No. 24-3576

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

GIBSON, ET AL. ,

Plaintiffs-Appellants,

v.

CENDYN GROUP, INC. , ET AL.,

Defendants-Appellees

On Appeal from the United States District Court
for the District of Nevada, No. 2:23-CV-00140

BRIEF FOR THE AMERICAN ANTITRUST INSTITUTE AS AMICUS CURIAE IN SUPPORT OF PLAINTIFFS-APPELLANTS

RANDY STUTZ
DAVID O. FISHER
AMERICAN ANTITRUST INSTITUTE
1025 Connecticut Avenue, NW
Suite 1000
(202) 304-0195
rstutz@antitrustinstitute.org
dfisher@antitrustinstitute.org

JOSHUA P. DAVIS
MATTHEW SUMMERS
BERGER MONTAGUE PC
505 Montgomery Street
Suite 625
San Francisco, CA 94111
(415) 906-0684
jdavis@bm.net
msummers@bm.net

Counsel for Amicus Curiae

October 3, 2024

CORPORATE DISCLOSURE STATEMENT

Pursuant to Appellate Rule 26.1(a), the American Antitrust Institute states that it is a nonprofit, non-stock corporation. It has no parent corporations, and no publicly traded corporations have an ownership interest in it.

Date: October 3, 2024

BERGER MONTAGUE PC

/s/ Joshua P. Davis
Joshua P. Davis

Counsel for Amicus Curiae

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INTEREST OF AMICUS CURIAE[1]

The American Antitrust Institute ("AAI") is an independent nonprofit organization devoted to promoting competition that protects consumers, businesses, and society. It serves the public through research, education, and advocacy on the benefits of competition and the use of antitrust enforcement as a vital component of national and international competition policy. AAI enjoys the input of an Advisory Board that consists of over 130 prominent antitrust lawyers, law professors, economists, and business leaders. See http://www.antitrustinstitute.org.[2]

INTRODUCTION AND SUMMARY OF ARGUMENT

We are in the early days of a transformation of our economy driven by the widespread use of cutting-edge software powered by machine learning and artificial intelligence ("AI").[3] Such software can speed up innovation, lower entry

[1] All parties have consented to the filing of this amicus. No counsel for a party has authored this brief in whole or in part, and no party, party's counsel, or any other person—other than amicus curiae or its counsel—has contributed money that was intended to fund preparing or submitting this brief.

[2] Individual views of members of AAI's Board of Directors or Advisory Board may differ from AAI's positions. A member of AAI's Advisory Board is affiliated with a law firm that represents one of the Hotel Defendants, but that member played no role in AAI's deliberations with respect to the filing of the brief.

[3] *See, e.g.*, Ariel Ezrachi & Jay Modrall, *Rising to the challenge – competition law and the digital economy*, vol. 15 no. 2 COMPETITION L. INT'L 117 (2019), (discussing antitrust "crossroad" posed by "the rapid evolution of the digital economy" and stating that "[t]he choices we make will impact future prosperity, determine the dynamics of digital markets and the distribution of wealth in society.")

barriers, maximize production, and facilitate price competition.[4] But it can also create or enhance market power, thwart new entrants, raise prices, and reduce output.[5] Luckily, antitrust law provides adaptable tools to distinguish procompetitive from anticompetitive uses of new technology. But for those tools to be effective, courts must not shoehorn AI into legal frameworks designed for outdated technologies. They must focus on "competitive reality" rather than "formalistic distinctions." *Am. Needle, Inc. v. Nat'l Football League*, 560 U.S. 183, 191, 196 (2010).

In this algorithmic price-fixing case, the district court took the wrong approach. Plaintiffs allege (1) that the Hotel Defendants knowingly shared commercially sensitive information with a common algorithm, (2) that the algorithm used the information to make pricing and vacancy recommendations, and (3) that the Hotel Defendants' near-universal acceptance of the recommendations reduced output below and raised prices above competitive levels. 5-ER-705, 717–718, 810, 821 (¶¶57, 74, 212, 235). Yet the district court ignored that concerted activity and its anticompetitive effects, finding the scheme could not have been unlawful because the Hotel Defendants started using the

[4] *See* Emilio Calvano, Giacomo Calzolari, Vincenzo Denicolò & Sergio Pastorello, *Algorithmic Pricing: What Implications for Competition Policy?*, 55 REV. INDUS. ORG. 155, 168 (2018) ("[T]here is a wide consensus that algorithms may deliver big efficiency gains by allowing more efficient pricing.").

[5] *See generally, e.g.*, Ariel Ezrachi & Maurice E. Stucke, *Artificial Intelligence & Collusion: When Computers Inhibit Competition*, 2017 U. ILL. L. REV. 1775 (2017); Emilio Calvano, Giacomo Calzolari, Vincenzo Denicolò, Joseph E. Harrington Jr. & Sergio Pastorello, *Policy Forum: Protecting consumers from collusive prices due to AI*, 370 SCIENCE 1040 (2020).

algorithm at different times, did not directly share non-public information with each other, and did not promise to accept the algorithm's prices in all cases. 1-ER-16. The court derived these requirements from traditional "plus factors" that have been used in the past identify human collusion, but that are not helpful in identifying algorithmic collusion.

By requiring that algorithmic collusion demonstrate the hallmarks of human collusion, the district court erred. Its opinion provides a roadmap for evading antitrust scrutiny and effectively immunizes cartels that fix prices using AI. That is a dangerous precedent to set, particularly as AI increasingly pervades our economy.[6] This Court should reverse.

ARGUMENT

There is a consensus among researchers and antitrust enforcers that, when firms use a common AI pricing algorithm, they can act in concert to raise prices and restrict output without the traditional hallmarks of collusion.[7] Armed with this

[6] "[A]lmost any market can be cartelized if the law permits sellers to establish formal, overt mechanisms for colluding." *In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 655 (7th Cir. 2002) (Posner, J.); *see also* Herbert Hovenkamp & Christopher R. Leslie, *The Firm as Cartel Manager*, 64 VAND. L. REV. 813, 859–72 (2011) (discussing case studies).

[7] *See*, *e.g.*, Michal S. Gal, *Limiting Algorithmic Coordination*, 38 BERKELEY TECH. L.J. 173, 229 (2023); Kevin T. White & Tammy W. Cowart, *Behind the Cloaking Device: Is There an Anti-Competitive Agreement Lurking Under the Use of Common Pricing Algorithms by Multifamily Landlords?*, 63 WASHBURN L.J. 287, 306–11 (2024); Statement of Interest of the United States, *In re RealPage, Inc., Rental Software Antitrust Litig. (No. II)*, No. 3:23-MD-03071 (M.D. Tenn. Nov. 15, 2023), ECF Nos. 627, 628; Statement of Interest of the United States, *Duffy v. Yardi Systems, Inc.*, No. 2:23-cv-01391 (W.D. Wash. Mar. 1, 2024), ECF No. 149; Statement of Interest of the United States, *Cornish-Adebiyi v. Caesars Entertainment, Inc.*, No. 1:23-cv-02536 (D.N.J. Mar. 28, 2024), ECF No. 96.

understanding, courts should examine allegations of algorithmic price-fixing with care, focusing not on "formalistic distinctions" drawn from human collusion, but on the "competitive reality" of AI. *Am. Needle*, 560 U.S. at 191, 196.

I. AI Enables Firms to Fix Prices Without the Traditional Hallmarks of Human Collusion

Modern competition policy relies on a collective action problem. In a competitive market, firms cannot raise prices above competitive levels unless they enter an illegal price-fixing agreement with their rivals. That is hard to do in practice. It requires signaling participation in a cartel, predicting others' production and prices, and monitoring compliance. This collective action problem is a feature, not a bug. It makes it difficult for firms to earn extra profits by short-circuiting competition and harming consumers.

AI creates challenges for traditional methods of identifying collusion because it "solves" the collective action problem. Firms can use algorithms to "remove the degree of strategic uncertainty in the marketplace and promote a stable market environment in which they can predict each other's reaction and dominant strategy." Ezrachi & Stucke, *supra* note 5, at 1782. The algorithm effectively removes the market's natural barriers to collusion.

For this reason, AI allows firms to effectively coordinate on price and output without creating the plus-factor evidence that is traditionally indicative of collusion. Without AI, competitors seeking to collude must communicate multilaterally and share data with each other to achieve a stable and predictable market environment. But an AI algorithm can create that environment by

aggregating large volumes of information to produce profit-maximizing strategies that benefit firms without their communicating or sharing information directly.[8]

Similarly, AI allows a large number of market actors to collude without an overarching, multilateral agreement. Traditionally, a series of bilateral agreements, without more, would be insufficient. Without assurance that other market actors will cooperate in a single overarching conspiracy to raise prices, no two individual actors could bilaterally agree to raise their individual prices without incurring the risk of lost profits and sales to the remaining rivals. But by using the same algorithmic pricing provider, all rivals can raise prices without an overarching, multilateral agreement. Because a shared algorithm "learns" from the data of multiple rivals at once, it can recommend elevated prices to each one based on predictions that a sufficient number of the others will cooperate. The algorithm replaces the need for a singular meeting of the minds between all of the algorithmic pricing customers collectively. It allows competitors to coordinate effectively even when they implement the algorithm at different times, without sharing confidential information, and without communicating directly among themselves.[9]

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[8] *See generally* Joshua P. Davis & Anupama K. Reddy, *AI and Interdependent Pricing: Combination Without Conspiracy?*, 30 COMPETITION: J. ANTITRUST, UCL & PRIVACY SECTION CAL. L. ASSOC. 1, 8-9 (2020).

[9] Ezrachi & Stucke, *supra* note 5, at 1782 (explaining how a series of agreements between individual competitors and a central algorithm vendor can "give rise to a classic hub-and-spoke conspiracy, whereby the [algorithm] developer (as the hub) helps orchestrate industry-wide collusion, leading to higher prices").

Notwithstanding its novelty, the Sherman Act applies to algorithmic collusion. Congress drafted the Act using intentionally broad language to ensure it would be adaptable to new technologies. *Nat'l Soc'y of Pro. Eng'rs v. United States*, 435 U.S. 679, 688 (1978). And because "Congress designed the Sherman Act as a consumer welfare prescription," the Supreme Court has recognized that "[a] restraint that has the effect of reducing the importance of consumer preference in setting price and output is not consistent with this fundamental goal of antitrust law." *Reiter v. Sonotone Corp.*, 442 U.S. 330, 343 (1979) (internal quotation marks omitted); *Nat'l Collegiate Athletic Ass'n. v. Bd. of Regents of Univ. of Okla.*, 468 U.S. 85, 107 (1984). Algorithmic price fixing violates the Act because it "deprives the marketplace of the independent centers of decisionmaking that competition assumes and demands." *Copperweld Corp. v. Indep. Tube Corp.*, 467 U.S. 752, 768–69 (1984).

II. The District Court Erred by Relying on Plus Factors Indicative of Human Collusion

Section 1 of the Sherman bars *all* "contracts, combinations, and conspiracies in restraint of trade." However, because "restraint is the very essence of every contract," courts have read Section 1 as prohibiting only those agreements which restrain trade "unreasonably," a determination which focuses on "whether the challenged agreement is one that promotes competition or one that suppresses competition." *Nat'l Soc'y of Pro. Eng'rs*, 435 U.S. at 687–688 & n.10 (citing, inter alia, *Chi. Bd. of Trade v. United States*, 246 U.S. 231, 238 (1918)).

Accordingly, "[t]he purpose of the analysis is to form a judgment about the competitive significance of the restraint." *Nat'l Soc'y of Pro. Eng'rs* at 692. And the Supreme Court has long elevated function over form in conducting this inquiry, repeatedly emphasizing that "[t]he legality of arguably anticompetitive conduct" is judged by "market impact" and "economic effect." *Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 762 (1984); *Am. Needle*, 560 U.S. at 191 ("We have eschewed . . . formalistic distinctions in favor of a functional consideration of how the parties involved in the alleged anticompetitive conduct actually operate"; "the inquiry is one of competitive reality"); *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 466–67 (1992) ("Legal presumptions that rest on formalistic distinctions rather than actual market realities are generally disfavored in antitrust law."); *see also* Hovenkamp & Leslie, *supra* note 6, at 849–851.

Courts take one of two approaches in deciding whether conduct is unreasonable. Some conduct—such as horizontal agreements to fix prices or restrict output—is so obviously anticompetitive that courts deem it unreasonable without further inquiry; it is said to be *per se* illegal. *Nat'l Soc'y of Pro. Eng'rs*, 435 U.S. at 692. Other conduct is subject to a more searching analysis under the rule of reason; it requires a determination of whether an agreement's anticompetitive effects are outweighed by procompetitive effects that could not have been achieved through less restrictive means. *Fed. Trade Comm'n v. Qualcomm Inc.*, 969 F.3d 974, 991 (9th Cir. 2020).

The district court applied neither of these approaches. Instead, it took two wrong turns which led it to reject both Plaintiffs' vertical and hub-and-spoke

theories.[10] Before examining the agreements' competitive effects, it first asked whether they are "in restraint of trade" under Section 1. It held they were not because they do not "constrain Hotel Defendants' ability to unilaterally set prices." 1-ER-18.[11] This unprecedented holding conflicts with longstanding Supreme Court precedent recognizing that "every agreement concerning trade," by definition, "restrains trade." *Chi. Bd. of Trade*, 246 U.S. at 238; *see also, e.g., Leegin Creative Leather Prod., Inc. v. PSKS, Inc.*, 551 U.S. 877, 885 (2007) (If not for the rule of reason, "§1 could be interpreted to proscribe all contracts."). There should have been no controversy about whether the Hotel Defendants' contracts with Cendyn restrained trade. They did. The only relevant issue was whether they were

[10] Plaintiffs' alternative "vertical" and "hub-and-spoke" theories make this case fundamentally different from *Musical Instruments*, in which this Court focused on the existence of a rim agreement between the defendant manufacturers only after "Plaintiffs made it clear both before the district court and on appeal that their theory of the case depends on establishing those horizontal agreements" and "did not claim the vertical agreements between the manufacturers and Guitar Center . . . to be unreasonable vertical restraints under § 1." 5-ER-895–97 (¶¶351–370); *In re Musical Instruments & Equip. Antitrust Litig.*, 798 F.3d 1186, 1193 & n.4 (9th Cir. 2015). Apart from Plaintiffs vertical and hub-and-spoke theories, the district court failed to consider whether plaintiffs simply alleged a *per se* illegal horizontal agreement. Cendyn's principal role as an intermediary is to facilitate a price-fixing agreement between horizontal competitors, which is *per se* illegal. The use of an intermediary to achieve a horizontal agreement has never stood in the way of the per se rule's application. *See United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 223 (1940). "Such a rule could protect cartels from the heightened scrutiny attending naked restraints through the simple device of attaching the cartel agreement to some other, independently lawful transaction." Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶ 1908b (5th ed. Cum. Supp. 2022).

[11] The only precedent the trial court cited for its novel approach was *Newman v. Universal Pictures*, 813 F.2d 1519 (9th Cir. 1987). 1-ER-18. But *Newman* does not support its position. In that case, this Court ruled that plaintiffs could not bring an antitrust claim based on damages that were incurred before the alleged conspiracy took place and therefore lacked "antitrust injury." 813 F.2d at 1522–23.

reasonable (because they promote competition) or unreasonable (because they suppress it). *Leegin*, 551 U.S. at 898–899 (recognizing that purely vertical restraints may unreasonably restrain trade in violation of § 1); *Musical Instruments*, 798 F.3d at 1192, n.3 ("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.").

The district court's second misstep was to focus not functionally on the price increases caused by the Hotel Defendants' agreements with Cendyn but rather formally on whether the plus factors traditionally associated with human collusion were present. The Court determined that the Hotel Defendants' agreements with Cendyn were spread too far apart in time, that they did not directly share non-public information with each other, and that they did not promise to accept the algorithms' prices in all cases. 1-ER-16. However, these traditional plus factors shed no light on whether the Hotel Defendants' agreements with Cendyn were anticompetitive.

Because collusion is illegal, it typically occurs in secret. Accordingly, plaintiffs usually rely on circumstantial evidence to prove that a challenged restraint stems from concerted action rather than independent decision. When there is no direct or circumstantial evidence of an express agreement, courts distinguish permissible parallel conduct from impermissible tacit collusion by looking for certain "plus factors." *Musical Instruments* 798 F.3d at 1194; *In re*

Citric Acid Litig., 191 F.3d 1090, 1102 (9th Cir. 1999); *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 557 (2007).

"There is no finite set" or "exhaustive list" of plus factors. *In re Flat Glass Antitrust Litig.*, 385 F.3d 350, 360 (3d Cir. 2004). Rather, "[t]he plus-factor approach provides a loosely structured framework for making a circumstantial case." Christopher R. Leslie, *The Decline and Fall of Circumstantial Evidence in Antitrust Law*, 69 AM. U. L. REV. 1713, 1727–28 (2020) (Courts "have not coalesced on a uniform definition of plus factors."). And "because these are plus *factors*, not elements, no single plus factor is dispositive or necessary to a plaintiff's case." *Id*.

Because AI did not previously exist, every previous case involving plus factors was premised on the hallmarks of human collusion. But the rise of machine learning and AI require that "legal assumptions geared to deal with human behavior need to be reexamined." Ezrachi & Stucke, *supra* note 5, at 1775. In basing its decision on the absence of evidence that the Hotel Defendants contracted with Cendyn around the same time, shared confidential information with each other, and promised to be bound by the algorithm's prices, the court drew on this Court's opinion in *Musical Instruments*, which addressed a conspiracy carried out through traditional written contracts, *In re Citric Acid Litig.*, which addressed a conspiracy carried out through a trade association, and *Prosterman v. Am. Airlines, Inc.*, which addressed a "clearinghouse" of pricing information. 1-ER-7–8, 10; *Musical Instruments* 798 F.3d at 1169; *In re Citric Acid Litig.*, 191 F.3d at 1097; *Prosterman v. Am. Airlines, Inc.*, 747 F. App'x 458, 462 (9th Cir. 2018). None of

these technologies shares AI's ability to facilitate collusive price setting in the absence of direct communication between competitors.

The district court's focus on these inapposite plus factors arose from its acceptance of defense counsel's analogy between AI and the practice of law. Just as a lawyer does not violate a past client's confidentiality by advising a current client, defense counsel argued, an algorithm cannot improperly use one rival's confidential information when it makes pricing recommendations to another. 1-ER-13. But the analogy is fundamentally flawed; algorithms may sometimes imitate human executive functioning, but they do not reproduce it.[12] Here, moreover, Plaintiffs alleged that Cendyn's algorithm uses rivals' confidential information to recommend prices to multiple rivals *simultaneously*. 5-ER-821 (¶235). The more fitting analogy, then, is to a lawyer representing clients *at the same time*. Where a lawyer's duty of confidentiality to one current client implicates her representation of another, a conflict of interest arises. MODEL RULES OF PRO. CONDUCT r. 1.6(a) cmt. 4 (AM. BAR ASS'N 2024); *Id.* at r. 1.7(a) cmts. 30–31. Such a conflict would surely arise here, where the algorithm functions precisely by using its customers' confidential data to make pricing recommendations to its other customers. Furthermore, ethics rules do not permit attorneys to facilitate otherwise unlawful conduct. *Id.* r. 1.2(d) cmt. 9. That, in effect, is what Cendyn's algorithm does: it gathers and retains confidential information from the Hotel Defendants to

[12] Johannes Jaeger, *Artificial Intelligence Is Algorithmic Mimicry: Why Artificial 'Agents' Are Not (and Won't Be) Proper Agents*, 2024 NEURONS, BEHAVIOR, DATA ANALYSIS, AND THEORY at 3, https://arxiv.org/pdf/2307.07515 [https://perma.cc/WX29-3CDY].

promote artificial price inflation through coordinated conduct in a manner they could not lawfully pursue on their own. An attorney playing this role would not only be guilty of an ethical violation; she would be a co-conspirator and direct participant in an antitrust violation. *Id.* The same result should obtain when AI produces the same harm to competition.

III. The "Rim" of a "Hub-and-Spoke" Conspiracy Can Be a Tacit Agreement

Even under the district court's narrow reading of the Amended Complaint to allege only a traditional hub-and-spoke conspiracy, it also erred by failing to infer a tacit rim agreement between the Hotel Defendants. A hub-and-spoke conspiracy is "simply a collection of vertical and horizontal agreements." *Musical Instruments*, 798 F.3d at 1192–1193. It may emerge just as surely from a tacit rim agreement as an express one. *See, e.g.*, *Meyer v. Kalanick*, 174 F. Supp. 3d 817, 822–827 (S.D.N.Y. 2016) (finding hub-and-spoke conspiracy plausibly alleged where drivers used Uber based on the tacit understanding that other drivers were agreeing to use the same pricing algorithm).

This Court explained that an express agreement is not required in *ESCO v. United States*, in which it upheld a distributor's criminal conviction for using bundled discounts to fix the prices of stainless steel piping and tubing. 340 F.2d 1000, 1002-03, 1014 (9th Cir. 1965). The distributor argued that there was insufficient evidence to convict because it only participated in two of the ten alleged meetings at which the conspiracy was discussed and did not agree to the discounts discussed. *Id*. at 1005–1006. This Court disagreed, explaining that, as a

general matter, the "common purpose" element of a price-fixing conspiracy "does not mean that each defendant or all defendants must have participated in each act or transaction." *Id.* at 1006. It specifically rejected the distributor's suggestion that a price-fixing conspiracy requires "an exchange of assurances to take or refrain from a given course of conduct," clarifying that "it is sufficient that a concert of action be contemplated and that defendants conform to the arrangement." *Id.* at 1007–1108.

Here, Plaintiffs' market data show that the Hotel Defendants accepted the algorithm's pricing recommendations 90% of the time, that they have higher prices when they use the algorithm than when they do not, and that their use of the algorithm inflated prices market-wide. 5-ER-716–717, 810 (¶¶74, 212). These non-conclusory allegations establish that each Hotel Defendant accepted the algorithm's prices often enough to serve the common purpose of raising prices market-wide, obviating the need for any express agreement to commit to charge the algorithm's prices.

The district court also gave undue weight to the fact that the Hotel Defendants "adopted policies over a period of years, not simultaneously," holding that their conduct "did not raise the specter of collusion" on that basis. 1-ER-6–7 (internal quotation marks omitted). As the district court itself acknowledged, "an unlawful conspiracy may be and often is formed without simultaneous action or agreement on the part of the conspirators." *Id*. (quoting *Interstate Cir. v. United States*, 306 U.S. 208, 227 (1939); *Musical Instruments,* 798 F.3d at 1196) (alterations omitted)). That is why, in the Uber price-fixing litigation, the Southern

District of New York correctly held that plaintiffs plausibly alleged a horizontal agreement between thousands of Uber drivers to fix ride-sharing prices even though they joined and used the app at different times. *Meyer*, 174 F. Supp. 3d at 825. Like Uber's algorithm, Cendyn's algorithm changes its price recommendations to earlier-joining users based on the data provided by later-joining ones, and vice versa. First Amended Complaint, *Meyer v. Kalanick*, No. 1:15-cv-09796 (S.D.N.Y Jan. 29, 2016), ECF No. 26, at ¶ 47 ("As demand for car services increases among users, applying the Uber algorithm results in increased fares"); 5-ER-686 (¶ 6) ("Each hotel operator provides GuestRev with granular pricing and occupancy data on a continuous basis. GuestRev then generates pricing recommendations on an at-least daily basis."). As each subsequent member joins, Cendyn's algorithm learns that it can raise prices further without competitive discipline. 5-ER-692 (¶ 19) (Cendyn's algorithm "continuously trains itself on the collective data provided by each operator and, over time, steadily improves the profit-optimization recommendations").

Finally, the district court failed to consider that firms can and do incur antitrust liability for sharing competitively sensitive information with an intermediary, particularly when they know their rivals are doing the same and the intermediary will use the data to make price recommendations. *See* Mem. Op., p.34, *In re RealPage, Inc., Rental Software Antitrust Litig. (No. II)*, No. 3:23-md-03071 (M.D. Tenn. Dec. 28, 2023) ECF No. 690 (hereinafter "*In re RealPage* Mem. Op.") (finding that confidential information was shared for purposes of plus-factor analysis when algorithm "inputs a melting pot of confidential competitor

information through its algorithm and spits out price recommendations based on that private competitor data").[13][14] Here, the kind and degree of information the Hotel Defendants shared is particularly troubling: they gave Cendyn access to their back-end vacancy and booking operations. 5-ER-686 (¶6) (alleging that Cendyn's algorithm "is directly integrated with hotel operators' property management systems"). In the absence of price collusion, no reasonable business would share this data with a firm it knows will provide recommendations to its rivals. *See* Statement of Interest of the United States, *In re Pork Antitrust Litig.*, No. 0:18-cv-01776 (D. Minn. Oct. 1, 2024), ECF No. 2616, at 14 ("Courts have also recognized that information-sharing arrangements are more likely to harm competition when the information shared is detailed or non-aggregated."). The kind of data the Hotel

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[14] Although the *RealPage* court distinguishes that case from this one on the basis that, here, Plaintiff s' Original Complaint did not allege that Cendyn's algorithm based its pricing recommendations on rival hotels' non-public information, the district court here acknowledged that Plaintiffs' Amended Complaint fixed that deficiency by clarifying what it called Plaintiffs' "machine learning theory". *In re RealPage* Mem. Op., at 34; 1-ER-12 (explaining that Plaintiffs' allegations regarding "exchange of confidential information" are "based on their 'machine learning' theory—that the algorithms improved over time by running on confidential information provided by each Hotel Defendant."). As the *RealPage* Court recognized, the "machine learning theory" is merely a recognition that rivals cannot use an intermediary to facilitate reliance on each other's confidential information. *In re RealPage* Mem. Op., at 34; *See also* Maureen K. Ohlhausen, Acting Chairman, Fed. Trade Comm'n, Should We Fear the Things That Go Beep In the Night? Some Initial Thoughts on the Intersection of Antitrust Law and Algorithmic Pricing at 10 (May 23, 2017), *available at* https://www.ftc.gov/system/files/documents/public_statements/1220893/ohlhausen_-_concurrences_5-23-17.pdf ("Just as the antitrust 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.")

Defendants disclosed plausibly suggests they formed a tacit rim agreement. *In re RealPage* Mem. Op., at 42 (The "most compelling evidence of horizontal agreement are allegations that Lessors submitted real-time pricing and supply data to be compiled into a common algorithm, which was sent to all RealPage clients as 'forward-looking, unit-specific pricing and supply recommendations based on their shared data' to achieve higher prices.").

CONCLUSION

For the foregoing reasons, the district court's opinion should be reversed.

Respectfully submitted,

/s/ Joshua P. Davis

RANDY STUTZ
DAVID O. FISHER
AMERICAN ANTITRUST INSTITUTE
1025 Connecticut Avenue, NW
Suite 1000
(202) 304-0195
rstutz@antitrustinstitute.org
dfisher@antitrustinstitute.org

JOSHUA P. DAVIS
MATTHEW SUMMERS
BERGER MONTAGUE PC
505 Montgomery Street
Suite 625
San Francisco, CA 94111
(415) 906-0684
jdavis@bm.net
msummers@bm.net

Counsel for Amicus Curiae

UNITED STATES COURT OF APPEALS
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Date: October 3, 2024

BERGER MONTAGUE PC

/s/ Joshua P. Davis
Joshua P. Davis

Counsel for Amicus Curiae