summarize and comment on a new wave of lawsuits that allege hub-and-spoke conspiracies based on competitors' mutual use of big data and algorithms to set prices.

## II. WHAT IS A HUB-AND-SPOKE CONSPIRACY?

"The Sherman Act was designed to be a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade," and "the policy unequivocally laid down by the Act is competition."<sup>33</sup> To achieve this objective, Section 1 prohibits agreements that unreasonably restrain trade by restricting production, raising prices, or otherwise manipulating markets to the detriment of consumers.<sup>34</sup> Unlike Section 2 of the Sherman Act, which addresses monopolization and other illegal *unilateral* conduct, Section 1 applies only when there is an *agreement* between two or more firms to restrain trade.<sup>35</sup> A single firm's independent action, no matter how anticompetitive its aim, does not implicate Section 1.<sup>36</sup>

### A. Horizontal vs. Vertical Agreements

In analyzing the reasonableness of an agreement under Section 1, courts distinguish between agreements made up and down a supply chain, such as between a manufacturer and a distributor ("vertical agreements"), and agreements made among competitors, such as between two manufacturers ("horizontal agreements").<sup>37</sup> The Supreme Court has recognized that certain

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32. *Id.*

33. *Northern Pac. Ry. Co. v. United States*, 356 U.S. 1, 4 (1958); *see also* *NCAA v. Alston*, 141 S. Ct. 2141, 2144 (2021) ("In the Sherman Act, Congress tasked courts with enforcing a policy of competition on the belief that market forces 'yield the best allocation' of the Nation's resources.") (quoting *NCAA v. Board of Regents*, 468 U.S. 85, 104 n. 27 (1984)).

34. *See State Oil Co. v. Khan*, 522 U.S. 3, 10 (1997) ("Congress intended to outlaw only unreasonable restraints.").

35. *Monsanto*, 465 U.S. at 761.

36. *Id.*

37. *See Khan*, 522 U.S. at 10.



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horizontal agreements are “manifestly anticompetitive” and “always or almost always tend to restrict competition and decrease output.”<sup>38</sup> These types of horizontal agreements “have such predictable and pernicious anticompetitive effect, and such limited potential for procompetitive benefit, that they are deemed unlawful per se.”<sup>39</sup> This “per se rule” reflects a longstanding judgment that case-by-case analysis is unnecessary for certain practices that, by their nature, have a substantial potential to unreasonably restrain competition.<sup>40</sup> Classic examples of per se Section 1 violations include horizontal agreements among competitors to fix prices,<sup>41</sup> rig bids,<sup>42</sup> divide markets,<sup>43</sup> and refuse to deal.<sup>44</sup> Such inherently anticompetitive horizontal agreements violate Section 1 per se.<sup>45</sup> Thus, once the agreement’s existence is established, no further inquiry into the practice’s actual effect on the market or the parties’ intentions is necessary to establish a Section 1 violation.<sup>46</sup>

In contrast, the Supreme Court in recent years has clarified that vertical agreements—including those that restrict prices—should generally be analyzed under the “rule of reason.”<sup>47</sup> Under the rule of reason, courts examine “the facts peculiar to the business, the history of the restraint, and the reasons why it was imposed” to determine the effect on competition in the relevant product or service market.<sup>48</sup>

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38. *Business Elecs. Corp. v. Sharp Elecs. Corp.*, 485 U.S. 717, 723 (1988) (first quoting *Continental T.V., Inc. v. GTE Sylvania Inc.*, 433 U.S. 36, 50 (1977); and then quoting *Nw. Wholesale Stationers, Inc. v. Pac. Stationery & Printing Co.*, 472 U.S. 284, 289–90 (1985)).
  39. *Khan*, 522 U.S. at 10.
  40. *FTC v. Sup. Ct. Trial Lawyers Ass’n*, 493 U.S. 411, 433 (1990).
  41. *See, e.g., United States v. Trenton Potteries Co.*, 273 U.S. 392, 397–98 (1927) (horizontal price fixing).
  42. *See, e.g., United States v. Joyce*, 895 F.3d 673, 676 (9th Cir. 2018) (finding that bid rigging, as a form of horizontal price fixing, is a per se violation of the Sherman Act).
  43. *See, e.g., United States v. Topco Assocs.*, 405 U.S. 596, 608 (1972) (horizontal market division).
  44. *See, e.g., Nw. Wholesale Stationers*, 472 U.S. at 293–94 (concerted refusal to deal).
  45. *See Northern Pac. Ry. Co.*, 356 U.S. at 5.
  46. *Id.*
  47. *See Leegin Creative Leather Prods. v. PSKS, Inc.*, 551 U.S. 877, 882 (2007) (holding that the rule of reason applies to vertical minimum price-fixing agreements); *Khan*, 522 U.S. at 7 (holding that the rule of reason applies to vertical maximum price-fixing agreements).
  48. *Nat’l Soc’y of Prof’l Eng’rs v. United States*, 435 U.S. 679, 692 (1978).

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In *Ohio v. American Express Co.*,<sup>49</sup> the Supreme Court explained that a three-step, burden-shifting framework applies when determining whether a restraint violates the rule of reason.<sup>50</sup> Under this step-by-step progression, the plaintiff bears the initial burden of proving that the challenged restraint has a substantial anticompetitive effect that harms consumers in the relevant market. If the plaintiff meets its burden, the burden shifts to the defendant to show a procompetitive rationale for the restraint.<sup>51</sup> If the defendant makes this showing, the burden shifts back to the plaintiff to demonstrate that the procompetitive efficiencies could be reasonably achieved through less anticompetitive means.<sup>52</sup> A rule-of-reason analysis takes into account the fact that many types of vertical restraints may have procompetitive justifications that increase interbrand competition and benefit consumers.<sup>53</sup>

## B. Configuration of a Hub-and-Spoke Conspiracy

Although the distinction between horizontal and vertical agreements is simple in theory, determining the orientation of an actual agreement can be difficult at times and turns on more than simply identifying whether the participants are at the same level of the market structure.<sup>54</sup> In many cases, the line between horizontal and vertical restraints may blur. A single conspiracy can involve both direct competitors and actors up and down the supply chain, and hence consist of both horizontal and vertical agreements.<sup>55</sup>

A hub-and-spoke conspiracy is a term of art used to describe conspiracies that have three elements: (a) a hub, such as a dominant purchaser; (b) spokes, such as competing manufacturers or distributors, each of which enters into a separate vertical agreement with the hub; and (c) the rim of the wheel, which consists of a horizontal agreement among the spokes.<sup>56</sup> The feature of a hub-and-spoke conspiracy that distinguishes it from other horizontal conspiracies is the participation of the vertically aligned co-conspirator (the hub) in the horizontal agreement (the rim).<sup>57</sup> When the objective of

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49. *Ohio v. Am. Express Co.*, 138 S.Ct. 2274 (2018).

50. *Id.* at 2284.

51. *Id.*

52. *Id.*

53. *See Leegin*, 551 U.S. at 889–92 (noting that vertical price restraints can have the procompetitive effect of increasing interbrand competition).

54. *eBooks*, 791 F.3d at 314.

55. *Guitar Center*, 798 F.3d at 1192.

56. *Id.* (citing *Howard Hess Dental Labs. Inc. v. Dentsply Intern., Inc.*, 602 F.3d 237, 255 (3d Cir. 2010)).

57. *eBooks*, 791 F.3d at 322.

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the horizontal agreement is a per se illegal restraint of trade, all participants in the hub-and-spoke conspiracy are held liable, including the hub.<sup>58</sup>

### C. Early Jurisprudence on Hub-and-Spoke Conspiracies – *Interstate Circuit*

The first hub-and spoke case considered by the Supreme Court was *Interstate Circuit, Inc. v. United States* in 1939.<sup>59</sup> Interstate Circuit was a Dallas-based movie theater operator that sent identical demand letters to eight competing first-run film distributors, listing all of the distributors as addressees in each letter.<sup>60</sup> As a condition for the exhibition of movies in its first-run theaters at an evening price of at least 40 cents, Interstate Circuit demanded the distributors to impose minimum pricing and “double feature” restrictions in their contracts for the exhibition of first-run films by other theater operators.<sup>61</sup> The purpose of this demand was to protect Interstate Circuit from competition with second-run film theaters.<sup>62</sup> Though there was no direct evidence of communications between the distributors, all eight were copied on the demand letter and each met separately with representatives of Interstate Circuit to discuss the requests made in its letter.<sup>63</sup> Each distributor eventually consented to most of Interstate Circuit’s demands.<sup>64</sup>

The Supreme Court affirmed the district court’s finding that Interstate Circuit and the movie distributors violated Section 1, and upheld an injunction prohibiting the enforcement of their illegal agreements.<sup>65</sup> In reaching its decision, the Court found that the evidence showing that all distributors were copied on the demand letter, combined with the substantial unanimity of the distributors in adopting the demanded restrictions, was enough to support the “inference that the distributors acted in concert and in common agreement.”<sup>66</sup> Each distributor was aware that any competitor that did not adopt Interstate Circuit’s restrictions stood to lose business and that all distributors stood to gain substantial profits if each complied.<sup>67</sup> The Court found that it “taxe[d] credulity” to believe that the distributors would all take a radical departure

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58. *Id.* (“[T]he Supreme Court and our Sister Circuits have held *all* participants in ‘hub-and-spoke’ conspiracies liable when the objective of the conspiracy was a *per se* unreasonable restraint of trade.”) (emphasis added).

59. *See Interstate Circuit*, 306 U.S. 208 (1939).

60. *Id.* at 216–17, 216 n.3.

61. *Id.* at 217.

62. *Id.* at 218.

63. *Id.*

64. *Id.* at 218–19.

65. *See Interstate Circuit*, 306 U.S. at 232.

66. *Id.* at 225.

67. *Id.* at 222.

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from their previous business practices and create a drastic increase in prices without some understanding that all were going to join in the conspiracy.<sup>68</sup> In a famous passage, the Court concluded that there was a horizontal agreement between the film distributors, as well as vertical agreements with Interstate Circuit:

Each was aware that all were in active competition and that without substantially unanimous action with respect to the restrictions for any given territory there was risk of a substantial loss of the business and good will of the subsequent-run and independent exhibitors . . . There was risk, too, that without agreement diversity of action would follow.<sup>69</sup>

Although the Supreme Court never used the term “hub-and-spoke” in *Interstate Circuit*, it is a landmark decision for this type of conspiracy configuration. Today, courts interpret *Interstate Circuit* to say that a conspiracy may be inferred where: (1) two or more competitors enter into vertical agreements with a single upstream or downstream firm; and (2) absent express or implied agreement among the competitors to all enter into parallel vertical agreements with the firm, it would be economically irrational for an individual competitor to agree to the vertical restraint.<sup>70</sup>

Following *Interstate Circuit*, courts have considered dozens of antitrust cases involving alleged hub-and-spoke conspiracies.<sup>71</sup> These cases have involved hubs that were dominant retailers,<sup>72</sup> distributors,<sup>73</sup> and manufacturers.<sup>74</sup> In most cases, the hub in the conspiracy was either a direct supplier or

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68. *Id.* at 223.

69. *Id.* at 222.

70. *eBooks*, 791 F.3d at 319–20.

71. *Id.*

72. *See, e.g., Guitar Center*, 798 F.3d at 1189 (the alleged hub was the largest retail seller of musical instruments in the U.S. and the spokes were five major guitar and amplifier manufacturers); *Toys “R” Us, Inc. v. FTC*, 221 F.3d 928, 930 (7th Cir. 2000) (the hub was the largest toy retailer in the U.S. and the spokes were several leading toy manufacturers).

73. *See, e.g., eBooks*, 791 F.3d at 296–97 (the hub was a distributor of electronic books for use on its tablet computers and the spokes were five major book publishers); *United States v. All Star Indus.*, 962 F.2d 465, 467 (5th Cir. 1992) (the hub was a specialty pipe distributor and the spokes were six different pipe suppliers).

74. *See, e.g., Marion Healthcare, LLC v. Becton Dickinson & Co.*, 952 F.3d 832, 836–37 (7th Cir. 2020) (the alleged hub was a medical device manufacturer and the spokes were group purchasing organizations and medical product distributors); *Howard Hess Dental Labs.*, 602 F.3d at 244 (the alleged hub was a large artificial teeth manufacturer and the spokes were dental product distributors); *Leegin*, 615 F.3d 412, 414–15 (5th Cir. 2010) (the alleged hub was a manufacturer of leather goods and women’s fashion accessories and the spokes were retail fashion and accessories stores); *Dickson*, 309 F.3d at 198–99 (the

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purchaser of products or services to or from the horizontal competitors in the rim, which some commentators suggest is a necessary requirement for a hub-and-spoke conspiracy.<sup>75</sup> Others have recognized hub-and-spoke conspiracies where the hub was not a direct supplier or purchaser, but instead a common service provider or even a trade association.<sup>76</sup>

### III. WHY DO FIRMS FORM HUB-AND-SPOKE CONSPIRACIES?

A cartel is a group of competing firms in a market that agree to coordinate their behavior for the purpose of restraining competition, with the resulting conduct referred to as collusion.<sup>77</sup> In many cases, collusion takes the form of firms agreeing on a common price above the competitive level, which raises their profits and harms buyers.<sup>78</sup> A critical part of a cartel's effective operation is communication.<sup>79</sup> "Firms communicate to coordinate on a particular collusive outcome and to share information relevant to monitoring cartel members for their compliance with that outcome."<sup>80</sup> In a standard cartel, all members typically communicate with each other.<sup>81</sup>

Hub-and-spoke arrangements can provide advantages compared to other types of cartels because communications occur in a less direct manner.<sup>82</sup> Cartel members rarely—and sometimes never—communicate directly with each

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alleged hub was the dominant computer operating system developer and the spokes were three personal computer manufacturers).

75. Luke Garrod et al., *Hub-And-Spoke Cartels: Why They Form, How They Operate, and How to Prosecute Them* 2-3 (2021) ("A hub-and-spoke cartel . . . is distinguished from cartels encompassing a third party that, while assisting in the restraint of competition, neither supplies or buys from the cartel's members.").
76. See Avanti Deshpande, *Algorithmic Collusion and Hub & Spoke Cartel: Studying Anti-Competitive Behaviour In Online Platform*, THE COMPETITION & COM. L. REV. (Dec. 6, 2020), <https://www.tcclr.com/post/algorithmic-collusion-and-hub-spoke-cartel-studying-anti-competitive-behaviour-in-online-platform> [<https://perma.cc/HVB8-5LZC>] ("In the case of a hub and spoke cartel, the communication between competitors is not done directly, it is done via a third party, which takes the form of a hub and acts as the facilitator of the cartel. Thus, the hub can be a common manufacturer, retailer, service provider or even a trade association.").
77. Garrod et al., at 1; see also Ohlhausen, at 6 ("A cartel is nothing more than an agreement among a group of competitors to fix prices or output so that prices can be maintained above competitive levels.").
78. See Garrod et al., *supra* note 77.
79. See *id.*
80. See *id.*
81. See *id.*
82. See *id.*

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other.<sup>83</sup> Rather, each firm communicates with a particular upstream or downstream hub, which then shares that information with the other firms in the cartel.<sup>84</sup> The hub acts as the nexus in this communication network and plays a central role that is generally absent in standard cartels.<sup>85</sup> For its services, the hub often collects some of the collusive profits or may strategically use the conspiracy to raise its rivals' costs.<sup>86</sup>

Another advantage provided by hub-and-spoke cartels is the difficulty in detecting them.<sup>87</sup> Vertical agreements between the hub and spokes that are used to effectuate the horizontal agreement at the rim may be harder for authorities and plaintiffs to decipher. The vertical relationships are usually clear and visible, and the horizontal competitors rely on the hub to enforce the vertical agreements by terminating and punishing spokes that do not comply with the cartel's policies and restrictions.<sup>88</sup> Because the hub has a legitimate business relationship with each spoke, communications between the hub and a spoke may not attract antitrust scrutiny.<sup>89</sup>

#### IV. DO "RIMLESS" HUB-AND-SPOKE CONSPIRACIES EXIST?

Courts have distinguished between "rimmed" and "rimless" hub-and-spoke conspiracies. In *Kotteakos v. United States*,<sup>90</sup> the Supreme Court considered an alleged hub-and-spoke arrangement in the context of a loan fraud conspiracy under the U.S. Criminal Code rather than the Sherman Act.<sup>91</sup> The Court characterized the conspiracy in *Kotteakos* as "that of separate spokes meeting at a common center, though we may add without the rim of the

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83. *See id.*

84. *See Garrod et al., supra note 77.*

85. *See Garrod et al., supra note 77; see also Note by the U.S., supra note 3, at* ¶ 4 ("[H]ub and spoke agreements can reduce the cost of coordination and monitoring by centralizing some of the cartel functions at the hub. The hub creates collusive efficiency by reducing the need for horizontal coordination—the vertical relationships established with the spokes facilitate or coordinate the main aspects of the collusion.").

86. Barak Orbach, *Hub-and-Spoke Conspiracies*, in 15 ANTITRUST SOURCE NO. 3 (2016), (citing John Asker & Heski Bar-Isaac, *Raising Retailers' Profits: On Vertical Practices and the Exclusion of Rivals*, 104 AM. ECON. REV. 672 (2014)), available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2765476](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2765476) [<https://perma.cc/2Q9F-2DBV>].

87. *Id.*

88. *See Note by the U.S., supra note 3.*

89. *Id.*; *see also Garrod et al.*, at 5 ("Such discovery may be less likely with a hub-and-spoke cartel because direct communications are between an upstream supplier and downstream buyer, which is to be expected under competition.").

90. *Kotteakos v. United States*, 328 U.S. 750 (1946).

91. *Id.* at 752.

wheel to enclose the spokes.”<sup>92</sup> It went on to clarify that a rimless wheel conspiracy is not a single, general conspiracy, but instead amounts to multiple conspiracies between the common defendant and each of the other defendants.<sup>93</sup>

In *Dickson v. Microsoft Corp.*,<sup>94</sup> the Fourth Circuit defined a rimless hub-and-spoke conspiracy as one in which “various defendants enter into separate agreements with a common defendant, but where the defendants have no connection with one another other than the common defendant’s involvement in each transaction.”<sup>95</sup> Based on this definition, the court rejected the plaintiff’s argument that it could plead a “single, rimless wheel conspiracy,” and instead held that a full rule-of-reason analysis governed the issue of whether the purported vertical agreements between the hub and spokes imposed unreasonable restraints on trade.<sup>96</sup> Based on this analysis, the court affirmed the district court’s dismissal of the plaintiff’s complaint because it failed to set forth the factual allegations necessary to support the basic elements of its rule-of-reason claims.<sup>97</sup>

The Ninth Circuit in *Guitar Center* also commented on rimless hub-and-spoke conspiracies: “The extension of the wheel metaphor here may mislead: a rimless hub-and-spoke conspiracy is not a hub-and-spoke conspiracy at all (for what is a wheel without a rim?); it is a collection of purely vertical agreements. But such a conspiracy may yet unreasonably restrain trade.”<sup>98</sup>

The court also noted a very significant and practical difference between rimmed and rimless hub-and-spoke conspiracies:

Courts analyze vertical agreements under the rule of reason, whereas horizontal agreements are violations per se. This distinction provides strong incentives for plaintiffs to plead a horizontal conspiracy (either alone or as part of a rimmed hub-and-spoke conspiracy). The prospect of establishing a violation per se is much more appealing to plaintiffs than the potential difficulty and costliness of proving a § 1 claim under the rule of reason.<sup>99</sup>

Thus, although rimless hub-and-spoke conspiracies do exist and can violate the Sherman Act under a rule-of-reason analysis, most cases involving hub-and-spoke conspiracies are of the rimmed variety, which if proven result in per se violations.

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92. *Id.* at 755 (internal quotation marks omitted).

93. *Id.* at 768–69, 772.

94. *Dickson*, 309 F.3d at 193.

95. *Id.* at 203 (citing *Kotteakos*, 328 U.S. at 755).

96. *Id.* at 204, 205–06.

97. *Id.* at 213.

98. *Guitar Center*, 798 F.3d at 1192 n. 3 (citing *Leegin*, 551 U.S. at 898–99) (recognizing that purely vertical restraints may unreasonably restrain trade in violation of Section 1 under a rule-of-reason analysis).

99. *Id.* (internal citation omitted).

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## V. WHAT EVIDENCE IS NECESSARY TO PROVE THE HORIZONTAL RIM?

Because per se liability rests on the existence of a conspiracy among competitors, adequate proof of a horizontal agreement among the spokes is often the most crucial issue in a hub-and-spoke conspiracy case.<sup>100</sup> To satisfy this necessary Section 1 element, there must be “direct or circumstantial evidence that reasonably tends to prove” an agreement.<sup>101</sup>

### A. Direct Evidence

The easiest way to prove an agreement is with direct evidence.<sup>102</sup> In this context, direct evidence “is explicit and requires no inferences to establish the proposition or conclusion being asserted.”<sup>103</sup> Examples of direct evidence include “eyewitness accounts,”<sup>104</sup> “a recorded phone call in which two competitors agreed to fix prices,”<sup>105</sup> “a document or conversation explicitly manifesting the existence of the agreement in question,”<sup>106</sup> and “an admission by an employee of one of the conspirators, that officials of the defendants had met and agreed explicitly on the terms of a conspiracy to raise price.”<sup>107</sup>

### B. Circumstantial Evidence and Conscious Parallelism

In many antitrust cases, direct evidence of an agreement may be unavailable, especially at the pleading stage.<sup>108</sup> Thus, instead of direct evidence,

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100. *Id.*

101. *Monsanto*, 465 U.S. at 768.

102. *See In re Ins. Brokerage Antitrust Litig. (Ins. Brokerage)*, 618 F.3d 300, 323–24 (3d Cir. 2010) (“Allegations of direct evidence of an agreement, if sufficiently detailed, are independently adequate” under *Twombly*).

103. *Superior Offshore Int’l, Inc. v. Bristow Grp.*, 490 F. App’x 492, 497 (3d Cir. 2012) (quoting *In re Baby Food Antitrust Litig. (Baby Food)*, 166 F.3d 112, 118 (3d Cir. 1999)); *see also In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 662 (7th Cir. 2002) (direct evidence is “tantamount to an acknowledgement of guilt.”).

104. *Smith v. Reddy*, 101 F.3d 351, 356 (4th Cir. 1996).

105. *Mayor & City Council of Balt., Md. v. Citigroup, Inc.*, 709 F.3d 129, 136 (2d Cir. 2013); *see also Am. Chiropractic Ass’n v. Trigon Healthcare, Inc.*, 367 F.3d 212, 226 (4th Cir. 2004) (“... a recorded phone call in which two competitors agreed to fix prices at a certain level.”).

106. *Ins. Brokerage*, 618 F.3d at 324 n. 23.

107. *Text Messaging*, 630 F.3d at 628; *see also In re Chocolate Confectionary Antitrust Litig. (Chocolate)*, 801 F.3d 383, 396 (3d Cir. 2015) (an example of direct evidence is “an explicit admission from a participant that an antitrust conspiracy existed.”).

108. *Text Messaging*, 630 F.3d at 629.



a complaint may allege circumstantial evidence supporting the *inference* that a conspiracy existed.<sup>109</sup>

In *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, the Supreme Court explained that the antitrust laws limit the range of permissible inferences that may be drawn from circumstantial evidence in a Section 1 case.<sup>110</sup> Conduct that is just “as consistent with permissible competition as with illegal conspiracy does not, standing alone, support an inference of an antitrust conspiracy.”<sup>111</sup> The Court went on to hold that:

To survive a motion for summary judgment or for a directed verdict, a plaintiff seeking damages for a violation of § 1 must present evidence “that tends to exclude the possibility” that the alleged conspirators acted independently. . . . [A plaintiff], in other words, must show that the inference of conspiracy is reasonable in light of the competing inferences of independent action . . . .<sup>112</sup>

The Court in *Matsushita* identified two separate inquiries that are relevant to this issue: (1) whether the defendant had “any rational motive” to join the alleged conspiracy and (2) whether the defendant’s conduct “was consistent with the defendant’s independent interest.”<sup>113</sup> If the defendants had no rational motive to conspire, and if their conduct is consistent with other, equally plausible explanations, then “the conduct does not give rise to an inference of a conspiracy.”<sup>114</sup>

Following *Matsushita*, the Supreme Court in *Bell Atlantic Corp. v. Twombly* considered similar evidentiary issues at the pleading stage of a case.<sup>115</sup> The Court acknowledged that parallel conduct, such as competitors adopting similar policies around the same time in response to similar market conditions, might constitute circumstantial evidence of an anticompetitive agreement.<sup>116</sup> But mere allegations of parallel conduct—even consciously parallel conduct—are insufficient to state a claim under Section 1.<sup>117</sup> “Plaintiffs must plead ‘something more,’ ‘some further factual enhancement,’ a

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109. *Id.*

110. *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 588 (1986).

111. *Id.* (citing *Monsanto*, 465 U.S. at 764).

112. *Id.* (quoting *Monsanto*, 465 U.S. at 764).

113. *Id.* at 587 (citing *First Nat. Bank of Ariz. v. Cities Serv. Co.*, 391 U.S. 253, 280 (1968)).

114. *Id.* at 596–97.

115. *See Twombly*, 550 U.S. at 545.

116. *Id.*

117. *Id.* at 553–54.

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‘further circumstance pointing toward a meeting of the minds’ of the alleged conspirators.”<sup>118</sup>

The Supreme Court decisions in *Matsushita* and *Twombly* take into account the economic reality that competitors’ mere parallel conduct is as consistent with independent conduct in an interdependent market as it is with an agreement among competitors.<sup>119</sup> “In an interdependent market, companies base their actions in part on the anticipated reactions of their competitors.”<sup>120</sup> And because of this mutual awareness, two firms may arrive at identical decisions independently, as they are cognizant of—and reacting to—similar market pressures.<sup>121</sup> In other words, competitors’ behavior may be “consciously parallel.”<sup>122</sup> Recognizing that parallel conduct may arise on account of independent business decisions rather than an illegal agreement, *Twombly* and *Matsushita* require plaintiffs alleging parallel conduct in support of a Section 1 claim to also plead and prove enough non-conclusory facts to place that parallel conduct “in a context that raises a suggestion of a preceding agreement.”<sup>123</sup> “Allegations of facts that could just as easily suggest rational, legal business behavior by the defendants as they could suggest an illegal conspiracy” are insufficient to plead a Section 1 violation.<sup>124</sup>

### 1. Plus Factors

Courts have “distinguished permissible parallel conduct from impermissible conspiracy by looking for certain ‘plus factors.’”<sup>125</sup> “Whereas parallel

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118. *Guitar Center*, 798 F.3d at 1193 (quoting *Twombly*, 550 U.S. at 557, 560).

119. *See Twombly*, 550 U.S. at 554 (“The inadequacy of showing parallel conduct or interdependence, without more, mirrors the ambiguity of the behavior: consistent with conspiracy, but just as much in line with a wide swath of rational and competitive business strategy unilaterally prompted by common perceptions of the market.”).

120. *Guitar Center*, 798 F.3d at 1193.

121. *Id.*

122. *Id.*

123. *Id.* at 1193–94 (citing *Twombly*, 550 U.S. at 557); *Matsushita*, 475 U.S. at 575 (“To survive a motion for summary judgment or for a directed verdict, a plaintiff seeking damages for a violation of Section 1 must present evidence ‘that tends to exclude the possibility’ that the alleged conspirators acted independently.”).

124. *Id.* at 1194; *Kendall v. Visa U.S.A., Inc.*, 518 F.3d 1042, 1049 (9th Cir. 2008) (citing *Twombly*, 550 U.S. at 553–58 n. 5).

125. *Guitar Center*, 798 F.3d at 1194 (citing *In re: Citric Acid Antitrust Litig.*, 191 F.3d 1090, 1102 (9th Cir. 1999) (“Parallel pricing is a relevant factor to be considered along with the evidence as a whole; if there are sufficient other ‘plus’ factors, an inference of conspiracy can be reasonable.”)); *see also*, *Valspar Corp. v. E.I. Du Pont De Nemours and Co.*, 873 F.3d 185, 193 (3d Cir. 2017) (“Because proof of parallel behavior will rarely itself create an inference

conduct is as consistent with independent action as with conspiracy, plus factors are economic actions and [behavior] that are largely inconsistent with unilateral conduct but largely consistent with [collusion].”<sup>126</sup> These plus factors, which are “necessary conditions for the conspiracy inference,”<sup>127</sup> represent courts’ efforts to differentiate “actual agreement” from “unilateral, independent conduct.”<sup>128</sup> If pleaded, they can place parallel conduct “in a context that raises a suggestion of a preceding agreement.”<sup>129</sup>

Courts generally have not articulated a specific ranking of plus factors, but they have recognized a number of different examples in hub-and-spoke cases, including: spokes acting against self-interest;<sup>130</sup> spokes knowing about agreements with other spokes and expecting reciprocity;<sup>131</sup> abrupt changes to business practices;<sup>132</sup> bid rigging among spokes;<sup>133</sup> communication among spokes;<sup>134</sup> and communications from hubs to spokes regarding other spokes’

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of conspiracy, a plaintiff will often need to ‘show that certain plus factors are present’ in order ‘[t]o move the ball across the goal line.’”) (citing *Chocolate*, 801 F.3d 383 at 398–99).

126. *Guitar Center*, 798 F.3d at 1194; *Twombly*, 550 U.S. at 557 n. 4.
127. *Baby Food*, 166 F.3d at 122.
128. *In re Flat Glass Antitrust Litig. (Flat Glass)*, 385 F.3d 350, 360 (3d Cir. 2004) (quoting *Baby Food*, 166 F.3d at 122).
129. *Guitar Center*, 798 F.3d at 1194; *Twombly*, 550 U.S. at 557.
130. *Toys “R” Us*, 221 F.3d at 932 (“[T]he sudden adoption of measures under which [the toy manufacturers] decreased sales to the [warehouse clubs] ran against their independent economic self-interest.”).
131. *eBooks*, 791 F.3d at 318–19 (Apple “told the publishers that Apple would launch its iBookstore only if a sufficient number of them agreed to participate and that each publisher would receive identical terms, assuring them that a critical mass of major publishers would be prepared to move against Amazon.”).
132. *Interstate Circuit*, 306 U.S. at 222 (“Compliance with the proposals involved a radical departure from the previous business practices of the industry and a drastic increase in admission prices of most of the subsequent-run theatres.”).
133. *Ins. Brokerage*, 618 F.3d at 336–37 (“[W]e believe the bid-rigging behavior does plausibly suggest concerted action by the insurers; it proffers ‘enough fact to raise a reasonable expectation that discovery will reveal evidence of illegal agreement,’—more specifically, a horizontal agreement among the insurers not to compete for one another’s incumbent business.”) (quoting *Twombly*, 550 U.S. at 556).
134. *United States v. General Motors Corp.*, 384 U.S. 127, 143 (1966) (“The dealers collaborated, through the associations and otherwise, among themselves and with General Motors, both to enlist the aid of General Motors and to enforce dealers’ promises to forsake the discounters.”); *eBooks*, 791 F.3d at 300, 318–19 (“[T]he Publisher Defendants were in constant communication regarding their negotiations with both Apple and Amazon.”).

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intentions.<sup>135</sup> No single plus factor is outcome determinative, and the absence of one or some of these plus factors does not necessarily negate the inference of a hub-and-spoke conspiracy.<sup>136</sup>

## 2. Examples of Circumstantial Evidence in Hub-and-Spoke Cases

The following hub-and-spoke cases illustrate some of the plus factors considered by courts when deciding whether circumstantial evidence was sufficient to infer a horizontal agreement around the rim.

### a. *All Star Industries*

*United States v. All Star Industries* was a criminal bid-rigging case that involved a hub-and-spoke conspiracy between a specialty pipe distributor and several pipe suppliers.<sup>137</sup> The hub of the conspiracy was Texas Pipe Bending Company (“TPB”), which would reach out to six different pipe suppliers when awarding a fabrication job on a cost-plus basis and dictate to each supplier the bid price TPB expected to receive.<sup>138</sup> TPB would then pass the artificially high “winning” bid along to end users with the agreed upon mark-up.<sup>139</sup> Though the pipe suppliers emphasized the vertical component of the conspiracy and the fact that TPB told them the price to bid, the Fifth Circuit found that the suppliers conspired to rig their bids with TPB acting as the conduit to pass on the rigged bids and upheld the convictions.<sup>140</sup>

The court emphasized that the conspiracy depended on the suppliers’ cooperation and participation with TPB, and that the suppliers obliged by: (i) knowing “that TPB was required to submit at least three competitive bids to its customers for their approval, and the suppliers took pains to make these bids look legitimate to the end users;” (ii) not allocating “jobs exactly evenly because they knew that would look suspicious, meaning that the suppliers made a deliberate effort to maintain the appearance of competitive bidding;” and (iii) “[e]ven on contracts for items they knew they would not be getting because they were protecting the prices of other bidders, the [suppliers] would ‘develop’ their prices by calling manufacturers to give them the im-

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135. *Interstate Circuit*, 306 U.S. at 222 (“The O’Donnell letter named on its face as addressees the eight local representatives of the distributors, and so from the beginning each of the distributors knew that the proposals were under consideration by the others.”); *Toys “R” Us*, 221 F.3d at 932 (“TRU communicated the message ‘I’ll stop if they stop’ from manufacturer to competing manufacturer” and “made a point to tell each of the vendors . . . that we would be talking to our other key suppliers.”).

136. *Note by the U.S.*, *supra* note 3.

137. *All Star Indus.*, 962 F.2d at 467.

138. *Id.* at 467–68.

139. *See id.* at 473.

140. *See id.*

pression that the [suppliers] were preparing competitive bids.”<sup>141</sup> This was enough circumstantial evidence to infer a horizontal agreement among the pipe suppliers.<sup>142</sup> Thus, even though TPB was the hub that conceptualized and organized the conspiracy by bringing the suppliers together, the suppliers were still criminally liable for conspiring with each other.<sup>143</sup>

**b. Toys “R” Us**

During the 1980s, Toys “R” Us (“TRU”) was “a giant in the toy retailing industry” selling “approximately 20% of all the toys sold in the United States.”<sup>144</sup> In response to growing competition from low-priced warehouse clubs for sales of toys, TRU entered into a series of vertical agreements with “about ten” of the leading toy manufacturers under which each manufacturer agreed to sell “only highly-differentiated products (either unique individual items or combo packs)” to the warehouse clubs.<sup>145</sup> The FTC filed an administrative action against TRU and later determined that these vertical agreements violated the antitrust laws.<sup>146</sup> Based “upon an extensive administrative record,” the Commission concluded that:

TRU had acted as the coordinator of a horizontal agreement among a number of toy manufacturers. The agreements took the form of a network of vertical agreements between TRU and the individual manufacturers, in each of which the manufacturer promised to restrict the distribution of its products to low priced warehouse club stores, *on the condition that other manufacturers would do the same.*<sup>147</sup>

In affirming the Commission’s decision and calling it a modern-day equivalent to *Interstate Circuit*, the Seventh Circuit held that the FTC had presented evidence that tended to exclude the possibility that the manufacturers acted independently, as required by *Matsushita*<sup>148</sup> and *Monsanto*.<sup>149</sup> In addition to the evidence indicating an abrupt shift from past practices, there was evidence that it would have been contrary to a manufacturer’s self-interest to enter into the vertical agreement independently.<sup>150</sup> In particular, the FTC presented evidence that the manufacturers “wanted to diversify from TRU” rather than become more dependent on it, and that “each manufacturer was

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141. *Id.* at 472.

142. *Id.* at 473.

143. *See id.*

144. *Toys “R” Us*, 221 F.3d at 930.

145. *Id.* at 932.

146. *Id.* at 930.

147. *Id.* (emphasis added).

148. *See Matsushita*, 475 U.S. at 588.

149. *Toys “R” Us*, 221 F.3d at 936; *see Monsanto*, 465 U.S. at 764.

150. *See Toys “R” Us*, 221 F.3d at 936.

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afraid to curb its sales to the warehouse clubs alone, because it was afraid its rivals would cheat [on the agreement] and gain a special advantage in [a] popular new market niche.”<sup>151</sup> The Seventh Circuit therefore concluded that TRU had engineered and supervised a horizontal agreement to boycott TRU’s competitors, which could be condemned as a per se Section 1 violation.<sup>152</sup>

**c. eBooks**

Amazon introduced a new portable electronic device called the Kindle in 2007. The Kindle allowed consumers to purchase, download, and read electronic books (“ebooks”).<sup>153</sup> As an enticement for consumers to buy a Kindle, Amazon offered desirable books—including new releases and *New York Times* bestsellers—for \$9.99, which roughly matched the wholesale price it paid to the book publishers.<sup>154</sup> Following the release of the Kindle, the market for ebooks expanded rapidly.<sup>155</sup> By 2009, Amazon was responsible for 90% of all ebook sales.<sup>156</sup> The large book publishing companies saw Amazon’s ebooks, and particularly its \$9.99 pricing, as a threat to their traditional business model.<sup>157</sup> Executives from the six largest book-publishing companies, known as the “Big Six,” communicated the need to act together, meeting roughly once a quarter to discuss strategies to raise Amazon’s wholesale pricing.<sup>158</sup>

In 2009, when preparing for the release of its own tablet computer called the iPad, Apple decided to enter into a new dedicated marketplace for ebooks known as the iBookstore.<sup>159</sup> The market for ebooks appeared particularly promising, but entry into this market required recruitment of the Big Six, which accounted for over 90% of the *New York Times* bestsellers in 2010.<sup>160</sup> After meeting with leaders of the Big Six and realizing their common desire to raise Amazon’s ebook pricing, Apple approached the publishers and encouraged them to enter into new “agency model” distribution agreements that featured a “most-favored nation” (“MFN”) clause.<sup>161</sup> The agency model arrangement allowed the publishers to set retail prices for

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151. *Id.*

152. *See id.* (citing *Nw. Wholesale Stationers*, 472 U.S. at 294).

153. *eBooks*, 791 F.3d at 299.

154. *Id.*

155. *Id.*

156. *Id.*

157. *Id.*

158. *Id.* at 300.

159. *eBooks*, 791 F.3d at 301.

160. *See id.* at 298, 301.

161. *See id.* at 302–04.

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ebooks within committed caps of \$14.99, \$12.99, and \$9.99 (with the publishers receiving 70% of each ebook sale and Apple receiving a 30% commission), while the MFN clause required the publishers to change their relationship with other ebook retailers, including Amazon.<sup>162</sup> The combined effect of these two contractual provisions effectively eliminated retail price competition.<sup>163</sup>

Apple convinced two of the publishers to verbally commit to the iBookstore, and then used them to enlist the other Big Six members to participate in the scheme.<sup>164</sup> Apple kept each of the publishers, who were in close communication with each other,<sup>165</sup> up to date about who was “on board.”<sup>166</sup> By the time the iPad launched in January 2010, five members of the Big Six had agreed to participate in Apple’s iBookstore.<sup>167</sup> After the publishers entered into their vertical agreements with Apple, the price of ebooks increased by 23.9%.<sup>168</sup>

“The Department of Justice (“DOJ”) and thirty-three states and territories filed [a civil antitrust action] alleging that Apple, in launching the iBookstore, had conspired with the [five publishers] to raise retail prices across the . . . ebook market.”<sup>169</sup> All five publisher defendants soon settled and signed consent decrees, which prohibited them from restricting ebook retailers’ ability to set prices, but Apple chose not to settle and instead defended itself against the government’s claims.<sup>170</sup>

Following a three-week bench trial, the district court concluded that, in order to induce the publisher defendants to participate in the iBookstore and to avoid the necessity of itself competing with Amazon, Apple orchestrated a hub-and-spoke conspiracy among the publisher defendants to raise the price of ebooks.<sup>171</sup> “The district court [held] that the agreement constituted a per se violation of Section 1 and, in the alternative, unreasonably restrained trade under the rule of reason.”<sup>172</sup> Based on these findings, “the district court en-

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162. *See id.* at 303–05.

163. *See id.* at 305.

164. *See id.* at 307–08.

165. *eBooks*, 791 F.3d at 308 (the district court found that in three days while making their decisions, the CEOs of the Big Six called each other 34 times).

166. *Id.*

167. *Id.*

168. *See id.* at 310.

169. *Id.* at 290.

170. *See id.* at 311–12.

171. *eBooks*, 791 F.3d at 297 (citing *United States v. Apple Inc.*, 952 F. Supp. 2d 638, 647 (S.D.N.Y. 2013)).

172. *Id.*

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tered a final judgment on the liability finding and issued an injunctive order. . . .”<sup>173</sup>

On appeal, the Second Circuit upheld the district court’s finding of a hub-and-spoke conspiracy to set retail prices for ebooks.<sup>174</sup> The court rejected Apple’s argument that the evidence was ambiguous and therefore insufficient to support the inference of a conspiracy.<sup>175</sup> Instead, the court found that the evidence and the relationship between the publishers unambiguously demonstrated that Apple consciously orchestrated a conspiracy among the publishers to set prices.<sup>176</sup> The court found both that the publishers colluded among themselves and that Apple helped to organize that collusion.<sup>177</sup> Both the vertical agreements and the intention of the publishers and Apple to use those agreements to raise ebook prices were “useful evidence” to prove a horizontal cartel.<sup>178</sup>

Though the three-judge panel found it was appropriate to infer a horizontal conspiracy from vertical coordination in the case, it was split on the applicability of the per se rule to the vertical agreements in the hub-and-spoke conspiracy.<sup>179</sup> The two-judge majority analyzed the vertical agreements as a per se violation and found that Apple was liable.<sup>180</sup> Additionally, writing only for herself, Judge Livingston analyzed the case under the alternative rule of reason and found Apple also was liable under that standard.<sup>181</sup> Judge Lohier concurred based on the per se analysis alone, but rejected any rule-of-reason analysis.<sup>182</sup> In Judge Jacobs’ dissent, he stated that the vertical agreements between Apple and the publisher defendants should be analyzed under the rule of reason and that Apple would not be liable for any antitrust violations if that were the case.<sup>183</sup>

#### *d. Guitar Center*

Not every attempt at using circumstantial evidence to allege or prove a rim between the spokes has been successful. In *Guitar Center*, the Ninth

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173. *Id.*

174. *Id.*

175. *Id.* at 319.

176. *Id.*

177. *eBooks*, 791 F.3d at 319.

178. *Id.* at 319–20 (“vertical agreements, lawful in the abstract, can in context ‘be useful evidence . . . to prove the existence of a horizontal cartel.’”) (quoting *Leegin*, 551 U.S. at 893).

179. *See generally id.* at 321.

180. *See id.* at 329.

181. *See id.* at 329–35.

182. *Id.* at 339–40 (Lohier, J., concurring).

183. *Id.* at 340–54 (Jacobs, J., dissenting).



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Circuit considered hub-and-spoke allegations involving Guitar Center, which was the largest retail seller of musical instruments in the U.S.<sup>184</sup> As alleged by the plaintiffs, Guitar Center pressured each of the five leading guitar and amplifier manufacturers to dictate the lowest prices at which any retailer could advertise the manufacturer's products, and each manufacturer agreed to adhere to this minimum-advertised-price ("MAP") policy.<sup>185</sup> The MAP policy apparently was intended to address free-riding problems that Guitar Center faced from discount retailers, which could offer lower prices because they provided less support and fewer services to customers.<sup>186</sup> The policy also was supported by the musical instrument manufacturers' trade association, which a few years earlier had negotiated industry-wide MAP policies that it agreed to abandon in a consent decree with the FTC.<sup>187</sup> Guitar Center introduced its MAP policy shortly thereafter.<sup>188</sup>

In their complaint, the plaintiffs did not cite any direct evidence of horizontal communications or an agreement among the guitar manufacturers.<sup>189</sup> Instead, they alleged parallel action together with circumstantial facts, which purportedly evinced that (i) "the MAP policies were similar and adopted around the same time (tending to negate independent action)"; (ii) "the MAP policies were against [the] manufacturers' individual self-interest and would succeed only if all manufacturers participated"; (iii) the "manufacturers' key decision-makers met at summits or trade shows"; and (iv) "trade show announcements and open discussions were designed to signal, announce, and police compliance."<sup>190</sup> In applying the *Twombly* pleading standards to these hub-and-spoke allegations, the district court dismissed the complaint because it did not "answer the basic questions: who, did what, to whom (or with whom), where, and when?"<sup>191</sup>

The Ninth Circuit affirmed the lower court's decision that the plaintiffs had failed to plausibly state a claim showing a horizontal agreement under the *Twombly* pleading standards.<sup>192</sup> While not disregarding the possibility of a hub-and-spoke conspiracy, the court found the complaint provided "ample independent business reasons" why each manufacturer adopted and enforced

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184. *See Guitar Center*, 798 F.3d at 1189.

185. *Id.*

186. *Id.*

187. *In re Nat'l Ass'n of Music Merchs., Musical Instruments & Equip. Antitrust Litig.*, No. 09-CV-2002, 2012 WL 3637291 (S.D. Cal. Aug. 20, 2012), *aff'd* sub nom. *In re Musical Instruments & Equip. Antitrust Litig.*, 798 F.3d 1186 (9th Cir. 2015)).

188. *Id.*

189. *Guitar Center*, 798 F.3d at 1193.

190. *Nat'l Ass'n of Music Merchants*, 2012 WL 3637291, at \*3.

191. *Id.*

192. *Guitar Center*, 798 F.3d at 1198.

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the MAP policy even absent an agreement among the manufacturers.<sup>193</sup> If there were reasonable reasons to enter into the MAP policy without assurances that each other manufacturer would enter into similar agreements, then there was no evidence of collusion.<sup>194</sup>

The court in *Guitar Center* recognized that “the line between horizontal and vertical restraints can blur” in hub-and-spoke conspiracies, but rejected the plaintiffs’ argument that the circumstances surrounding the adoption of and compliance with the MAP policies was sufficient to plead an actionable claim under *Twombly*.<sup>195</sup> Instead, the court divided the alleged conspiracy “into its constituent parts, the respective vertical and horizontal agreements,” and analyzed them separately under either “the rule of reason or as violations *per se*.”<sup>196</sup> The court’s analysis suggests that plaintiffs in hub-and-spoke cases must allege sufficient circumstantial evidence of direct horizontal coordination that goes beyond the anticompetitive effects of the vertical agreements.<sup>197</sup>

## V. CAN PRICE INFORMATION EXCHANGES VIOLATE SECTION 1?

Hub-and-spoke conspiracy cases often involve the indirect exchange of price information between the spokes, with the hub acting as the common nexus in their communication network.<sup>198</sup> Thus, the legality of horizontal agreements to exchange price information—or price information exchanges—frequently is addressed in hub-and-spoke cases.

Courts have considered horizontal price information exchanges in a number of Section 1 cases. In *United States v. United States Gypsum Co.*, the Supreme Court confirmed that “exchanges of [price data] information do not constitute a *per se* violation of the Sherman Act.”<sup>199</sup> Instead, courts analyze price information exchanges under the rule of reason if they are not part of a price-fixing scheme.<sup>200</sup>

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193. *Id.* at 1195.

194. *Id.*

195. *Id.* at 1192.

196. *Id.*

197. *Id.* at 1193.

198. See *Interstate Circuit*, 306 U.S. 208.

199. *United States v. U.S. Gypsum Co. (Gypsum)*, 438 U.S. 422, 441 n.16 (1978); see also *U.S. v. Citizens & S. Nat. Bank*, 422 U.S. 86, 113 (1975) (“[T]he dissemination of price information is not itself a *per se* violation of the Sherman Act.”).

200. *Gypsum*, 438 U.S. at 441 n.16 (“The exchange of price data and other information among competitors does not invariably have anticompetitive effects; indeed such practices can in certain circumstances increase economic efficiency and render markets more, rather than less, competitive.”).

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### A. Price Information Exchanges as a Rule-of-Reason Violation

Applying the rule of reason, courts have prohibited price information exchanges in certain types of industries where the exchanges are likely to have anticompetitive effects. For example, in *United States v. Container Corp. of America*, the Supreme Court held that exchanges of information concerning the “most recent price charged or quoted” among sellers of corrugated shipping containers unlawfully stabilized prices.<sup>201</sup> The Court concluded that the exchange of price information, involving a highly concentrated industry and a fungible product with inelastic demand, “had an anticompetitive effect in the industry, chilling the vigor of price competition.”<sup>202</sup>

In *Todd v. Exxon Corp.*,<sup>203</sup> the Second Circuit used a rule-of-reason analysis in considering an exchange of employee compensation data among fourteen major oil and petrochemical companies. The plaintiff alleged that the defendants violated Section 1 “by regularly sharing detailed information regarding compensation paid to non-union managerial, professional, and technical (“MPT”) employees and using this information in setting the salaries of these employees at artificially low levels.”<sup>204</sup> The defendants allegedly carried out this information exchange through a third-party consultant, Towers Perrin, which compiled and distributed periodic benchmarking surveys that compared past and current MPT employees’ salary information.<sup>205</sup>

Writing for the court, then-Judge Sotomayor held that when a Section 1 claim is based on an information exchange alone—as opposed to merely using the information exchange as evidence upon which to infer a price-fixing agreement—the “exchange of information is not illegal per se, but can be found unlawful under a rule-of-reason analysis.”<sup>206</sup> Relying on *Gypsum*, the court explained the basic framework for a rule-of-reason analysis of a price information exchange: “A number of factors including most prominently the structure of the industry involved and the nature of the information exchanged are generally considered in divining the procompetitive or anticompetitive effects of this type of interseller communication.”<sup>207</sup>

Applying this framework, the court considered the alleged relevant market, the defendants’ power in that market, and the susceptibility of the market

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201. *United States v. Container Corp. of Am.*, 393 U.S. 333, 335 (1969).

202. *Id.* at 337.

203. *Todd v. Exxon Corp.*, 275 F.3d 191 (2d Cir. 2001).

204. *Id.* at 195.

205. *Id.* at 196.

206. *Id.* at 198 (citing *Battipaglia v. N.Y. State Liquor Auth.*, 745 F.2d 166, 174–75 (2d Cir. 1984)).

207. *Id.* at 199 (quoting *Gypsum*, 438 U.S. at 441 n.16).

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to the defendants' exercise of market power.<sup>208</sup> The court then addressed some of the market factors alleged by the plaintiff, including the concentration of the alleged market, the "fungibility" of the products in the market, and the inelastic demand for those products.<sup>209</sup> It also considered the "nature of the information exchanged" by the defendants, including whether it was current or historical wage information<sup>210</sup> and whether the information was publicly available.<sup>211</sup> Based upon the allegations of these various factors in the complaint, the court concluded that the plaintiff had adequately asserted a rule-of-reason violation involving the defendants' information exchange, vacated the order dismissing the complaint, and remanded the case back to the district court for further consideration.<sup>212</sup>

## **B. Price Information Exchanges as Circumstantial Evidence of a Per Se Violation**

In addition to analyzing the defendants' agreement to exchange price information as an antitrust violation under the rule of reason, the Second Circuit in *Todd* also discussed the use of this circumstantial evidence as a plus factor for inferring whether the defendants entered into a per se price-fixing agreement:

[E]ven in the absence of direct "smoking gun" evidence, a horizontal price-fixing agreement may be inferred on the basis of conscious parallelism, when such interdependent conduct is accompanied by circumstantial evidence and plus factors such as defendants' use of facilitating practices. *Infor-*

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208. *Id.* at 207–08 (“[O]nce the relevant market is defined, a court must analyze the structure of that market to determine whether it is susceptible to the exercise of market power through tacit coordination. . . . Susceptible markets tend to be highly concentrated—that is, oligopolistic—and to have fungible products subject to inelastic demand.”) (internal quotation marks omitted).

209. *Id.* at 207, 208–11.

210. *Id.* at 211 (“The exchange of past price data is greatly preferred because current data have greater potential to affect future prices and facilitate price conspiracies. By the same reasoning, exchanges of future price information are considered especially anticompetitive.”) (internal citations omitted).

211. *Id.* at 213 (“A court is therefore more likely to approve a data exchange where the information is made public.”) (citing *Maple Flooring Mfrs. Ass’n v. United States*, 268 U.S. 563, 573–74 (1925) (finding no violation where exchanged information was widely disseminated to the public)).

212. *Id.* at 195. Following the remand to the district court, the *Todd* case was consolidated with other similar cases in *In re Comp. of Managerial, Prof’l & Tech. Employees Antitrust Litig.*, MDL No. 1471 (D. N.J. 2002). The author represented one of the defendants in that litigation.

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mation exchange is an example of a facilitating practice that can help support an inference of a price-fixing agreement.<sup>213</sup>

Numerous courts have cited this passage from *Todd* when discussing price information exchanges as a facilitating practice for implementing a price-fixing conspiracy.<sup>214</sup>

### 1. The Third Circuit's Tetralogy of Price Information Exchange Cases

The Third Circuit has discussed and compared the probative value of price information exchanges as a plus factor in a series of four antitrust cases, beginning with *Baby Food* in 1999.

#### a. *Baby Food*

In *Baby Food*, the Third Circuit held that the plaintiffs could not infer a conspiracy to fix baby food prices based on evidence that there was a reciprocal price information exchange by the defendants.<sup>215</sup> The plaintiffs in *Baby Food* relied upon evidence that some manufacturers possessed other competitors' price information gathered by field-level sales employees who lacked pricing authority.<sup>216</sup> The court noted that price discussions among low-level sales representatives have little probative weight, and distinguished this type of information exchange from the far different situation where upper-level executives have secret conversations about prices.<sup>217</sup> The court also emphasized that "there must be evidence that the exchanges of information had an impact on pricing decisions."<sup>218</sup> The rationale for this requirement is that exchanges of price information may be compatible with competition because they may "increase economic efficiency and render markets more, rather than less, competitive."<sup>219</sup> The plaintiffs' amorphous claim that the information exchanges "impacted the market as a whole" was legally deficient because

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213. *Id.* at 199 (citing *Interstate Circuit*, 306 U.S. at 226–27; *Ambook Enters. v. Time Inc.*, 612 F.2d 604, 614–18 (2d Cir. 1979)) (emphasis added).

214. *See, e.g., In re Local TV Advert. Antitrust Litig.*, No. 18-CV-6785, 2022 WL 3716202 (N.D. Ill. Aug. 29, 2022); *In re Comp. of Managerial, Prof'l & Tech. Employees Antitrust Litig.*, No. 02-CV-2924, 2008 WL 3887619 (D.N.J. Aug. 20, 2008).

215. *Baby Food*, 166 F.3d at 125.

216. *Id.*

217. *Id.* at 125, 139 n. 8 ("Evidence of sporadic exchanges of shop talk among field sales representatives who lack pricing authority is insufficient to survive summary judgment.").

218. *Id.* at 125.

219. *Id.* (quoting *Gypsum*, 438 U.S. at 443 n. 16).

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they could not correlate the information exchanges with specific collusive behavior by the defendants.<sup>220</sup>

**b. Flat Glass**

In *Flat Glass*, the Third Circuit distinguished the facts in *Baby Food* and held that the plaintiffs' evidence showing exchanges of price information among the defendants was sufficient to survive a summary judgment on the issue of whether there was an agreement to fix the prices for flat glass and automotive replacement glass.<sup>221</sup> The court determined that the exchanges of information in *Flat Glass* were qualitatively different from those in *Baby Food* for two reasons.<sup>222</sup> *First*, there was evidence tending to show that "the exchanges occurred at a higher level of the flat glass producers' structural hierarchy."<sup>223</sup> *Second*, and more importantly, "a finder of fact could reasonably infer that the flat glass producers used the information to implement collusive price increases; that is, 'the exchanges of information had an impact on pricing decisions.'"<sup>224</sup> The court went on to summarize these qualitative differences between the evidence in *Baby Food* and *Flat Glass*:

[H]ere the exchanges of information are more tightly linked with concerted behavior and therefore they appear more purposive. Several of the key documents emphasize that the relevant price increases were not economically justified or supportable, but required competitors to hold the line. Others suggest not just foreknowledge of a single competitor's pricing plans, but of the plans of multiple competitors. Predictions of price behavior were followed by actual price changes. The inference of concerted rather than interdependent action is therefore stronger.<sup>225</sup>

**c. Chocolate**

*Chocolate* is another Third Circuit case that considered the defendants' price information exchanges as circumstantial evidence of a price-fixing conspiracy.<sup>226</sup> In *Chocolate*, the plaintiffs highlighted evidence showing that the defendant chocolate manufacturers had possession of competitors' pricing information before the competitors publicly announced their price increases.<sup>227</sup> Specifically, the plaintiffs pointed to internal Hershey documents reflecting that it had advance notice of a Mars price increase two months before Mars

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220. *Id.*

221. *Flat Glass*, 385 F.3d at 378.

222. *Id.* at 368.

223. *Id.* at 369.

224. *Id.* (quoting *Baby Food*, 166 F.3d at 125).

225. *Id.*

226. *Chocolate*, 801 F.3d at 407–09.

227. *Id.* at 407.

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announced the increase.<sup>228</sup> Hershey also had another internal memo stating that it “received confirmation that both Mars and Nestlé have raised their prices on loose bars” two days before Nestlé publicly announced its price increase.<sup>229</sup>

In considering this future pricing information as circumstantial evidence of a price-fixing conspiracy, the court in *Chocolate* confirmed that the “‘mere possession of competitive memoranda’ is not evidence of concerted action to fix prices,” and “gathering the price information of competitors can be just as consistent with lawful interdependence as with a price-fixing conspiracy.”<sup>230</sup> The court explained that on the spectrum of advance pricing evidence, the plaintiffs’ evidence in *Chocolate* was “much closer to the evidence in *Baby Food* than to the evidence in *Flat Glass*.”<sup>231</sup> The plaintiffs had no direct or strong circumstantial evidence that the advance price information came from Hershey’s competitors, much less their upper-level executives.<sup>232</sup> The information also was limited to advance pricing information and, unlike in *Flat Glass*, did not reveal pricing plans dependent on others following.<sup>233</sup> Furthermore, the two-day advance notice of Nestlé’s price increase came *after* Hershey had already announced its price increase, so it had little or no effect on Hershey’s pricing decision.<sup>234</sup> Finally, the summary judgment evidence reflected that the chocolate manufacturers’ pricing actions were intended to, and in some cases did, catch their rivals by surprise.<sup>235</sup>

Considering the evidence as a whole, the court found that the plaintiffs failed to create a reasonable inference that the chocolate manufacturers more likely than not conspired to fix prices, and that the evidence was as consistent with interdependence as with a conspiracy.<sup>236</sup> Thus, the court affirmed the district court’s summary judgment dismissing the plaintiffs’ Section 1 claims.<sup>237</sup>

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228. *Id.*

229. *Id.* at 407–08.

230. *Id.* at 408, 409 (citing *Baby Food*, 166 F.3d at 126).

231. *Id.* at 408.

232. *Chocolate*, 801 F.3d at 408.

233. *Id.*

234. *Id.*

235. *Id.*

236. *Id.* at 412.

237. *Id.*

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*d. Valspar*<sup>238</sup>

*Valspar* is the most recent Third Circuit decision discussing the probative value of information exchanges for inferring a price-fixing conspiracy.<sup>239</sup> In *Valspar*, the plaintiff was a paint manufacturer (“Valspar”) that purchased titanium dioxide (“TiO<sub>2</sub>”) as a whitening pigment for its paint products.<sup>240</sup> Valspar filed a Section 1 claim against DuPont, accusing it of entering into a price-fixing agreement with a handful of other large firms that dominated the U.S. market for TiO<sub>2</sub>.<sup>241</sup> As evidence of this price-fixing conspiracy, Valspar alleged that DuPont and the other TiO<sub>2</sub> suppliers manifested their agreement through thirty-one parallel price increase announcements issued by the suppliers.<sup>242</sup> DuPont countered that the parallel pricing was not the product of an agreement because the market for TiO<sub>2</sub> was an oligopoly and the price movements were caused by “conscious parallelism,” which naturally occurs when oligopolists follow a competitor’s price increase in the hopes that each firm’s profits will increase.<sup>243</sup> The district court agreed with DuPont and granted its motion for summary judgment.<sup>244</sup>

In affirming the district court’s summary judgment, the Third Circuit commented on Valspar’s evidence regarding two forms of information exchanges that occurred in the TiO<sub>2</sub> industry.<sup>245</sup> First, Valspar submitted evidence that DuPont and the other competitors took part in a data-sharing program offered by the Titanium Dioxide Manufacturers Association (“TDMA”).<sup>246</sup> As part of this program, the competitors provided production, inventory, and sales-volume data (but never price data) to the TDMA, which then aggregated, anonymized, and redistributed the data.<sup>247</sup> Valspar argued that the data-sharing program allowed each conspirator to calculate its own market share and thus deduce whether it was getting its fair share of the

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238. The author’s firm represented one of the titanium dioxide defendants in related class action and opt-out antitrust cases involving the same conspiracy alleged in the *Valspar* opt-out case; see, e.g., *In re: Titanium Dioxide Antitrust Litig.*, No. 1:10-cv-00318, 2012 WL 5947283 (D. Md. 2012) (direct purchaser plaintiff case); *Harrison v. E.I. DuPont De Nemours and Co.*, No. 5:13-cv-01180, 2016 WL 3231535 (N.D. Cal. 2013) (indirect purchaser plaintiff case); *Home Depot U.S.A., Inc. v. E.I. DuPont De Nemours and Co.*, No. 3:16-cv-04865, 2019 WL 6171063 (N.D. Cal. 2016) (opt-out plaintiff case).

239. See *Valspar*, 873 F.3d at 189.

240. *Id.*

241. *Id.*

242. *Id.*

243. *Id.* at 189–90.

244. *Id.* at 190.

245. See *Valspar*, 873 F.3d at 190.

246. *Id.* at 198.

247. *Id.*



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conspiracy's profits.<sup>248</sup> The court considered the TDMA data-sharing program and concluded that it "looks innocuous when compared to the information in *Baby Food* and *Flat Glass*."<sup>249</sup> The court also observed that the TDMA's data-sharing program "aggregated and blinded members' monthly sales, production, and inventory data worldwide, but never collected price information," so at most it "merely allowed each firm to calculate its *own* market share."<sup>250</sup>

Another form of information sharing in the TiO<sub>2</sub> industry involved a mutual industry consultant who Valspar suggested was used as a "conduit" to funnel information between the competitors.<sup>251</sup> Examples of this information sharing evidence included an email from one competitor's employee asking if the consultant could confirm rumors about an impending price increase by another competitor.<sup>252</sup> The court held that "[t]his sort of inquiry to a consultant is not probative of conspiracy" and that "it makes common sense to obtain as much information as possible of the pricing policies and marketing strategies of one's competitors."<sup>253</sup> The court further held that "this type of inquiry undermines the existence of a conspiracy because conspirators would have no need to ask consultants about the specifics of their own conspiracy."<sup>254</sup>

### C. Price Information Exchange Cases Involving Agri Stats

Agri Stats, Inc. is an information reporting service that serves the chicken, turkey, egg, and pork industries.<sup>255</sup> The company compiles and distributes highly detailed, non-public "benchmarking" reports that are widely utilized by participants in these meat industries.<sup>256</sup> In 2009, Agri Stats President Blair Snyder stated that about 97% of the poultry industry and 95% of the turkey industry were working with his company.<sup>257</sup> While he did not offer

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248. *Id.*

249. *Id.*

250. *Id.* at 199 (emphasis in original).

251. *See Valspar*, 873 F.3d at 199 (emphasis in original).

252. *Id.*

253. *Id.* (quoting *Baby Food*, 166 F.3d at 126).

254. *Id.* (citing *Mayor & City Council of Balt.*, 709 F.3d at 139 (attempts to confirm future pricing plans of competitors "tend to suggest the absence of [competitor] communications" because if competitors were communicating directly they "would not have had to rely on third parties to confirm [each other's] strateg[ies]")).

255. Agri Stats, Inc., *Partnership and Services*, (last visited Apr. 10, 2023), <https://www.agristats.com/partnership> [<https://perma.cc/Z9TU-ZD72>].

256. *Id.*

257. Eli Hoff, 'Is This Legal?': Why an Obscure Data Service has been Sued Nearly 100 Times for Facilitating Anti-Competitive Behavior, INVESTIGATE MIDWEST:

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a number for the pork industry, Mr. Snyder called the participating companies “pretty much a list of who’s who” in swine.<sup>258</sup>

### 1. Wheeler<sup>259</sup>

Agri Stats has been at the center of hundreds of price-fixing and wage-fixing cases in the meat industries since 2006 when *Wheeler v. Pilgrim’s Pride Corp.* was filed.<sup>260</sup> The plaintiffs in *Wheeler* were east Texas chicken “growers,” who had contracted with Pilgrim’s Pride Corp. (“Pilgrim”) to raise chickens processed for meat products, known as “broilers.”<sup>261</sup> The defendants in *Wheeler* were Pilgrim and its primary competitor, Tyson Foods, Inc. (“Tyson”), which at the time were the two largest broiler producers in the U.S.<sup>262</sup> The plaintiffs asserted per se Section 1 claims against Pilgrim and Tyson because they allegedly entered into market allocation and wage-fixing agreements involving the contract growers.<sup>263</sup> Specifically, the plaintiffs alleged that the defendants conspired to suppress grower compensation via the exchange of confidential wage information, including the use of Agri Stats reports, and agreed to split the grower market between them by not contracting with the others’ growers, which reduced competition and suppressed the base wages paid to growers.<sup>264</sup>

As alleged in the plaintiffs’ pleadings, Pilgrim, Tyson, and most other U.S. broiler producers (commonly known in the industry as “Integrators”)<sup>265</sup> participated in a comparative data survey administered by Agri Stats, which required the Integrators to submit detailed business information about their

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THE MIDWEST CTR. FOR INVESTIGATIVE REPORTING (July 29, 2021), <https://investigatamidwest.org/2021/07/29/is-this-legal-why-an-obscure-data-service-has-been-sued-nearly-100-times-for-facilitating-anti-competitive-behavior/> [https://perma.cc/8FG5-ZPK7].

258. *Id.*

259. The author was co-counsel for the plaintiffs in *Wheeler v. Pilgrim’s Pride Corp.*, No. 5:06-cv-0004, (E.D. Tex.).

260. *See Wheeler v. Pilgrim’s Pride Corp.*, 246 F.R.D. 532 (E.D. Tex. 2007).

261. *Wheeler*, 246 F.R.D. at 535–36; *see also, In re Broiler Chicken Antitrust Litig. (Broiler Chicken)*, 290 F. Supp. 3d 772, 779 (N.D. Ill. 2017) (“‘Broilers’ are ‘chickens raised for meat consumption to be slaughtered before the age of 13 weeks, and which may be sold in a variety of forms’. . . Broilers constitute approximately 98% of all chicken meat sold in the United States.”).

262. *Wheeler*, 246 F.R.D. at 535.

263. *Id.* at 536.

264. *Id.*

265. Seventh Amended Complaint ¶ 1, *Wheeler v. Pilgrim’s Pride Corp.*, No. 5:06-cv-0004, (E.D. Tex. filed May 8, 2008), ECF No. 155 [hereinafter *Wheeler Complaint*].

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operations, including the compensation paid to their growers.<sup>266</sup> The results of these surveys were provided to the participating Integrators in weekly, quarterly, and annual reports published by Agri Stats.<sup>267</sup>

The plaintiffs further alleged that Pilgrim's and Tyson's broiler operations were organized by "complexes," each of which had at least one pullet farm, breeder farm, hatchery, feed mill, and processing plant within the same local area.<sup>268</sup> Agri Stats divided broiler complexes into different regions of the U.S.<sup>269</sup> For example, Sub-Region 51 in the Agri Stats reports consisted of broiler complexes in parts of Arkansas, Louisiana, Oklahoma, and Texas.<sup>270</sup> The Agri Stats reports included numerous tables reflecting different types of detailed data for each complex that participated in the survey.<sup>271</sup> The tables also identified the general location of each complex by Sub-Region numbers.<sup>272</sup> According to the plaintiffs, the Agri Stats report that Pilgrim received identified each Pilgrim complex by name, but did not specify the names of complexes owned by other Integrators.<sup>273</sup> Likewise, Tyson's Agri Stats report identified its own complexes, but did not list the names of other complexes.<sup>274</sup>

For anyone employed in the poultry industry who was familiar with broiler complexes in a certain region of the country, the plaintiffs alleged it was relatively easy to figure out the identity of the complexes in that region using the data provided in the various Agri Stats tables.<sup>275</sup> Information contained in the Agri Stats reports, such as the Sub-Region number of the complex, the types of chicken breeds that were processed at the complex, and the types of poultry houses used by growers for that complex, could be used to quickly determine the Integrator that owned the complex, and in some cases the specific identity of the complex.<sup>276</sup> In addition, one of the tables in the Agri Stats reports, called "Actual Live Production Costs," included the price

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266. *Id.* ¶ 6.

267. *Id.*

268. *Id.* ¶ 38.

269. *Id.* ¶ 48.

270. *Id.*

271. Seventh Amended Complaint, *supra* note 265, ¶ 49.

272. *Id.*

273. *Id.*

274. *Id.*

275. *Id.* ¶ 50; *see also* Hoff, *supra* note 257 (detailing various ways that meat processing insiders could decipher the Agri Stats reports to identify plants based on the data alone).

276. Wheeler Complaint ¶ 50; *see also* *Broiler Chicken*, 290 F. Supp. 3d at 781 (data exchanged through the Agri Stats Reports included "where Broiler producers buy their breeder stock and feed, the size of production facilities[,] . . . production capacity, including numbers of eggs, the size of breeder flocks, and

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per pound that the complex paid to its growers for that reporting period.<sup>277</sup> Using this information, Pilgrim and Tyson were able to monitor the average wages paid to the other company's growers for the given reporting period, which the plaintiffs alleged was a facilitating practice for the defendants' wage-fixing agreement.<sup>278</sup>

## 2. Recent Price Information Exchange Cases Involving Agri Stats

Following the *Wheeler* case, other private plaintiffs filed numerous class action and opt-out cases involving antitrust claims against meat processors in the broiler,<sup>279</sup> pork,<sup>280</sup> and turkey<sup>281</sup> industries. Many of these cases included Agri Stats as a defendant,<sup>282</sup> while some did not.<sup>283</sup> The plaintiffs in some of these cases included direct and indirect purchasers who allegedly overpaid for meat products.<sup>284</sup> Other plaintiffs included workers, like the plaintiffs in *Wheeler*, who allegedly were underpaid for the labor services they provided

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other inventory numbers, as well as financial information about each company.”).

277. *Wheeler* Complaint ¶ 51.

278. *Id.*

279. *See, e.g., Broiler Chicken*, 290 F. Supp. 3d 772, 779 (N.D. Ill. 2017); *Jien v. Perdue Farms, Inc.*, No. 1:19-cv-2521, 2020 WL 5544183, at \*1 (D. Md. Sept. 16, 2020).

280. *See, e.g., In re Pork Antitrust Litig. (Pork)*, 495 F. Supp. 3d 753 (D. Minn. 2020).

281. *See, e.g., Olean Wholesale Grocery Coop., Inc. v. Agri Stats, Inc.*, No. 1:19-cv-08318, 2020 WL 6134982, at \*1 (N.D. Ill. Oct. 19, 2020); *Sandee's Catering v. Agri Stats, Inc.*, No. 1:20-cv-02295, 2020 WL 6273477, at 1\* (N.D. Ill. Oct. 26, 2020).

282. *See, e.g., Pork*, 495 F. Supp. 3d at 765 n. 1; *Jien*, 2020 WL 5544183, at \*1 n. 2; *Sandee's*, 2020 WL 6273477, at \*1; *Olean*, 2020 WL 6134982, at \*1.

283. *See, e.g., Broiler Chicken*, 290 F. Supp. 3d at 800 (although the plaintiffs did not include Agri Stats as a defendant in the case, they did allege that Agri Stats was a “tool” used by the defendants to help implement their price-fixing conspiracy).

284. *See, e.g., Broiler Chicken*, 290 F. Supp. 3d at 779 (three putative classes of businesses and individuals who purchased chicken from the defendants, either directly or indirectly, for resale, business, or personal use); *Pork*, 495 F. Supp. 3d at 765 (three categories of class-action plaintiffs who purchased pork products, either directly or indirectly, from one of the defendants); *Sandee's*, 2020 WL 6273477, at \*1 (the plaintiff was an indirect purchaser of turkey products); *Olean*, 2020 WL 6134982, at \*1 (the class plaintiffs were direct purchasers of turkey products).

to the meat processors.<sup>285</sup> In addition to the private antitrust cases, the DOJ also filed criminal<sup>286</sup> and civil<sup>287</sup> antitrust cases against some of the meat processors and their employees based on price-fixing and wage-fixing claims.

The defendants in many of the private antitrust cases filed motions to dismiss, which for the most part were unsuccessful.<sup>288</sup> For example, in *Olean* the plaintiffs did not allege a horizontal price-fixing agreement, but instead asserted that the “Turkey Defendants” entered into a conspiracy to exchange competitive information, which violated Section 1 under a rule-of-reason analysis.<sup>289</sup> In considering the defendants’ joint motion to dismiss, the district court discussed the plaintiffs’ circumstantial evidence regarding the detailed information provided in the Agri Stats reports and determined that this evidence was sufficient to allege a hub-and-spoke conspiracy:

These allegations are sufficient to allege a hub-and-spoke conspiracy among the Turkey Defendants and Agri Stats. . . . Plaintiffs allege enough to suggest agreements both among the spokes (Turkey Defendants) and between the spokes and the hub (Agri Stats). Given that Turkey Defendants allegedly knew that each of them were participating in the information exchange and could decipher the data pertaining to each producer—and because executives of the Turkey Defendants allegedly had regular opportunities to meet and discuss production targets at various trade association meetings—Plaintiffs have alleged enough to plausibly suggest the existence of a hub-and-spoke conspiracy among the Turkey Defendants to exchange competitively sensitive information with one another through Agri Stats.<sup>290</sup>

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285. *Jien*, 2020 WL 5544183, at \*1 (the class plaintiffs were former and current employees of fourteen poultry processors and their subsidiaries).

286. *See, e.g.*, Plea Agreement, United States v. Pilgrim’s Pride Corp., No. 1:20-cr-00330-RM (D. Colo. 2020), ECF No. 58 (Feb. 23, 2021) (Pilgrim entered into a plea agreement with the DOJ and agreed to pay a criminal fine of \$107.9 million based on charges that it engaged in a conspiracy to fix prices and rig bids for broiler chicken products), *available at* <https://www.justice.gov/atr/case-document/file/1373956/download> [<https://perma.cc/3T2W-JHV6> ] (last visited Apr. 10, 2023).

287. *See, e.g.*, Competitive Impact Statement, United States v. Cargill Meat Solutions Corp., No. 1:22-cv-01821 (D. Md. 2022), ECF No. 37 (Sept. 12, 2022) (three poultry processors, a data consulting firm, and its president entered into final judgments with the DOJ based on allegations that the defendants collaborated on decisions about poultry plant worker compensation, which suppressed competition in the nationwide and local labor markets for poultry processing), *available at* <https://www.justice.gov/atr/case-document/file/1535091/download> [<https://perma.cc/9KQJ-V3UX>] (last visited Apr. 10, 2023).

288. *See, e.g.*, *Olean*, 2020 WL 6134982, at \*1.

289. *Id.*

290. *Id.* at \*6.

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The plaintiffs in *Jien* also alleged in Count II of their complaint that the poultry processor defendants unlawfully exchanged employee compensation information through Agri Stats, which had an overall anticompetitive effect on the relevant labor market under the rule of reason.<sup>291</sup> In denying the defendants' motion to dismiss Count II, the district court concluded that the plaintiffs had "sufficiently alleged Defendant Processors' market power within the continental United States poultry processing labor market, as well as plausible anticompetitive effects resulting from the compensation-depressing information exchange in which Defendants engaged."<sup>292</sup> The court further determined that "[b]y providing comprehensive, real-time, and current wage data to nearly the entire poultry processing industry, Agri Stats's conduct can plausibly be alleged to constitute unlawful information sharing per Count II."<sup>293</sup>

In addition to considering the Agri Stats benchmarking reports as evidence of an agreement to exchange competitively-sensitive information under a Section 1 rule-of-reason analysis, courts also have considered the same type of evidence as a plus factor for inferring a per se agreement to fix prices.<sup>294</sup> In *Broiler Chicken*, for example, the plaintiffs alleged that the defendant chicken meat producers conspired to fix chicken prices that were higher than the market would naturally support.<sup>295</sup> As evidence of this claim, the plaintiffs alleged that the defendants "communicated their conspiracy to restrain production and inflate prices in part through an entity called Agri Stats."<sup>296</sup>

The defendants in *Broiler Chicken* filed a motion to dismiss, in which they argued that the plaintiffs failed to plead a plausible conspiracy because the defendants' alleged parallel conduct was too varied in its timing and methods.<sup>297</sup> The defendants also questioned whether the role Agri Stats played in the alleged conspiracy was plausible "considering Plaintiffs do not allege that Agri Stats was a co-conspirator" and Agri Stats existence was no secret because "it is a subsidiary of a publicly owned company."<sup>298</sup> The district court disagreed with the defendants' arguments and denied their motion to dismiss. In doing so, the court stated:

Plaintiffs clearly allege . . . that the information provided by Agri Stats simply facilitated the conspiracy. It was a tool Defendants used to help im-

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291. *Jien*, 2020 WL 5544183, at \*9.

292. *Id.* at \*13.

293. *Id.* at \*12.

294. *See, e.g., Broiler Chicken*, 290 F. Supp. 3d at 779.

295. *Id.*

296. *Id.* at 781.

297. *Id.* at 787.

298. *Id.* at 800.

plement their conspiracy. Agri Stats does not have to be a co-conspirator or a secret to play this alleged role, possibility unwittingly.<sup>299</sup>

#### D. The Agencies' "Safety Zone" for Price Information Exchanges

Two Yale Law School students recently authored a paper titled *Danger in the Safety Zone: Information Sharing in the Meat Processing Industry*,<sup>300</sup> which suggests that Agri Stats "appears to serve as a hub for a hub-and-spoke conspiracy" between meat processing companies ("MPCs").<sup>301</sup> The authors note that the "only difference between a traditional hub-and-spoke conspiracy and the one described here is that the hub, Agri Stats, is a party who does not directly participate in the price and output restrictions of the spokes, the MPCs."<sup>302</sup> They contend, though, that the third-party distinction is one without an effective difference because "Agri Stats could thus serve as an effective tool for an MPC cartel to both coordinate and monitor rival firm behavior."<sup>303</sup> The authors also assert that "[a]lthough the facilitated exchange of this non-public information by Agri Stats to MPCs enables allegedly anti-competitive behavior, the company operates within an established agency safety zone."<sup>304</sup>

The "safety zone" referenced by Messrs. Holdheim and Tameez dates back to at least 1996, when the FTC and DOJ (the "Agencies") issued their *Statements of Antitrust Enforcement Policy in Health Care*.<sup>305</sup> Although this guidance document came out more than 25 years ago and specifically refers to the health care industry, until recently the Agencies have continued to apply the *1996 Health Care Statements* to many different industries.<sup>306</sup>

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299. *Id.*

300. Sachin Holdheim & Zaakir Tameez, *Danger in the Safety Zone: Information Sharing in the Meat Processing Industry*, REFORMING AMERICA'S FOOD RETAIL MARKETS 11, 11 (June 6, 2022), [https://som.yale.edu/sites/default/files/2022-06/Grocery-Compendium\\_1.pdf](https://som.yale.edu/sites/default/files/2022-06/Grocery-Compendium_1.pdf) [<https://perma.cc/4TD7-JCGX>] (last visited Apr. 10, 2023).

301. *Id.* at 17.

302. *Id.*

303. *Id.*

304. *Id.*

305. U.S. DEP'T OF JUST. & FED. TRADE COMM'N, STATEMENTS OF ANTITRUST ENF'T POL'Y IN HEALTH CARE 2 (Aug. 1, 1996) [hereinafter *1996 Health Care Statements*], [https://www.ftc.gov/system/files/attachments/competition-policy-guidance/statements\\_of\\_antitrust\\_enforcement\\_policy\\_in\\_health\\_care\\_august\\_1996.pdf](https://www.ftc.gov/system/files/attachments/competition-policy-guidance/statements_of_antitrust_enforcement_policy_in_health_care_august_1996.pdf) [<https://perma.cc/LCB3-PM4E>] (last visited Apr. 10, 2023).

306. *See, e.g.*, U.S. DEP'T OF JUST. & FED. TRADE COMM'N, ANTITRUST GUIDANCE FOR HUM. RES. PROS. 5 (Oct. 20, 2016) [hereinafter *2016 HR Guidance*], [https://www.ftc.gov/system/files/documents/public\\_statements/992623/ftc-doj\\_hr\\_guidance\\_final\\_10-20-16.pdf](https://www.ftc.gov/system/files/documents/public_statements/992623/ftc-doj_hr_guidance_final_10-20-16.pdf) [<https://perma.cc/8QU3-U9ZL>] (last visited Apr. 10, 2023).

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Statement 6 of the *1996 Health Care Statements* creates an “Antitrust Safety Zone” for price and cost information surveys among competitors that have the following features:

(1) the survey is managed by a third-party (e.g., a purchaser, government agency, healthcare consultant, academic institution, or trade association);

(2) the information provided by survey participants is based on data more than 3 months old; and

(3) there are (a) at least five providers reporting data upon which each disseminated statistic is based, (b) no individual provider’s data represents more than 25 percent (25%) on a weighted basis of that statistic, and (c) any information disseminated is sufficiently aggregated such that it would not allow recipients to identify the prices charged or compensation paid by any particular provider.<sup>307</sup>

The *1996 Health Care Statements* indicate that if these conditions are met, and absent extraordinary circumstances, the Agencies will exercise their prosecutorial discretion not to challenge participation in competitor information surveys of this nature.<sup>308</sup>

In October 2016, the Agencies issued their *Antitrust Guidance for Human Resource Professionals*,<sup>309</sup> which provides “that [i]t is possible to design and carry out information exchanges in ways that conform with the antitrust laws.”<sup>310</sup> The *2016 HR Guidance*<sup>311</sup> and the *1996 Health Care Statements* discuss similar criteria for lawful information exchanges, which indicates that the Antitrust Safety Zone created by the *1996 Health Care Statements* continued to be the Agencies’ policy in 2016 for analyzing antitrust risks related to price and cost information exchanges.<sup>312</sup>

On February 3, 2023, the DOJ Antitrust Division issued a short press release announcing it was withdrawing the “outdated” *1996 Health Care Statements*.<sup>313</sup> The Division said that the withdrawal of the antitrust policy

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307. *1996 Health Care Statements*, *supra* note 305, at 50.

308. *Id.* at 5.

309. *2016 HR Guidance*, *supra* note 306.

310. *Id.* at 5.

311. *See id.*

312. *See 1996 Health Care Statements*, *supra* note 305, at 50.

313. Press Release, U.S. Dep’t of Just., Justice Department Withdraws Outdated Enforcement Policy Statements (Feb. 3, 2023), <https://www.justice.gov/opa/pr/justice-department-withdraws-outdated-enforcement-policy-statements> [https://perma.cc/BA3F-53YX] (last visited Apr. 10, 2023) (the press release also said the DOJ was withdrawing the DEPARTMENT OF JUSTICE AND FTC ANTITRUST ENFORCEMENT POLICY STATEMENTS IN THE HEALTH CARE AREA (Sept. 15, 1993) and STATEMENT OF ANTITRUST ENFORCEMENT POLICY REGARDING ACCOUNTABLE CARE ORGANIZATIONS PARTICIPATING IN THE MEDICARE SHARED SAVINGS PROGRAM (Oct. 20, 2011)).



statements “is the best course of action for promoting competition and transparency” and that “the statements are overly permissive on certain subjects, such as information sharing.”<sup>314</sup> The press release did not refer to the *2016 HR Guidance* or whether the *1996 Health Care Statements* remain in place at the FTC.<sup>315</sup>

The day before the DOJ’s press release, the Antitrust Division’s Principal Deputy Assistant Attorney General (“DAAG”), Doha Mekki, gave a speech previewing the DOJ’s plan to withdraw the policy statements.<sup>316</sup> She said that the Division “has been thinking critically about a particular type of Section 1 prohibition—anticompetitive information exchanges”—which can be condemned under the per se rule if they are a “means or method of facilitating price or wage fixing, bid rigging, or market allocation.”<sup>317</sup>

DAAG Mekki’s delivered remarks specifically flagged two factors that often are viewed as probative when assessing whether an information exchange is likely to be anticompetitive: (1) the structure of the industry involved and (2) the nature of the information exchanged.<sup>318</sup> With respect to the first factor, she said that prevailing opinion historically has been that the more concentrated an industry, the more susceptible it is to anticompetitive information exchanges, an assumption that the DOJ contends is neither accurate nor necessarily supported by case law.<sup>319</sup> Rather, anticompetitive information exchanges (and related collusion) have been observed in industries involving a large number of participants.<sup>320</sup> And while concentrated markets make coordination more likely, she said they are not essential.

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314. *Id.*

315. *Id.*

316. *Principal Deputy Assistant Attorney General Doha Mekki of the Antitrust Division Delivers Remarks at GCR Live: Law Leaders Global 2023* (Feb. 2, 2023) [hereinafter *2023 GCR Remarks*], <https://www.justice.gov/opa/speech/principal-deputy-assistant-attorney-general-doha-mekki-antitrust-division-delivers-0> [<https://perma.cc/TE7S-8JEU>] (last visited Apr. 10, 2023).

317. *Id.*

318. *Id.* (citing *Gypsum*, 438 U.S. at 441 n. 16).

319. *Id.* (“[W]hile concentrated markets make coordination more likely, they are not essential”) (citing *Todd*, 275 F.3d at 209) (“[D]ata exchange cases may involve a number of participants that begins to push the boundaries of oligopoly. These players are most in need of such data exchange arrangements in order to facilitate price coordination; a very small handful of firms in a more highly concentrated market may be less likely to require the kind of sophisticated data dissemination alleged in this case.”).

320. *Id.* (first citing *Am. Column & Lumber Co. v. United States*, 257 U.S. 377, 391-93 (1921) (365 firms adopted a “Plan” to share sensitive information about their hardwood lumber production and sales); then *Container Corp.*, 393 U.S. at 342 (Marshall, J., dissenting) (18 firms exchanged sensitive price information concerning specific sales of corrugated containers); and then *Todd*, 275

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Regarding the nature of the exchanged information, DAAG Mekki asserted that prior assumptions concerning the relative “freshness or staleness” of the information exchanged and the aggregation of data (and their correlation with competitive sensitivity) may no longer hold in today’s market environment.<sup>321</sup> Given that the “Supreme Court has appropriately highlighted the perniciousness of ‘[e]xchanges of current price information,’ which ‘of course, have the greatest potential for generating anti-competitive effects,’” she said it makes sense that “the exchange of forward-looking, competitively-sensitive information should be even more concerning.”<sup>322</sup>

DAAG Mekki also commented on another factor considered by courts and the Agencies: the degree to which exchanged data is aggregated.<sup>323</sup> Citing *Todd*, she said that “[p]rice exchanges that identify particular parties, transactions, and prices are seen as potentially anticompetitive because they may be used to police a secret or tacit conspiracy to stabilize prices.”<sup>324</sup> She went on to warn that “facial aggregation of data alone has been held to be insufficient to save otherwise problematic information exchanges,” but if the competitors “had the ability to effectively disaggregate it, [then this would raise] serious antitrust concerns.”<sup>325</sup>

In explaining why the DOJ was withdrawing the antitrust policy statements, DAAG Mekki observed that the Antitrust Safety Zone was “written at a time when information was shared in manila envelopes and through fax machines.”<sup>326</sup> Today, data is shared, analyzed, and used in ways that would be unrecognizable decades ago. In particular, she was critical of the use of third parties as a means to immunize improper information sharing between competitors:

One factor in the safety zones is the use of a third-party intermediary to facilitate information exchanges. *But exchanges facilitated by intermediaries can have the same anticompetitive effect as direct exchanges among competitors.* In some instances, data intermediaries can enhance – rather than reduce – anticompetitive effects.<sup>327</sup>

DAAG Mekki also questioned the Antitrust Safety Zone’s criteria concerning the exchanged data’s age.<sup>328</sup> “[T]he suggestion that data that is at least three-months old is unlikely to be competitively-sensitive or valuable is

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F.3d at 208 (14 major oil and petrochemical companies exchanged employee compensation data)).

321. *Id.*

322. 2023 *GCR Remarks*, *supra* note 316.

323. *Id.*

324. *Id.* (quoting *Todd*, 275 F.3d at 212).

325. *Id.* (citing *Todd*, 275 F.3d at 212–13).

326. *Id.*

327. *Id.* (emphasis added).

328. 2023 *GCR Remarks*, *supra* note 316 (emphasis added).

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undermined by *the rise of data aggregation, machine learning, and pricing algorithms that can increase the competitive value of historical data for some products or services.*<sup>329</sup> This statement by DAAG Mekki suggests that the DOJ has a specific concern about industries that exchange pricing information for use with pricing algorithms.<sup>330</sup>

Regarding the number of firms that participate in an information exchange, DAAG Mekki said that “the Division’s enforcement actions and the case law itself demonstrate that having five or more participants in an information exchange is no guarantee that the exchange will not harm competition, especially in situations where the companies exchanging the information collectively have significant shares of the relevant market.”<sup>331</sup> This implies that information exchanges involving five or more participants may be challenged by the DOJ in future enforcement actions, especially if these exchanges involve participants in concentrated markets like the meat processing industries.

In her concluding remarks, DAAG Mekki said that the DOJ has no immediate plans to replace the withdrawn information exchange guidelines.<sup>332</sup> She further suggested that industry participants should look to recent DOJ enforcement actions and advocacy that “provide guidance to the public about our enforcement priorities.”<sup>333</sup>

## VII. CAN THE USE OF PRICING ALGORITHMS VIOLATE SECTION 1?

The Agri Stats cases and *Todd* involved competitor exchanges of wage and price information through third parties, but these information exchanges did not include the use of algorithms to suggest the wages or prices that competitors should set for paying their employees or selling their products. A recent wave of antitrust cases involve this additional factor.<sup>334</sup> The allegations and claims in some of these cases are discussed below.

### A. Recent Pricing Algorithm Cases

#### 1. Uber

Uber Technologies, Inc. (“Uber”) is a technology company that developed an application for smartphone devices (the “Uber App”), which

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329. *Id.* (emphasis added).

330. *Id.*

331. *Id.*

332. *Id.*

333. *Id.*

334. *See, e.g., Meyer v. Kalanick (Uber I)*, 174 F. Supp. 3d 817, 820 (S.D.N.Y. 2016).

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matches users with automobile drivers.<sup>335</sup> Through the Uber App, users can request drivers to pick them up at one location and drive them to another location.<sup>336</sup> Uber facilitates payment of the driver's fare by charging the user's credit card or other payment method on file.<sup>337</sup> Drivers providing Uber ride services are independent contractors who enter into vertical agreements with Uber.<sup>338</sup> Under the terms of these agreements, the drivers collect fares through the Uber App, with a percentage of the fare paid to Uber as a licensing fee and the remainder remitted to the driver.<sup>339</sup> The drivers are also required to charge fares determined by an Uber pricing algorithm, which can set "surge pricing" fares that increase up to ten times the standard fare during periods of high rider demand and low driver supply.<sup>340</sup>

In *Meyer v. Kalanick*, an Uber rider ("Mr. Meyer") filed an antitrust class action case against Travis Kalanick, the CEO and co-founder of Uber.<sup>341</sup> Mr. Meyer alleged that Mr. Kalanick violated Section 1 and the New York Donnelly Act<sup>342</sup> by orchestrating and facilitating an illegal hub-and-spoke conspiracy with Uber drivers, who agreed to use Uber's pricing algorithm to set fares and thereby restricted price competition among themselves to the detriment of Uber riders.<sup>343</sup> As support for the horizontal rim of the alleged conspiracy, Mr. Meyer asserted that the drivers had a "common motive to conspire" because adhering to Uber's pricing algorithm yielded supra-competitive prices, and if the drivers were acting independently instead of in concert, they would have competed on price and Uber's fares would have been "substantially lower."<sup>344</sup>

Mr. Kalanick moved to dismiss the complaint, arguing that each driver's vertical agreement with Uber did not evince a horizontal agreement among the drivers themselves.<sup>345</sup> Instead, Mr. Kalanick asserted that the most "natural" explanation for the drivers' conduct was that each driver "independently decided it was in his or her best interest to enter a vertical agreement with Uber," and doing so could be in a driver's best interest because Uber matches

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335. *Id.*

336. *Id.*

337. *Id.*

338. *Id.*

339. *Id.*

340. *See, e.g., Meyer v. Kalanick (Uber I)*, 174 F. Supp. 3d 817, 820–21 (S.D.N.Y. 2016).

341. *Id.* at 819.

342. N.Y. GEN. BUS. LAW § 340 (McKinney 2013).

343. *Uber I*, 174 F. Supp.3d at 819–20.

344. *Id.* at 821.

345. *Id.* at 823.

riders with drivers and processes payment.<sup>346</sup> In addition, Mr. Kalanick argued that the alleged conspiracy was “wildly implausible” and “physically impossible,” since it involved a purported agreement “among hundreds of thousands of independent transportation providers all across the United States.”<sup>347</sup>

In denying the defendant’s motion to dismiss, the district court found that the plaintiff plausibly alleged a horizontal conspiracy in which drivers sign up for Uber precisely “on the understanding that the other [drivers] were agreeing to the same” pricing algorithm, and in which drivers’ agreements with Uber would “be against their own interests were they acting independently.”<sup>348</sup> The court further found that the drivers’ ability to benefit from reduced price competition with other drivers by agreeing to the terms in Uber’s vertical agreement plausibly constitutes “a common motive to conspire.”<sup>349</sup> Thus, the court found that Mr. Meyer adequately pled a horizontal conspiracy under Section 1.<sup>350</sup>

Following the district court’s order denying the motion to dismiss, Uber was added as a defendant in the case.<sup>351</sup> Uber then moved to compel arbitration, arguing that Mr. Meyer was required to arbitrate his claims pursuant to a contract formed when he signed up to use the Uber App.<sup>352</sup> The district court initially denied Uber’s motion to compel arbitration, but that decision was vacated by the Second Circuit and the case was remanded back to the district court.<sup>353</sup> The district court then granted Uber’s motion to compel arbitration and issued an order requiring the parties to submit their dispute to binding arbitration.<sup>354</sup>

The American Arbitration Association (“AAA”) appointed Les J. Weinstein to serve as the arbitrator in the case involving Mr. Meyer and Uber.<sup>355</sup>

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346. *Id.*

347. *Id.* at 825.

348. *Id.* at 824 (quoting *eBooks*, 791 F.3d at 314).

349. *Uber I*, 174 F. Supp.3d at 824 (quoting *Apex Oil Co. v. DiMauro*, 822 F.2d 246, 254 (2d Cir. 1987)).

350. *See id.* at 826; *see also id.* at 826–28 (finding that Mr. Meyer also pled a plausible vertical conspiracy between each driver and Mr. Kalanick based on a rule-of-reason analysis).

351. *Meyer v. Kalanick (Uber II)*, 200 F. Supp. 3d 408, 411 (S.D.N.Y. 2016).

352. *Id.*

353. *See Meyer v. Uber Technologies, Inc.*, 868 F.3d 66, 70 (2d Cir. 2017).

354. *See Meyer v. Kalanick (Uber III)*, 291 F. Supp. 3d 526, 536–37 (S.D.N.Y. 2018).

355. *See Award of Arbitrator at 2, In the Matter of the Arbitration between Meyer v. Uber Technologies, Inc.*, Case No. 01-18-0002-1956 (AAA Feb. 22, 2020) [hereinafter *Uber Award*], available at Dkt. No. 1:15-cv-09796, ECF No. 182-16 (S.D.N.Y. May 22, 2020).

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Following a three-day evidentiary hearing, Arbitrator Weinstein issued his *Uber* Award, in which he ruled in Uber's favor and denied Mr. Meyer's claims.<sup>356</sup> As summarized in the *Uber* Award, Mr. Meyer asserted antitrust claims against Uber based on allegations that he was overcharged by Uber's surge pricing for two rides he took in 2015.<sup>357</sup> Mr. Meyer further asserted that the surge pricing arrangement was a per se hub-and-spokes horizontal price-fixing violation between competing drivers, who were aided by Uber acting as the active sponsoring hub of the horizontal scheme.<sup>358</sup> Mr. Meyer chose not to challenge the standard aspects of Uber's "non-surge" pricing, despite the fact that Arbitrator Weinstein thought that the same legal analysis would apply.<sup>359</sup>

In denying Mr. Meyer's claims, Arbitrator Weinstein found that "no such hub and spokes conspiracy existed or that any horizontal agreement was proven" and that "Uber's individual relationships with its drivers were purely vertical in nature in regard to the prices paid by riders and the amount earned by drivers."<sup>360</sup> He also distinguished *Interstate Circuit* from the facts involving Uber, in part because the Uber drivers "are a diverse lot, not generally knowing each other's names or identities," so there was "no evidence that the drivers entered into any agreement among themselves or collectively with Uber relating to surge pricing."<sup>361</sup> Arbitrator Weinstein went on to find that:

There is arguably a Hub here, Uber. There are from time to time an ever varying number of individual driver "spokes," electronically flashing on and off like a laser beam directed to the hub and from the hub. Rarely are the same spokes present at the same time or for the same length of time.

What is unproven is [that] any "rim" exists connecting the drivers spokes to any agreement among themselves and the hub (Uber) such rim being the essential element of the horizontal agreement necessary to even make an effort of applying [a] per se theory of a hub and spokes nature. Meyer has sought to prove a wheel which does not roll for the lack of a rim. Indeed there are no spokes in the traditional sense but merely numerous vertical and individual contractual relationships between Uber and its many drivers. There is no true wheel however much Meyer sought to portray it as such.<sup>362</sup>

In the arbitration case, Mr. Meyer did not assert his alternative vertical conspiracy claim that the district court found was plausible based on the

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356. *Id.*

357. *Id.* at 3.

358. *Id.*

359. *See id.* at 3 n. 2.

360. *Id.* at 4.

361. *Uber* Award, *supra* note 355, at 9.

362. *Id.*

pleadings.<sup>363</sup> Although the claim was abandoned by Mr. Meyer, the parties still introduced evidence on issues that might be part of a rule-of-reason case.<sup>364</sup> Arbitrator Weinstein discussed this evidence in dictum and found that it “established rather clearly that had Meyer pursued a rule of reason analysis, [he] would have lost,” which “explains why [Meyer] chose to invest in and pursue only a per se theory.”<sup>365</sup>

## 2. Rainmaker

Rainmaker Group Unlimited Inc. and its parent company, Cendyn Group, LLC (collectively “Rainmaker”), are technology companies that provide software and services to the hotel management industry.<sup>366</sup> Rainmaker offers different “revenue management software” (“RMS”) products with sophisticated pricing algorithms that are tailored specifically for the hotel and casino industry.<sup>367</sup> These RMS products recommend pricing for individual hotel room types and market segments on a daily basis, and take into account factors such as perceived value, guests’ willingness to pay, and dynamic demand and availability indicators.<sup>368</sup> According to the company’s website, Rainmaker’s pricing recommendations are accepted by 90% of its customers.<sup>369</sup>

In January 2023, two Las Vegas visitors filed *Gibson v. MGM Resorts International*<sup>370</sup> against Rainmaker and the owner/operators of many large hotel-casinos along the four-mile “Las Vegas Strip,” which is a mecca for tourists in Las Vegas, Nevada.<sup>371</sup> Other named defendants in the case are MGM Resorts International, Caesars Entertainment Inc., Treasure Island LLC, and Wynn Resorts Holdings, LLC (the “Hotel Operators”).<sup>372</sup> The plaintiffs seek to certify a class of direct purchasers of “hotel guest room

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363. *See id.* at 7.

364. *See id.*

365. *Id.* at 12.

366. Class Action Complaint, ¶ 4, *Gibson v. MGM Resorts International (Rainmaker)*, No. 2:23-cv-00140 BL (D. Nev. filed Jan. 25, 2023), ECF No. 1 [hereinafter *Rainmaker* Complaint].

367. *Guestrev: Revenue & Profit Optimization Solution*, CENDYN, <https://www.cendyn.com/guestrev/> [https://perma.cc/6E9S-S35Y] (last visited Apr. 10, 2023).

368. *See id.*

369. *Id.*

370. *Rainmaker* Complaint, *supra* note 366, ¶¶ 26–27.

371. *See id.* ¶¶ 28–33, 40.

372. *Id.* ¶¶ 28–33.

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rentals” on the Las Vegas Strip from the Hotel Operators that used Rainmaker’s RMS products.<sup>373</sup>

The *Rainmaker* plaintiffs’ claims are based on an alleged conspiracy among the defendants to artificially inflate the prices of hotel rooms on the Las Vegas Strip by (a) providing information to be used in the operation of Rainmaker’s pricing algorithms, (b) creating and operating algorithms that provide pricing recommendations to the Hotel Operators, (c) knowingly using algorithms that incorporate information from other Hotel Operators in setting pricing recommendations, and/or (d) setting prices based in whole or in part on pricing recommendations provided by Rainmaker.<sup>374</sup> The plaintiffs assert that this alleged conspiracy is a per se violation of Section 1 or, in the alternative, that it violates Section 1 under the rule of reason.<sup>375</sup>

As factual support for their claims, the *Rainmaker* plaintiffs allege that the Hotel Operators replaced their independent pricing and supply decisions with a shared set of pricing algorithms supplied by Rainmaker, which are specifically intended to raise profits for the Hotel Operators, while discouraging them from maximizing occupancy of hotel rooms.<sup>376</sup> The Hotel Operators purportedly do this by providing Rainmaker with real-time access to competitively sensitive and non-public data on their occupancy, rates, and guests, which Rainmaker then feeds through its algorithms and generates forward-looking, room-specific pricing recommendations to the Hotel Operators.<sup>377</sup> The plaintiffs further allege that, in a competitive market, an empty hotel room would mean lost revenue, so hotels would be forced to lower prices to rent the empty rooms.<sup>378</sup> Instead, based on Rainmaker’s recommendations, the plaintiffs contend that the Hotel Operators were able to keep their prices high, even with empty rooms, because they knew their co-conspirators would not undercut these supra-competitive prices.<sup>379</sup>

The *Rainmaker* Complaint does not cite any direct evidence of a price-fixing agreement among the Hotel Operators. Instead, the plaintiffs allege that the market for the rental of hotel guest rooms on the Las Vegas Strip is characterized by numerous “plus factors” that render the industry susceptible to collusion such that the formation, maintenance, and efficacy of a cartel is more likely.<sup>380</sup> Included among these alleged “plus factors” are “(1) high barriers to entry, (2) market concentration, (3) inelastic consumer demand, (4) relative fungibility of hotel rooms, (5) exchanges of competitively-sensitive

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373. *Id.* ¶¶ 76–77.

374. *Id.* ¶ 89.

375. *Id.* ¶ 95.

376. *Rainmaker* Complaint, *supra* note 366, ¶¶ 3, 9.

377. *Id.* ¶¶ 8, 57.

378. *Id.* ¶ 10.

379. *Id.*

380. *Id.* ¶ 69.



information among horizontal competitors, and (6) numerous opportunities to collude at trade associations and Rainmaker Group conferences.”<sup>381</sup>

Rainmaker and the Hotel Operators recently moved to dismiss the *Rainmaker* Complaint for failure to state a claim.<sup>382</sup> In their motion to dismiss, the defendants argue that the plaintiffs failed to plead any direct evidence of a conspiracy because there are no allegations that the Hotel Operators agreed to use any of the Rainmaker RMS products, agreed to follow those products’ pricing suggestions, or ever shared any confidential information.<sup>383</sup> The defendants further argue that the circumstantial evidence alleged in the *Rainmaker* Complaint does not plausibly suggest a conspiracy because the plaintiffs fail to allege parallel conduct and their alleged “plus factors” are irrelevant.<sup>384</sup> More specifically, the defendants argue that the plaintiffs did not plead parallel conduct because there are no allegations that the Hotel Operators ever subscribed to the same Rainmaker RMS products or that they did so at the same time.<sup>385</sup> Thus, according to the defendants, there is nothing to plausibly suggest that the Hotel Operator “spokes” agreed to use the RMS products provided by the Rainmaker “hub.”<sup>386</sup>

### 3. RealPage<sup>387</sup>

RealPage, Inc. (“RealPage”) is a Texas-based technology company that provides software and services to managers of residential rental apartments.<sup>388</sup> RealPage purportedly provides a host of software solutions for the multifamily rental housing markets, including revenue management software called “AI Revenue Management” (previously known as “YieldStar”).<sup>389</sup> AI Revenue Management uses “supply and demand algorithms” to suggest rental rates for apartment units.<sup>390</sup>

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381. *Id.*

382. *See* Defendants’ Joint Motion to Dismiss the Complaint with Prejudice at 1, *Rainmaker*, No. 2:23-cv-00140 (D. Nev. filed Mar. 27, 2023), ECF No. 91.

383. *See id.* at 11–13.

384. *See id.* at 13–19.

385. *See id.* at 13–15.

386. *Id.* at 15.

387. The author represents one of the defendants in *In re* RealPage, Inc., Rental Software Antitrust Litigation (No. II) (*RealPage*), Case No. 3:23-md-3071 (M.D. Tenn.).

388. Class Action Complaint ¶ 41, *Goldman v. RealPage, Inc.*, No. 3:23-md-03071 (M.D. Tenn. filed June 16, 2023), ECF No. 291 [hereinafter *RealPage* Multifamily CAC].

389. *Id.* ¶ 2.

390. *RealPage AI Revenue Management*, REALPAGE, INC., <https://www.realpage.com/asset-optimization/revenue-management/> [https://perma.cc/J5GN-37RA] (last visited June 21, 2023).

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Beginning in October 2022, RealPage and nearly seventy multifamily property managers and owners (“Lessors”) were named as defendants in dozens of antitrust class action cases that were filed throughout the U.S.<sup>391</sup> The complaints in most of these cases alleged that RealPage and the Lessors entered into a hub-and-spoke conspiracy to raise rental prices for multifamily housing units throughout the United States.<sup>392</sup> Another complaint alleged a narrower product market and geographic submarkets that were limited to the leasing of student housing in college towns throughout the U.S.<sup>393</sup>

On April 10, 2023, the U.S. Judicial Panel on Multidistrict Litigation issued an order that transferred and centralized all of the cases as a multidistrict litigation (“MDL”) action in the U.S. District Court for the Middle District of Tennessee.<sup>394</sup> After the cases were transferred and centralized, the plaintiffs in the *RealPage* MDL action filed two consolidated class action complaints. One of the complaints generally alleges that the defendants engaged in a nationwide hub-and-spoke conspiracy to fix and inflate the rental price of *multifamily housing* units across the country.<sup>395</sup> The other class action complaint generally alleges that RealPage and a different group of student housing property owners and managers engaged in a hub-and-spoke conspiracy to fix and inflate the price of *student housing* units across the U.S., including near college campuses.<sup>396</sup>

The plaintiffs that filed the *RealPage* Multifamily CAC contend that the relevant geographic market is the entire United States,<sup>397</sup> but they also allege that there are fifty-three regional submarkets that are defined by Metropolitan Statistical Areas (“MSAs”).<sup>398</sup> The *RealPage* Multifamily CAC also alleges

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391. Patrick Range McDonald, *Tenants Hit Back. RealPage and Corporate Landlords Face More Than 20 Lawsuits*, HOUSING IS A HUMAN RIGHT (Jan. 17, 2023), <https://housinghumanrt.medium.com/tenants-hit-back-realpage-and-corporate-landlords-face-more-than-20-lawsuits-fc0cbb14e2a> [<https://perma.cc/7Y8Y-GEZN>].

392. *See, e.g.*, Class Action Complaint ¶ 52, *Weller v. RealPage, Inc.*, Dkt. No. 2:23-cv-00548 (W.D. Wash. filed Apr. 7, 2023), ECF No. 1.

393. *See* Class Action Complaint ¶ 26, *Navarro v. RealPage, Inc.*, Dkt. No. 2:22-cv-01552 (W.D. Wash. filed Nov. 2, 2022), ECF No. 1.

394. *See* Transfer Order at 2, *In re RealPage, Inc., Rental Software Antitrust Litigation* (No. II), Case MDL No. 3071, 2023 BL 120819 (J.P.M.L. Apr. 10, 2023), ECF No. 205.

395. *See RealPage Multifamily CAC*, *supra* note 388, ¶ 1.

396. *See* Class Action Complaint ¶ 1, *Meredith v. RealPage, Inc.*, No. 3:23-md-03071 (M.D. Tenn. filed June 16, 2023), ECF No. 290 [hereinafter *RealPage Student Housing CAC*].

397. *RealPage Multifamily CAC*, *supra* note 388, ¶ 234.

398. *See id.* ¶¶ 240–388.

that the relevant product market is “the market for the lease of multifamily residential real estate.”<sup>399</sup>

As alleged by the plaintiffs, RealPage’s revenue management software collects vast amounts of non-public proprietary data from the Lessors, including their lease transactions, rent prices, and occupancy and inventory levels.<sup>400</sup> This information, along with additional data collected from RealPage’s other data analytics and rental management software products, is fed into RealPage’s pricing algorithm, which uses the data to generate a daily rental price for each client’s available units.<sup>401</sup> RealPage allegedly makes sure that all of its clients know that, to maximize revenues, they must accept the software’s rental price at least 80%-90% of the time.<sup>402</sup> In addition, the plaintiffs assert that RealPage’s “Pricing Advisors” monitor the clients’ compliance with RealPage’s pricing decisions.<sup>403</sup>

An article about RealPage’s pricing algorithms was published in *ProPublica* one week before the first *RealPage* case was filed.<sup>404</sup> Excerpts from that article are cited in the *RealPage* Multifamily CAC and form the basis for some of the plaintiffs’ allegations.<sup>405</sup> Other allegations in the *RealPage* Multifamily CAC are attributed to ten confidential witnesses who purportedly helped develop RealPage’s revenue management software or are former employees of RealPage or some of the Lessors.<sup>406</sup>

Based on these allegations, the plaintiffs in the *RealPage* Multifamily case assert that the defendants engaged in a conspiracy to fix, raise, stabilize, or maintain at artificially high levels the rental costs charged for multifamily residential real estate across the United States.<sup>407</sup> According to these plaintiffs, the alleged conduct is *per se* illegal under the Sherman Act or, in the alternative, under either a “quick look” or rule-of-reason mode of analysis.<sup>408</sup>

Although the defendants in *RealPage* have not yet filed answers or other responses to the *RealPage* complaints, some of the defendants, including RealPage, have issued statements denying many of the plaintiffs’ allega-

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399. *See id.* ¶ 234.

400. *Id.* ¶ 5.

401. *Id.*

402. *Id.*

403. *RealPage* Multifamily CAC, *supra* note 388, ¶ 7.

404. *See* Heather Vogell, *Rent Going Up? One Company’s Algorithm Could Be Why*, *PROPUBLICA* (Oct. 15, 2022, 5:00 AM), <https://www.propublica.org/article/yieldstar-rent-increase-realpage-rent> [<https://perma.cc/KHQ2-7SRP>].

405. *See, e.g., RealPage* Multifamily CAC, *supra* note 389, ¶¶ 1, 22, 25.

406. *See, e.g., id.* ¶¶ 7–9, 12, 15, 24, 104, 163 (quoting ten confidential witnesses referred to as “Witness 1” through “Witness 10”).

407. *Id.* ¶ 232.

408. *Id.* ¶¶ 232–34.

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tions.<sup>409</sup> For example, RealPage addressed many similar allegations in response to a letter from U.S. Senators Bernie Sanders, Elizabeth Warren, Tina Smith, and Edward J. Markey, who requested RealPage to provide information concerning its revenue management software products.<sup>410</sup> In a written response from its counsel,<sup>411</sup> RealPage stated that the:

article [in *ProPublica*] and other recent news coverage of RealPage’s revenue management software (largely based on the article) do not accurately describe how these products work, in particular with regard to the role that data about other properties plays in generating rent price recommendations for RealPage’s customers and the effect that the use of these products has had on rents and apartment occupancy rates.<sup>412</sup>

RealPage’s letter went on to state that “[r]ecent media coverage of YieldStar based on the aforementioned *ProPublica* article has focused on the use of data about other properties” and that “[t]hese reports badly distort and overstate the role that non-public data about other properties plays in YieldStar’s algorithm, while also misunderstanding the level of visibility that YieldStar provides to its customers about such data.”<sup>413</sup> The letter further emphasized that “the primary driver of price adjustments is the customer’s internal data from the subject property showing whether the property is failing, meeting, or exceeding the customer’s own unique objectives—not data about other properties that may be executing entirely different strategies.”<sup>414</sup>

In response to allegations that RealPage’s pricing algorithms rely on non-public data regarding lease transactions, rent prices, occupancy levels, and other data points, RealPage’s letter stated that “[a]ll [competitor] rents are anonymized and averaged, with outlier rents eliminated from consideration” and “YieldStar relies on a variety of data sources for rents at other properties, including public sources, such as rents listed on apartment pro-

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409. Mike Scarcella, *RealPage antitrust lawsuits over rent prices consolidated in Tennessee*, REUTERS (Apr. 10, 2023, 3:55 PM), <https://www.reuters.com/legal/litigation/realpage-antitrust-lawsuits-over-rent-prices-consolidated-tennessee-2023-04-10/> [https://perma.cc/DS5Z-XKC7].

410. See Isaac Monterose, *Senators Ask DOJ to Probe RealPage’s Rental Price Algorithm*, LAW 360 (Mar. 3, 2023, 4:07 PM), <https://www.law360.com/competition/articles/1582292> [https://perma.cc/5TKH-XEMV].

411. Letter from Karen Elizabeth Christian, Att’y from Akin Gump Strauss Hauer & Feld LLP, to Sen. Elizabeth Warren, Sen. Tina Smith, Sen. Bernie Sanders, Sen. Edward J. Markey, U.S. Senate (Nov. 22, 2022) (<https://www.law360.com/articles/1582292/attachments/1>) [https://perma.cc/9Y4S-4D2G].

412. *Id.* at 1.

413. *Id.* at 6.

414. *Id.* at 7–8.

vider websites.”<sup>415</sup> RealPage also asserted that it “does not consider unit availability, vacancy rates, or upcoming supply of any floor plan at any of the other properties in any of its revenue management products, including YieldStar.”<sup>416</sup>

In addition, RealPage’s response letter addressed claims that its customers must accept the software’s rental price at least 80% to 90% of the time:

YieldStar customers are under no obligation—contractually or otherwise—to follow the pricing recommendations generated by YieldStar software. Customers are free to follow, modify, or ignore the recommendations as they see fit. It is ultimately up to each customer to execute the pricing strategy that it determines is appropriate for its property, and YieldStar rent price recommendations are intended only as decision support for the customer’s ultimate individual pricing decisions.<sup>417</sup>

## B. Some Observations about the Recent Pricing Algorithm Cases

### 1. Observations About Uber

In *Uber*, a number of factors likely contributed to the arbitrator’s decision denying Mr. Meyer’s claims, including the fact that they were premised on the central allegation that Uber orchestrated collusion among hundreds of thousands of drivers, most of whom were “not known to each other by name or address.”<sup>418</sup> This fact pattern represents a sharp deviation from typical hub-and-spoke cases, including *Interstate Circuit*, *All Star Industries*, *Toys “R” Us*, and *eBooks*, which all involved between five to ten “rim” firms that were in direct competition with each other.<sup>419</sup>

Another key distinction between *Uber* and these prior hub-and-spoke cases relates to the purposes of the vertical “spoke” agreements. In *Interstate Circuit*, *Toys “R” Us*, and *eBooks*, it was clear that the “hub” entered into vertical agreements to reduce competition with *its* competitors.<sup>420</sup> There were no allegations that Uber had such an anticompetitive motive.<sup>421</sup> Instead, Uber offered its app to any driver who wanted to use it, along with the pricing

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415. *Id.* at 8.

416. *Id.* at 8–9.

417. Letter from Karen Elizabeth Christian, Att’y from Akin Gump Strauss Hauer & Feld LLP, to Sen. Elizabeth Warren, Sen. Tina Smith, Sen. Bernie Sanders, Sen. Edward J. Markey, U.S. Senate, *supra* note 411, at 9–10.

418. *Uber Award*, *supra* note 355, at 5.

419. *See Interstate Circuit*, 306 U.S. at 216–17; *All Star Indus.*, 962 F.2d at 467–68; *Toys “R” Us*, 221 F.3d at 932; *eBooks*, 791 F.3d at 308.

420. *Interstate Circuit*, 306 U.S. at 218; *Toys “R” Us*, 221 F.3d at 932; *eBooks*, 791 F.3d at 305, 310.

421. *See Uber Award*, *supra* note 355, at 8 (“Many drivers work not only for Uber but for Uber’s competitors such as Lyft and sometimes do so simultaneously without objection from Uber.”).

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algorithm, which was part of the product.<sup>422</sup> Nothing prevented potential Uber drivers from also contracting with a competitor such as Lyft or driving for an independent limousine service.<sup>423</sup> Uber also did not restrict drivers from going out on their own and pricing independently.<sup>424</sup> This is in stark contrast to the classic hub-and-spoke cases where there was a relatively small number of major players in the “rim” market and the hub convinced each of them to enter into vertical agreements that reduced competition with the hub.<sup>425</sup>

The drivers in *Uber* also lacked the interdependence that was a significant factor in many notable hub-and-spoke cases where agreements among the “rim” firms were inferred.<sup>426</sup> In each of those cases, the evidence demonstrated that it only made economic sense for any of the spokes to agree to the hub’s vertical restrictions if all of them agreed.<sup>427</sup> An Uber driver has no stake in whether another person, potentially thousands of miles away, also becomes an Uber driver. And while individual drivers may find greater success when there are more Uber drivers (which could cause more riders to use the Uber app), it is unlikely that drivers agreed to Uber’s terms because they knew all of the other drivers were required to agree to the same terms. They likely became Uber drivers for numerous, unrelated reasons, such as Uber’s well-known brand recognition, the flexible working hours for earning extra income, and the ease in which payment transactions are processed using the Uber app.

## 2. Observations About Rainmaker

In comparison to *Uber*, the market structure and alleged facts in *Rainmaker* are closer in some respects to those in *Interstate Circuit*, *All Star Industries*, *Toys “R” Us*, and *eBooks*.<sup>428</sup> Similar to those significant hub-and-spoke cases, the interdependent market structure in *Rainmaker* involves fewer than ten Hotel Operators along the Las Vegas Strip, with each purportedly basing pricing decisions for hotel room rates on the anticipated reactions

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422. See *Uber I*, 174 F. Supp. 3d at 820–21.

423. *Uber Award*, *supra* note 355, at 6 (“Some Uber drivers might, at any time, be serving as a Lyft driver or both an Uber and Lyft driver signing on to the apps that seemed most beneficial to him or her. Indeed, such drivers might also be driving for independent limousine services.”).

424. *Id.*

425. *Note by the U.S.*, *supra* note 3, ¶ 1–5.

426. *Id.*

427. See, e.g., *Interstate Circuit*, 306 U.S. at 222 (“Each was aware that all were in active competition and that without substantially unanimous action with respect to the restrictions for any given territory there was risk of a substantial loss of the business and good will of the subsequent-run and independent exhibitors”).

428. See generally *Rainmaker Complaint*, *supra* note 366.

of its competitors.<sup>429</sup> Thus, the structure and concentration of the hotel market along the Las Vegas Strip makes it more plausible to infer an agreement among the Hotel Operators to fix rates for hotel rooms than it would be to infer an agreement among hundreds of thousands of Uber drivers to fix rates for rider transportation services throughout the United States.<sup>430</sup>

Despite the similarity of the market structures alleged in *Rainmaker* and some of the other classic hub-and-spoke cases, some apparent differences with those cases could weigh against an inference of an illegal agreement among the Hotel Operators. Unlike *Interstate Circuit*, *All Star Industries*, *Toys “R” Us*, and *eBooks*, there seems to be a number of procompetitive reasons why a Hotel Operator might independently enter into a vertical agreement with Rainmaker for the use of its RMS products.<sup>431</sup> For one, the pricing algorithms in the Rainmaker RMS products can constantly monitor numerous variables related to demand, costs, and competitors’ rates, and quickly suggest adjustments to a Hotel Operator’s own room rates based on changes to these variables. These sophisticated pricing algorithms can provide a competitive advantage to Hotel Operators that have access to the Rainmaker products, which is a rational reason that a Hotel Operator would enter into a vertical agreement with Rainmaker even though none of its competitors also enter such agreements. Indeed, the competitive advantage would seem to be even greater for a Hotel Operator if it had access to Rainmaker’s pricing algorithms but its competitors did not have such access.

A key issue that may decide the outcome in *Rainmaker* relates to the plaintiffs’ allegation that the Hotel Operators provided Rainmaker with real-time access to competitively-sensitive and *non-public* data on their occupancy, rates, and guests.<sup>432</sup> There are a number of online travel services that allow users to see and compare hotel room rates for specific dates in virtually every town or city that has a hotel.<sup>433</sup> This pricing information is transparent and often indicates that the rooms in a hotel are sold out or only a limited number of rooms at a certain rate are available. Because this type of hotel room rate information already is available to anyone in the general public, it could distinguish *Rainmaker* from some of the significant price information cases such as *Todd*<sup>434</sup> and the *Agri Stats* cases<sup>435</sup> that involved the exchange of competitively-sensitive information that was confidential.

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429. *Id.* ¶¶ 1–5.

430. Compare *Rainmaker* Complaint, *supra* note 366, with *Uber Award*, *supra* note 355.

431. Compare *Rainmaker* Complaint, with *Interstate Circuit*, 306 U.S. at 222; *All Star Indus.*, 962 F.2d at 472; *Toys “R” Us*, 221 F.3d at 936; and *eBooks*, 791 F.3d at 316.

432. See *Rainmaker* Complaint ¶ 57.

433. See, e.g., PRICELINE, <https://www.priceline.com> (last visited Apr. 11, 2023) [<https://perma.cc/T6TA-4ZD7>].

434. *Todd*, *supra* note 203.

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### 3. Observations about RealPage

The allegations in the *RealPage* Multifamily CAC are similar in many respects to the allegations in the *Rainmaker* Complaint.<sup>436</sup> They each allege that a “hub” (i.e., RealPage or Rainmaker) collects non-public, competitively-sensitive pricing data from the competitor “spokes” (i.e., the Lessors or Hotel Operators).<sup>437</sup> This information is then fed into the hub’s pricing algorithm, which uses the data to generate suggested rental rates for the Lessors’ multifamily housing units or the Hotel Operators’ hotel rooms.<sup>438</sup> Both cases also contain similar allegations that RealPage and Rainmaker pressure their clients to accept the algorithms’ suggested rental prices for the apartment units and hotel rooms, respectively.<sup>439</sup>

Other notable hub-and-spoke cases, such as *eBooks*, also contained allegations that the hub pressured each of the spokes to set specified retail prices.<sup>440</sup> There is a significant difference, though, between the allegations in *RealPage* and *Rainmaker* on the one hand, and the allegations in many other hub-and-spoke cases that involved vertical price restraints. In *eBooks*, for example, it was clear that Apple had a direct financial interest in setting the retail prices for eBooks because it received 30% of the sales price for all eBooks sold by the publishers.<sup>441</sup> Based on the complaints filed against Rainmaker and RealPage, there are no allegations that those companies receive any additional compensation if the rental prices for hotel rooms or apartment

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435. Agri Stats cases, *supra* notes 259, 279–81.

436. *See RealPage Multifamily CAC*, *supra* note 388.

437. *See, e.g., Rainmaker Complaint*, *supra* note 366, ¶ 8 (“Defendant Hotel Operators, who collectively have market power in the Las Vegas Strip Hotel Market, provide real-time pricing and supply information to [Rainmaker].”).

438. *See, e.g., RealPage Multifamily CAC*, *supra* note 388, ¶ 5 (“Each client’s proprietary data is fed into a common data pool, along with additional data collected by Defendant RealPage’s myriad other data-analytics and rental-management software products. RealPage then trains its machine learning and artificial intelligence across that pool of its clients’ proprietary data and uses algorithms to generate rental prices daily for each of RealPage’s client’s available units.”).

439. *See, e.g., id.* ¶ 5 (“Property managers agree to adopt RealPage’s pricing up to 80%-90% of the time”); *Rainmaker Complaint* ¶ 61 (“Cendyn’s marketing materials tout that Rainmaker . . . obtains a 90% acceptance rate for its pricing recommendations.”).

440. *See eBooks.*, 791 F.3d at 304 (“[T]hese Contracts would split the proceeds from each ebook sale between the publisher and Apple, with the publisher receiving 70%, and would set price caps on ebooks at \$14.99, \$12.99, and \$9.99 depending on the book’s hardcover price.”).

441. *Id.* at 303.



units are increased by their clients.<sup>442</sup> This distinction could make it more difficult for the plaintiffs to prove that Rainmaker and RealPage had a financial motive for pressuring their clients to accept the algorithms' suggested rental prices.

There also is another difference between the facts in many of the previous price-fixing cases and the allegations in the *Rainmaker* and *RealPage*. The alleged product markets in both *Rainmaker* and *RealPage* involve the leasing of real estate.<sup>443</sup> As a general rule, fixing prices on a product like real estate, which by its nature has many variables such as size, location, amenities, and quality of the unit, is much more difficult than fixing prices on commodity products such as broiler chickens. With chickens, the competitors can all agree that the prices will go up by 5% and it is easy to monitor.<sup>444</sup> It is more difficult for competitors to police such an agreement with respect to real estate, where you may have rental units that are much more desirable than other units and can justify greater increases in rental rates.

Despite the many similarities between the allegations in *Rainmaker* and *RealPage*, there is at least one significant difference. The alleged geographic market in *Rainmaker* is limited to the Las Vegas Strip, which is a four-mile road along which the Hotel Operators' properties are located.<sup>445</sup> In contrast, the *RealPage* Multifamily CAC alleges that the relevant geographic market is the entire United States,<sup>446</sup> which would include multifamily residential properties stretching all the way from Miami to Seattle (a distance of over 3,300 miles). Even if the relevant geographic submarkets are defined by MSAs for each major metropolitan area in the country,<sup>447</sup> the distances between properties in some of those alleged submarkets can be significant. For example, the "Dallas Regional Submarket" includes multifamily properties located in eleven Texas counties surrounding the city of Dallas,<sup>448</sup> which would include properties that are located more than 120 miles from each other.<sup>449</sup>

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442. See generally *Rainmaker* Complaint, *supra* note 366; *RealPage* Multifamily CAC, *supra* note 388.

443. *Id.*

444. See *Broiler Chicken*, 290 F. Supp. 3d at 786.

445. See *Rainmaker* Complaint, *supra* note 366, ¶ 1, n.1 ("The Las Vegas Strip (as used here) is the four-mile stretch in the unincorporated towns immediately south of the City of Las Vegas.").

446. See, e.g., *RealPage* Multifamily CAC ¶ 234 (the "relevant geographic market is the United States.").

447. See *id.* ¶¶ 241–43.

448. *Id.* ¶ 281.

449. For example, the towns of Bridgeport, Texas (Wise County) and Mabank, Texas (Kauffman County) are both in the Dallas Regional Submarket. According to *Google Maps*, the shortest driving distance between these two towns is 127 miles. Driving Directions from Bridgeport, TX. to Mabank, TX., GOOGLE

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The size of the alleged geographic markets in *RealPage* are likely to complicate the legal and evidentiary issues in that case. For antitrust purposes, a relevant geographic market is the “area of effective competition . . . in which the seller operates, and to which the purchaser can practicably turn for supplies.”<sup>450</sup> The geographic market must “correspond to the commercial realities of the industry and be economically significant.”<sup>451</sup> A product’s characteristics can help define the geographic market’s reach when they affect how far a customer is willing to travel to purchase it. For many industries, physical proximity is a key factor in the analysis of the “commercial realities” for defining a relevant geographic market.<sup>452</sup>

A fundamental feature of the rental housing market is the fact that residential units are stationary and affixed to a specific tract of real estate.<sup>453</sup> Because of this inherent characteristic, the location of a residential property and its proximity to the places where a tenant works or goes to school is likely to be the most important factor in the tenant’s decision where to reside.<sup>454</sup> This commercial reality suggests that a residential rental unit in one geographic location may compete with other nearby rental properties, but it would not realistically compete for tenants looking for a residential unit many miles away, even if it had the same rates and amenities.<sup>455</sup> Thus, it is unlikely that the housing costs for tenants in one city are constrained by the market prices for rental properties in another city, much less another state.

Because of the localized nature of geographic markets involving residential real estate, the alleged hub-and-spoke conspiracies in *RealPage* will likely require the plaintiffs to identify the alleged Lessor “spokes” in *each* geographic “area of effective competition.”<sup>456</sup> To establish that an individual Lessor is liable for rent fixing in a specific geographic market, it also is likely that the plaintiffs will be required to plead and prove that the Lessor entered

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MAPS, <http://maps.google.com> (follow “Directions” hyperlink; then search starting point field for “Bridgeport, TX” and search destination field for “Mabank, TX”).

450. *U.S. v. Philadelphia Nat’l Bank*, 374 U.S. 321, 359 (1963) (quoting *Tampa Elec. v. Nashville Coal Co.*, 365 U.S. 320, 327 (1961)).

451. *Brown Shoe Co. v. United States*, 370 U.S. 294, 336 (1962) (internal quote omitted).

452. *BYC, Inc. v. Broken Yolk*, No. 21-CV-6203-FPG, 2021 U.S. Dist. LEXIS 212987, at \*9 (W.D.N.Y. 2021).

453. *Real Estate Market and Its Characteristics*, VALUERWORLD.COM (Apr. 8, 2023), <https://www.valuerworld.com/2022/01/20/real-estate-market-and-its-characteristics/> [<https://perma.cc/Q3EU-P5Q3>].

454. *Id.*

455. *Id.*

456. *See, RealPage Multifamily CAC*, *supra* note 388, ¶ 242 (“[M]ultifamily residential real estate outside the MSA are not within the relevant geographic markets for antitrust purposes.”).

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into a horizontal agreement with the other competitors *in that specific market*.<sup>457</sup> The plaintiffs may not lump the Lessors together as a group, but instead must demonstrate liability as to each individual Lessor.<sup>458</sup>

### VIII. CONCLUSION

While serving as the Active Chairperson of the FTC in 2017, Commissioner Maureen Ohlhausen gave a speech titled: *Should We Fear The Things That Go Beep In the Night? Some Initial Thoughts on the Intersection of Antitrust law and Algorithmic Pricing*.<sup>459</sup> Her speech gave some good hypothetical examples that are directly related to the central topic of this article.

In one example, Commissioner Ohlhausen discussed a hypothetical small town in a rural area that had three gas stations, with no other gas stations within 150 miles in any direction.<sup>460</sup> For many years, all three gas station owners observed each other and charged virtually identical prices for a gallon of gas.<sup>461</sup> Prices would go up and down as the wholesale price of gasoline moved, but all three stations generally charged identical prices.<sup>462</sup> One day, the owner of the first gas station decided to raise his price by five cents per gallon more than the prices of the other two gas stations, and the other two gas station owners decided to follow this price increase. Under these facts, there would be no violation of the antitrust laws as long as the gas station owners each acted independently.<sup>463</sup>

In describing why there would be no antitrust violation in this hypothetical example, Commissioner Ohlhausen explained that in a free market, individual actors are free to set their prices on the basis of *all* the information legally available to them.<sup>464</sup> “It is axiomatic that we cannot tell firms to ignore the public behavior of their rivals when they set prices without deleting the ‘free’ in free market. Enjoining this kind of behavior would inevitably lead to price regulation, which is completely inimical to the underlying purposes of the antitrust laws.”<sup>465</sup>

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457. *See Gypsum*, 438 U.S. at 463 (“Liability [can] only be predicated on the knowing involvement of each defendant, considered individually, in the conspiracy charged.”).

458. *See, e.g., In re: S.E. Milk Antitrust Litig.*, 801 F. Supp. 2d 705, 737-39 (E.D. Tenn. 2011) (summary judgment proper as to single defendant where plaintiffs had done no more than engage in “guilt by association”).

459. *See Ohlhausen, supra* note 25.

460. *Id.* at 3.

461. *Id.*

462. *Id.*

463. *Id.* at 4.

464. *Id.*

465. *See Ohlhausen, supra* note 25, at 4–5.

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Using the same gas station example, Commissioner Ohlhausen also explained her views on the use of a complex algorithm by a single firm to observe various market conditions and set prices nearly instantaneously in response to changes in the market.<sup>466</sup> If it is difficult for the gas station owners to see their competitors' posted prices, they might decide to buy a pair of binoculars to read the competitors' signs more clearly from the comfort of their offices.<sup>467</sup> The binoculars make it easier for the competitors to understand market conditions more quickly and respond accordingly.<sup>468</sup> It certainly is true that the binoculars (and pricing algorithms) increase transparency in the market and thereby make it easier for informal, tacit coordination to take place.<sup>469</sup> But the antitrust laws are not used to police firms' abilities to understand the markets they operate in or to optimize prices. The use of binoculars—or pricing algorithms—should not be banned because they can assist in conscious parallelism. Unilateral efforts to better understand market conditions and respond quickly to them are a critical part of a well-functioning economy.<sup>470</sup>

Commissioner Ohlhausen used another example to explain her views on hub-and-spoke arrangements in which multiple firms competing with each other employ a common algorithm to determine prices.<sup>471</sup> This second hypothetical involved a group of competitors who sub-contract their pricing decisions to a common, outside vendor that provides algorithmic pricing services.<sup>472</sup> Each firm communicates its pricing strategy to the vendor, which then programs its algorithm to reflect the firm's pricing strategy.<sup>473</sup> But because the same outside vendor now has confidential price strategy information from multiple competitors, it can program its algorithm to maximize industry-wide pricing.<sup>474</sup> In effect, the firms themselves do not directly share their pricing strategies, but that information still ends up in common hands, and that shared information is then used to maximize market-wide prices.<sup>475</sup>

In discussing the antitrust implications of this example, Commissioner Ohlhausen observed:

[T]his is fairly familiar territory for antitrust lawyers, and we even have an old-fashioned term for it, the hub-and-spoke conspiracy. Just as the anti-

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466. *Id.* at 7.

467. *Id.*

468. *Id.*

469. *Id.*

470. *See* Ohlhausen, *supra* note 25, at 7–8.

471. *Id.* at 10.

472. *Id.*

473. *Id.*

474. *Id.*

475. *Id.*

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trust laws do not allow competitors to exchange competitively sensitive information directly in an effort to stabilize or control industry pricing, they also prohibit using an intermediary to facilitate the exchange of confidential business information.

Let's just change the terms of the hypothetical slightly to understand why. Everywhere the word "algorithm" appears, please just insert the words "a guy named Bob." Is it ok for a guy named Bob to collect confidential price strategy information from all the participants in a market, and then tell everybody how they should price? If it isn't ok for a guy named Bob to do it, then it probably isn't ok for an algorithm to do it either.<sup>476</sup>

Although the use of big data and computer algorithms to set prices is a relatively new business trend made possible by modern technology, the anti-trust laws that govern this type of behavior have been around for more than 140 years.<sup>477</sup> These laws have been applied effectively over many decades to a myriad of new business practices that were never even imagined when the laws were enacted, and they should apply equally well to the current use of pricing algorithms.<sup>478</sup> As Commissioner Ohlhausen commented in her closing remarks, "if conduct was unlawful before, using an algorithm to effectuate it will not magically transform it into lawful behavior. Likewise, using algorithms in ways that do not offend traditional antitrust norms is unlikely to create novel liability scenarios."<sup>479</sup>

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476. See Ohlhausen, *supra* note 25, at 10.

477. See *id.* at 2; *The Antitrust Laws*, FEDERAL TRADE COMMISSION (last visited May 10, 2023), <https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/antitrust-laws> [<https://perma.cc/Q63C-6SUL>].

478. Terrell McSweeney & Brian O'Dea, *The Implications of Algorithmic Pricing for Coordinated Effects Analysis and Price Discrimination Markets in Antitrust Enforcement*, ABA 32 ANTITRUST 1 (2017).

479. Ohlhausen, *supra* note 25, at 11.