PEELING *APPLE*: ANTITRUST STANDING & INTERMEDIARY DEFENDANTS

John E. Lopatka†

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ABSTRACT

When market intermediaries unlawfully acquire market power, vertically related market participants may sue under the antitrust laws to recover damages. Their ability to recover depends upon an intricate set of doctrines that define private standing, including the indirect-purchaser rules set down by the Supreme Court most notably in *Illinois Brick*. In *Apple Inc. v. Pepper*, the Court decided the application of the indirect-purchaser rules to a particular kind of intermediary, a platform in a two-sided market. The article explores private antitrust standing doctrines as they apply to market intermediaries, using *Apple* to frame the exposition. The Court there held that iPhone owners are not barred by *Illinois Brick* from recovering damages from Apple for monopolizing the distribution of iPhone apps. The article argues that the Court may have reached the right result, but not for the right reason. The dissent and Apple reached

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† A. Robert Noll Distinguished Professor of Law, Penn State Law, the Pennsylvania State University, University Park. I am especially grateful to Roger Blair for hours of discussion exploring the issues addressed in this article and for his comments on an earlier draft. All errors are mine.

the wrong result, or at least did not offer the right reason. Apple imposed an ad valorem charge for using its platform in a two-sided transaction market, and in these circumstances, whether iPhone users had a right to sue for damages depends on whether the marginal costs of distribution were positive, a condition that was not addressed.

INTRODUCTION

Private parties may obtain damages for antitrust violations, but this right is cabined by an intricate and overlapping set of doctrines. Section 4 of the Clayton Act provides that "any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor . . . and shall recover threefold the damages by him sustained . . . ."[1] The statute on its face imposes several analytically distinct conditions on antitrust damage recoveries. The plaintiff must be a "person." The person must suffer an injury in fact, or a loss. That injury must be to the person's "business or property." The injury must be caused by an antitrust violation, for it must be sustained "by reason of" the violation. Finally, the damages to which the plaintiff is entitled must correspond to his or her injury.[2] Damages are an estimate of the cognizable loss suffered by the plaintiff, and before trebling, they are a measure of compensation. They approximate the difference between the plaintiff's actual economic condition and the condition the plaintiff would have occupied but for the violation.

The courts have added to this list of manifest conditions two requirements. First, the plaintiff's injury must be "antitrust injury," which is an injury of the kind the antitrust laws were intended to prevent. The antitrust laws were designed to protect the social benefits of competition.[3]

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1. 15 U.S.C. § 15(a) (2021).

2. The implication of the statute is that the violation must be causally connected to the amount of damages recovered. *See* Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 125 (1969) (referring to "the necessary causal relation between" an antitrust violation and the claimed damages) (citing Cont'l Ore Co. v. Union Carbide & Carbon Corp., 370 U.S. 690, 696–01 (1962)); Story Parchment Co. v. Paterson Parchment Paper Co., 282 U.S. 555, 563 (1931) (quoting Taylor v. Bradley, 4 Abb. Ct. App. 363, 367 (N.Y. 1868)) (recognizing that an antitrust plaintiff may recover a reasonable approximation of the "damages resulting necessarily and immediately and directly from the breach" of the legal mandate); Eastman Kodak Co. v. So. Photo Materials Co., 273 U.S. 359, 379 (1927) (recognizing that damages are an estimate of "the probable loss" caused by an antitrust violation).

3. *See* United States v. Trenton Potteries Co., 273 U.S. 392, 397 (1927) ("[T]he public interest is best protected from the evils of monopoly and price control by the maintenance of competition.") (citing United States v. Trans-Missouri Freight Ass'n, 166 U.S. 290 (1897)); Charles A. Ramsay Co. v. Associated Bill Posters, 260 U.S. 501, 512 (1923) ("The fundamental purpose of the Sherman Act was to . . . protect the public against evils commonly incident to destruction of competition . . . ."); Standard Oil Co. v. United States, 221 U.S. 1,

Section 4, therefore, recognizes the right to be compensated for injuries that result from an illegal restraint on competition. Thus, to qualify for compensation, an injury must be "of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful."[4] Antitrust injuries are those losses a restraint on competition are "likely to cause."[5] Second, a private plaintiff must have antitrust standing.[6] Broadly understood, the antitrust standing doctrine eliminates from the universe of compensable injuries those harms that are somehow remote from the antitrust violation.[7] The claims would satisfy all other explicit and implicit requirements for compensation, including notably the antitrust injury requirement, but are nevertheless excluded. Consequently, some persons suffering antitrust injuries because of an

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58 (1911) ("[T]he dread of enhancement of prices and of other wrongs . . . led . . . to the prohibition or treating as illegal all contracts or acts which were unreasonably restrictive of competitive conditions . . . ."); Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) ("Congress designed the Sherman Act as a 'consumer welfare prescription.'") (quoting ROBERT H. BORK, THE ANTITRUST PARADOX 66 (1978)).

4. Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 489 (1977).

5. *Id.* (quoting *Zenith Radio Corp*., 395 U.S. at 125).

6. *See* Associated Gen. Contractors v. Cal. State Council of Carpenters, 459 U.S. 519, 535 (1983) (holding that not all persons who satisfy the requirements of § 4 of the Clayton Act are entitled to recover damages). Some courts treat antitrust injury as a component of antitrust standing. *See* 11 JOSEPH P. BAUER, KINTNER FEDERAL ANTITRUST LAW § 78.1 n.14 (Supp. 2019). For clarity, we prefer treating the requirements as separate. However characterized, antitrust injury is a necessary but not a sufficient condition for a private plaintiff's right to sue for antitrust violations. *See*, *e.g.*, Cargill, Inc. v. Monfort of Colo., Inc., 479 U.S. 104, 110 n.5 (1986) ("A showing of antitrust injury is necessary, but not always sufficient, to establish standing under § 4 . . ."); Phila. Taxi Ass'n v. Uber Techs., Inc., 886 F.3d 332, 343 (3d Cir. 2018) (noting that "antitrust injury is 'a necessary but insufficient condition' for antitrust standing") (quoting Barton & Pittinos v. Smithkline Beecham Corp., 118 F.3d 178, 182 (3d Cir. 1997)).

7. *See* Lexmark Int'l, Inc. v. Static Control Components, Inc., 572 U.S. 118, 133 (2014) (quoting Holmes v. Sec. Inv'r Prot. Corp., 503 U.S. 258, 268–69 (1992)) (observing that the proximate cause requirement, which applies to the Clayton Act, "generally bars suits for alleged harm that is 'too remote' from the defendant's unlawful conduct"); Balaklaw v. Lovell, 14 F.3d 793, 798 n.9 (2d Cir. 1994) (citing Todorov v. DCH Healthcare Auth., 921 F.2d 1438, 1449 (11th Cir. 1991)) (noting that factors other than antitrust injury affecting a private antitrust plaintiff's right to sue for damages relate largely "to the directness and identifiability of the plaintiff's injury" and determine whether the plaintiff is "an efficient enforcer of the antitrust laws"); Daniel v. Am. Bd. of Emergency Med., 428 F.3d 408, 443 (2d Cir. 2005) (endorsing *Balaklaw*). The causation requirement that is explicit in § 4 could be understood as corresponding roughly to the concept of factual cause in tort law, and the directness requirement that is part of antitrust standing might then correspond to what tort law traditionally has treated as proximate cause. But an alternative interpretation of the statutory requirement is that it embraces both factual and proximate cause. *See Lexmark*, 572 U.S. at 126 (emphasizing that § 4 imposes a proximate cause requirement). As so understood, antitrust standing doctrine does not impose any causation requirement separate from the requirement contained in § 4.

antitrust violation are not entitled to recover damages for want of antitrust standing.

The most important application of the antitrust standing doctrine is the indirect purchaser, or *Illinois Brick*,[8] rule. In a simple case, when a firm or firms violate the antitrust laws and charge a supra-competitive price for a product, the immediate purchaser pays an overcharge, and subsequent purchasers also pay an overcharge, for some of the initial overcharge is passed down to buyers throughout the distribution chain. *Illinois Brick* denies standing to all but the immediate, or direct, purchasers from the antitrust violators even though subsequent purchasers incur an antitrust injury.[9] Significantly, the *Illinois Brick* rule is not limited to product or service purchasers. *Illinois Brick* involved a conspiracy among sellers, but the rationale of *Illinois Brick* applies as well when the antitrust violator is a buyer or group of buyers.[10] When one or more buyers exercise monopsony power, they will reduce the price paid for a good.[11] Immediate suppliers to antitrust violators who pay them sub-competitive prices have antitrust standing under *Illinois Brick*, but remote suppliers—those who supply suppliers—do not.

Antitrust standing doctrine has a host of applications beyond *Illinois Brick*.[12] Of particular relevance here, when a firm or group of firms exercise monopoly power and raise prices, the quantity of output they sell declines.[13] As a result, the quantity of input they purchase declines, and input suppliers may lose profits on the units not sold to them, depending on whether and the extent to which the suppliers can sell these units to buyers outside the affected market. If the output seller or sellers

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8. *See* 431 U.S. 720, 746 (1977).

9. *Id.*

10. *See*, *e.g.*, Zinser v. Cont'l Grain Co., 660 F.2d 754, 760 (10th Cir. 1981), *cert. denied*, 455 U.S. 941 (1982); ("In *Illinois Brick*, an indirect purchaser could not recover for an overcharge which had been passed on to him. It logically follows that an indirect seller, i.e., one who did not deal with the defendant, may not recover for an undercharge set in motion by the indirect buyer's unlawful activities."); *In re* Beef Indus. Antitrust Litig., 600 F.2d 1148, 1159 (5th Cir. 1979) (concluding that "there is nothing special about monopsony or oligopsony price-fixing cases that justifies treating them differently from monopoly price-fixing cases for passing-on purposes"); Doe v. Ariz. Hosp. & Healthcare Ass'n, No. CV 07-1292-PHX-SRB, 2009 U.S. Dist. LEXIS 42871, at *25 (D. Ariz. Mar. 19, 2009) (citing *Zinser*, 660 F.2d at 760) (recognizing that *Illinois Brick* applies to buyers' cartels).

11. *See* ROGER D. BLAIR & JEFFREY L. HARRISON, MONOPSONY IN LAW AND ECONOMICS 78 (2010).

12. *See* BAUER, *supra* note 6, § 78.7.

13. *See*, *e.g.*, DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 92 (4th ed. 2005). This assertion assumes that the firm or firms charge a single price, rather than price discriminate by charging multiple prices. Price discrimination may or may not result in an output reduction. *See id.* at 299–05.

exercising monopoly power have no monopsony power, they would by definition have no power to affect input price by reducing the quantity of input purchased, though they would purchase fewer units; if they have monopsony power, they will reduce the quantity purchased and pay a lower price.[14] Any losses incurred by suppliers can be characterized as antitrust injuries, and the suppliers satisfy all other necessary conditions for recovering damages. But they do not have antitrust standing, even if they sell directly to the antitrust violators.[15] This conclusion does not conflict with the proposition stated above, that sellers to an antitrust violator have standing. In that case, suppliers sell to purchasers exercising *monopsony* power; in the case described here, suppliers sell to purchasers exercising *monopoly* power.[16]

A private antitrust plaintiff that establishes a right to recover must provide some evidence of the amount of its damages. To be recoverable, damages cannot be speculative.[17] Antitrust damages in general are calculated to place the plaintiff in the economic position it would have occupied but for the violation; the amount is then trebled pursuant to Clayton Act § 4.[18] Normally, if the antitrust violation raises the price paid by a direct purchaser, the purchaser may recover in single damages the difference between the amount it paid and the lower amount it would have paid absent the violation, or the overcharge, multiplied by the quantity it purchased from the violator.[19] If the violation instead lowers the amount

14. Partial equilibrium analysis of the output market does not consider the effects in other markets resulting from a reduction in the employment of inputs. When input markets are perfectly competitive, inputs not used in one output market are used in other output markets. In these circumstances, the only loss if any incurred by input suppliers is the marginal transaction cost in selling to different purchasers. Output sellers in the market affected by the exercise of monopoly power would buy less input but not at a lower price. *See* HEINZ KOHLER, INTERMEDIATE MICROECONOMICS 465 (3d ed. 1990).

15. *See*, *e.g.*, Contreras v. Grower Shipper Vegetable Ass'n, 484 F.2d 1346, 1347 (9th Cir. 1973) (holding that agricultural workers lacked standing to assert claim for damages caused by a conspiracy among producers to raise lettuce prices).

16. *See id.*

17. *See* Bigelow v. RKO Radio Pictures, Inc., 327 U.S. 251, 264 (1946) ("[E]ven where the defendant by his own wrong has prevented a more precise computation, the jury may not render a verdict based on speculation or guesswork."); Story Parchment Co. v. Paterson Parchment Paper Co., 282 U.S. 555, 563 (1931) (noting "damages may not be determined by mere speculation or guess"); BAUER, *supra* note 6, § 79.1, at 97 ("The conclusion that the extent or amount of the plaintiff's harm was speculative . . . is perhaps the most frequent basis for refusing to allow (or upsetting on appeal) an award of damages.").

18. *See* BAUER *supra* note 6, § 79.1(b)(1), at 91–92; *see also* 15 U.S.C. § 15 (2021).

19. *See* BAUER, *supra* note 6, § 79.1(b)(2), at 104 ("Since a principal effect of violations such as monopolization and price fixing is the elevation of the price paid by the buyer, the most common form of relief in those cases is recovery of the unlawful 'overcharge.'") (collecting cases). We need not consider here the issue of "umbrella" standing, or the right of a purchaser to recover from an antitrust violator overcharges paid to a non-violator who raises

a seller received from a violator, the seller may recover the difference between the amount it received and the higher amount it would have received absent the violation, or the underpayment, multiplied by the quantity it sold to the violator.[20]

The examples above are simple ones. When commercial transactions become complex, the application of private standing requirements becomes less certain, even confounding.[21] For instance, what happens when a firm unlawfully acquires and exercises both monopoly and monopsony power? Who can sue, and for what harm? Does it matter whether the offender buys input and sells output in separate markets or facilitates interactions between suppliers and customers in a single market? Does the method by which the antitrust violator charges input suppliers for its services and output purchasers for its products matter? Complicated transactions pose challenging issues of causation, antitrust injury, antitrust standing, and damages.[22]

One context in which the rules of private antitrust standing blur is that of platforms. A platform is a kind of intermediary. It brings together different groups of actors who want to interact with each other. In *Apple Inc. v. Pepper*,[23] iPhone users alleged that Apple monopolized the retail market for the sale of iPhone applications ("apps") and as a result

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its prices because of the supra-competitive pricing of its competitors. *See* U.S. Gypsum Co. v. Ind. Gas Co., 350 F.3d 623, 627–28 (7th Cir. 2003) (Easterbrook, J.) (citing Loeb Industries, Inc. v. Sumitomo Corp. of America, 306 F.3d 469 (7th Cir. 2002) (allowing claim); *In re* Lower Lake Erie Iron Ore Antitrust Litig., 998 F.2d 1144, 1171 (3d Cir. 1993) (allowing claim); Mid-West Paper Prods. Co. v. Cont'l Group, Inc., 596 F.2d 573, 587 (3d Cir. 1979) (denying claim); BAUER, *supra* note 6, § 78.8 nn. 352–53 and accompanying text.

20. *See* United Carbide & Carbon Corp. v. Nisley, 300 F.2d 561, 575 (10th Cir. 1961) (recognizing that sellers to a buyers' cartel were entitled to recover damages based on the difference between "the price they were paid" for their product "and the prices they would have received but for the antitrust violations"). Again, we may put aside umbrella standing. *See supra* note 19; *cf.* Allen v. Dairy Farmers of Am., Inc., 748 F. Supp. 2d 323, 352 (D. Vt. 2010) (allowing sellers to recover under-payments to buyers not participating in conspiracy who were cowed into paying lower prices by cartel).

21. *See In re* Processed Egg Prods. Antitrust Litig., 881 F.3d 262, 268 (3d Cir. 2018) (citing Associated Gen. Contractors v. Cal. State Council of Carpenters, 459 U.S. 519, 536 (1983)) ("The term 'standing' as used in the antitrust context is conceptually difficult and has not been delineated with precision.").

22. When the prerequisites of a private cause of action are described in this way, "causation" refers to the statutory requirement of factual cause contained in § 4 of the Clayton Act, and some conception of proximate cause is contained in the requirement of "antitrust standing." *See supra* pp. 2086–87 (discussing factual vs. proximate causation). Alternatively, one could interpret the statutory requirement as embracing both factual and proximate causation, in which case proximate cause is no longer part of antitrust standing analysis. *See infra* notes 67–69 and accompanying text.

23. 139 S. Ct. 1514, 1518 (2019).

overcharged for them.[24] Many iPhone apps are produced by third-party app developers.[25] Apps perform functions that iPhone users value by meshing technologically with the phone's operating system. Apple, therefore, through its smartphone operating system, iOS, facilitates a connection between app developers and iPhone users.[26] An app is useless unless it interacts with the operating system, and a phone is not smart without functioning apps.[27] Apple, through technological and contractual restrictions, prevents iPhone app developers and iPhone users from transacting except through the App Store.[28] The app developer sets the price of the app sold in the App Store and paid by the iPhone user to Apple, and Apple conveys the payment to the developer less thirty percent of the price, which it retains as a commission.[29] The app developers purchase app distribution as well as operating system services from Apple, and iPhone users purchase services and apps from Apple.[30]

The Court, 5–4, held that iPhone users have standing to sue Apple for monopolization as direct purchasers from Apple within the meaning of *Illinois Brick*.[31] It rejected Apple's argument that, because developers set the prices that Apple charges iPhone users, only developers are direct purchasers.[32] In the rejected conception, Apple functions as the agent of the app developer in the sale of the app to the iPhone user; it is the direct purchaser of distribution services from Apple; and only the second transaction is relevant for standing purposes.[33] The dissenting justices would have confined standing to app developers primarily on grounds of proximate cause: Any monopolization of app distribution proximately causes developers but not iPhone owners injury.[34]

Because a platform in economic analysis connects at least two different kinds of users, it operates in a two-sided (or multi-sided)

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24. *See id.*

25. *See id.* at 1519 (noting that Apple does not itself create most of the approximately two million apps available to iPhone owners for download from the App Store).

26. *See iOS 14*, APPLE, https://www.apple.com/ios/ios-14/ (last visited May 13, 2021).

27. *See Smart-Phone*, MERRIAM-WEBSTER'S COLLEGIATE(R) DICTIONARY, https://www.merriam-webster.com/dictionary/smartphone (last visited May. 13, 2021) (defining "smartphone" as "a cell phone that includes additional software functions (as e-mail or an internet browser)").

28. *See Apple,* 139 S. Ct. at 1519.

29. *See id.*

30. *See id.* at 1518–19.

31. *See id.* at 1520.

32. *See id.* at 1520, 1521–22.

33. *See Apple*, 139 S. Ct. at 1521–22.

34. *See id.* at 1526, 1528 (Gorsuch, J., dissenting).

market.[35] It sells platform services to members of both groups. Each group obtains value from interacting with the other group,[36] and therefore, within certain limits, the members of each group benefit as the size of the other group increases.[37] This kind of economy of scale in consumption is the essence of indirect network effects. Positive indirect network effects challenge antitrust analysis, in applying both substantive and procedural rules to platforms. Because platforms must consider the effects of pricing and other decisions not only on the side of the market to which they immediately apply but also the effects on the other side of the market brought about by the effects on the first side, an antitrust analysis of either side alone is misleading.[38]

The analyses and arguments in *Apple* fail to take account of the nature of the transactions or acknowledge the nature of the market. In its main argument, Apple proposed the wrong legal principle, one based on agency, and it reached a dubious conclusion, that iPhone users have no standing.[39] The Court failed to appreciate the implications of Apple's payment model, but it correctly rejected Apple's proposed principle. Given the procedural posture of the case, it reached the right conclusion or at least the conclusion that would have been proper had the plaintiffs more carefully pleaded their claim, that iPhone users do have standing to sue Apple.[40] The dissent incorrectly focused on a single concept—

35. The terminology is not uniform. Authors often refer to "two-sided platforms"; if the definition of a platform is that it connects two groups of customers, the term "two-sided platform" is redundant. The term "platform" is sometimes used to denote a service provided to any group of customers. We generally use the term "platform" to denote a service or set of services provided to at least two groups of customers.

36. *See*, *e.g.*, Julian Wright, *One-sided Logic in Two-sided Markets*, 3 REV. NETWORK ECON. 44, 44 (2004) ("Two-sided markets involve two distinct types of users, each of whom obtains value from interacting with users of the opposite type over a common platform.").

37. *See*, *e.g.*, Ohio v. Am. Express Co., 138 S. Ct. 2274, 2281 (2018) ("[T]he value of the services that a two-sided platform provides increases as the number of participants on both sides of the platform increases."). Value may decline if negative congestion externalities overtake positive participation externalities. *See*, *e.g.*, DAVID EASLEY & JON KLEINBERG, NETWORKS, CROWDS, AND MARKETS: REASONING ABOUT A HIGHLY CONNECTED WORLD 534–35 (Cambridge Univ. Press 2010).

38. *See Ohio*, 138 S. Ct. at 2287 (holding that a payment card company operates in a two-sided transaction market and its conduct must be evaluated by examining both sides of the market); *see also* SC Innovations, Inc. v. Uber Techs., Inc., No. 18-cv-07440-JCS, 2020 U.S. Dist. LEXIS 77397, at *26–27 (N.D. Cal. May 1, 2020) (concluding that competitor sufficiently alleged adverse effects on both sides of ride-sharing platform to avoid dismissal).

39. *See Apple*, 139 S. Ct. at 1521–22.

40. Professor Hovenkamp also concludes that the Court reached the right conclusion in *Apple*, at least within the context of the existing *Illinois Brick* rule, but for reasons different from those set out in this Article. *See* Herbert Hovenkamp, Apple v. Pepper*: Rationalizing Antitrust's Indirect Purchaser Rule*, 120 COLUM. L. REV. FOR. 14, 27 (2020). Professors Kobayashi and Wright set out an analysis similar to that used in this article but focus on the

proximate cause—and misapplied that concept to reach the wrong conclusion.[41] The correct result for the correct reasons eluded both factions of the Court and the defendant.

The upshot is that the analysis of antitrust standing in *Apple* and other cases involving intermediaries is exceptionally difficult, requiring a careful assessment of market realities, transaction characteristics, legal doctrines, and the justifications for the *Illinois Brick* rule. This article identifies the private parties that have a right to recover damages when an intermediary unlawfully acquires monopoly power alone or both monopoly and monopsony power in one-sided markets and when an intermediary acquires monopoly power in a two-sided market. It explains that in a two-sided market, private antitrust standing, in the broad meaning of the term, depends initially on whether the intermediary charges parties a fee for a transaction between them. Standing then depends on the form of the charge, and depending on the form, the existence of significantly positive marginal costs of production and distribution.

In the next Part, the article sets out principles of private antitrust standing. Part II describes in more detail the decision in *Apple* and another platform case. Part III presents an economic analysis of platforms and the challenges they pose for antitrust. Part IV explains the economic effects of an intermediary's exercise of market power, using *Apple* to frame the exposition. It contrasts a case in which a firm functions as an input buyer and output seller in two single-sided markets and one in which a firm functions as a transaction platform in a single two-sided market. A transaction platform might charge either a per-unit or an ad valorem fee for its services in facilitating a transaction between two other parties.[42] It explains that when a transaction platform charges a per-unit fee, both sellers of the relevant good and buyers are injured and have standing to recover damages caused by the platform's monopolizing conduct. When the platform imposes an ad valorem fee, both sellers and buyers are injured and have antitrust standing, but only when the marginal costs of production and distribution are significantly positive. Part V applies the law of private standing and the economics of intermediary

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task the district court confronts on remand. *See* Bruce H. Kobayashi & Joshua D. Wright, *What's Next in* Apple Inc. v. Pepper*? The Indirect-Purchaser Rule and the Economics of Pass-Through*, 18 CATO SUP. CT. REV. 249, 252 (2019).

41. *Apple*, 139 S. Ct. at 1530–31.

42. An ad valorem charge is one "imposed at a rate percent of value." *Ad Valorem*, MERRIAM-WEBSTER'S COLLEGIATE(R) DICTIONARY, https://www.merriam-webster.com/dictionary/ad%20valorem (last visited May. 13, 2021).

market power to *Apple*, and by extension, to platform cases generally. Part VI critiques the arguments of the *Apple* dissent and Apple itself.

I. The Law of Private Antitrust Standing & Damages

A. Conditions & Limitations

The antitrust laws both create and limit a private right of action to recover damages for antitrust violations.[43] Clayton Act § 4 authorizes a "person" to recover "threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee."[44] To have this right, the person must be "injured in his business or property."[45] The concept of injury, or injury in fact, is reasonably clear: The person must be made worse off, or suffer a loss.[46] That condition implies a baseline, and the relevant baseline is the person's state before the antitrust violation takes place. Injury is inherently a relational concept.

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43. The focus here is on federal antitrust law. Most states permit private antitrust actions for damages under their own statutes, and state antitrust laws and their interpretations often track federal law. *See* STATE ANTITRUST LAW § 7.03 (2017) (noting that, "[a]s in federal cases, state antitrust statutes often require treble damages to be awarded to successful plaintiffs"). However, many states reject the indirect purchaser rule. *See id.* § 8.02[2] (noting that "at least twenty-five states and the District of Columbia have declined to follow *Illinois Brick*."). State laws that conflict with federal law in this regard are not preempted. *See* California v. ARC America Corp., 490 U.S. 93, 99–00 (1989). The analysis in this article does not resolve the private standing issue in a state that permits indirect purchasers to recover damages.

44. 15 U.S.C. § 15(a) (2021). The term "person" is broadly defined by statute to include business entities. *See id.* §§ 7, 12(a) (defining "person" as used in the antitrust laws "to include corporations and associations"). The term includes natural persons despite the explicit statutory reference to "corporations and associations." *See* United States v. Wise, 370 U.S. 405, 408 (1962) (rejecting argument that the statute implicitly excludes corporate officers from definition of "person" by explicitly referring to corporations). The term includes sovereign states (*see* Georgia v. Evans, 316 U.S. 159, 162 (1942)), municipalities (*see* Chattanooga Foundry & Pipe Works v. City of Atlanta, 203 U.S. 390, 396 (1906)), and foreign governments (*see* Pfizer, Inc. v. Gov't of India, 434 U.S. 308, 318 (1978)).

45. 15 U.S.C. § 15(a).

46. The limitation of the judicial power of federal courts contained in Article III of the constitution to the resolution of "Cases" and "Controversies" imposes on plaintiffs its own requirement of injury in fact, or "an invasion of a legally protected interest." Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992) (citing Allen v. Wright, 468 U.S. 737, 751 (1984)). That injury in fact, whether suffered or threatened, must be "concrete and particularized." *Id.*; Lexmark Int'l, Inc. v. Static Control Components, Inc., 572 U.S. 118, 125 (2014) (citing *Lujan*, 504 U.S. at 560). The injury-in-fact requirement of antitrust standing "mirrors the Article III constitutional standing requirement." Nat'l ATM Council, Inc. v. Visa Inc., 922 F. Supp. 2d 73, 80 (D.D.C. 2013).

The phrase "business or property" is broadly defined.[47] It includes most tangible assets other than bodily integrity.[48] In particular, "property" includes money, and both a commercial entity and a human being suffer an injury to property when the juridical person loses money, whether that loss represents a reduction in profits, which only a business can experience, or some other loss of wealth.[49]

Further, the antitrust violation must cause the loss, for the person must suffer the injury "by reason of" something "forbidden in the antitrust laws."[50] This statutory requirement of causation embraces at least the tort concept of actual causation. For tortious conduct to be an actual, or factual, cause of harm, it must generally be a necessary or sufficient condition of the harm. The philosophical concept of a necessary condition is embodied in the familiar legal principle of "but for" causation: The injury would not have been sustained but for the defendant's conduct.[51] The defendant's conduct is also an actual cause if it alone would have resulted in the injury even though other conduct took place that would have caused the same loss.[52] It is then a sufficient condition along with other sufficient conditions.[53] Losses that would have been sustained regardless of an antitrust violation, therefore, are not compensable under the Clayton Act.

Tort law traditionally has recognized an additional concept of proximate causation, which functions as a legal limitation on those actual

47. *See* Reiter v. Sonotone Corp., 442 U.S. 330, 338 (1979) ("[T]he word 'property' has a naturally broad and inclusive meaning. In its dictionary definitions and in common usage 'property' comprehends anything of material value owned or possessed.").

48. *See id.* at 339 (citing Hamman v. United States, 267 F. Supp. 420, 432 (Mont. 1967)) (noting that the statutory phrase "business or property" excludes "personal injuries suffered"). Emotional distress also unquestionably fails to qualify as "business or property." *See id.*

49. *See id.*

50. 15 U.S.C. §15(a).

51. *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 (Am. L. Inst. 2010) [hereinafter RESTATEMENT (THIRD) TORTS] ("Conduct is a factual cause of harm when the harm would not have occurred absent the conduct."). The Restatement recognizes that harm may have multiple factual causes, such that the harm would not have occurred absent any one of them. *See id.* cmt. c ("An actor's tortious conduct need only be a factual cause of the other's harm. The existence of other causes of the harm does not affect whether specified tortious conduct was a necessary condition for the harm to occur."); *see also* Bostock v. Clayton Cnty., 140 S. Ct. 1731, 1739 (2020) (recognizing that events often "have multiple but-for causes" such that the non-occurrence of any would avoid the outcome).

52. *See* RESTATEMENT (THIRD) TORTS, *supra* note 51, § 27 ("If multiple acts occur, each of which under § 26 alone would have been a factual cause of the physical harm at the same time in the absence of the other act(s), each act is regarded as a factual cause of the harm.").

53. *See* Greene v. Doruff, 660 F.3d 975, 978 (7th Cir. 2011) (Posner, J.) (explaining that a "sufficient condition is something that, if it is present, something else is bound to happen" and relating philosophical concepts of necessary and sufficient conditions to tort law).

causes for which liability can be imposed.[54] The Third (and latest) Restatement of Torts eschews the language of proximate causation in favor of zone of liability.[55] Specifically, "[a]n actor's liability is limited to those harms that result from the risks that made the actor's conduct tortious."[56] Notably, the Restatement Third does not quarrel with the idea that liability can be imposed for only a subset of factual causes,[57] but it argues that the term "proximate cause" is a poor descriptor of the relevant limitation.[58] Tort law has always embraced the concept that certain losses may be so improbable that imposing liability on a wrongdoer for them would subvert the law's purposes.[59] In many circumstances, the more remote a harm is from wrongful conduct, the less probable it is, but the critical variable is probability. Liability for an injury is thus limited to a subset of factual causes, those for which the probability of the injury times its magnitude justifies taking greater precaution.[60]

Antitrust law, for its part, has always recognized the principle that an antitrust violator's liability is limited to a subset of private parties actually injured by the violation, and courts, including the Supreme

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54. *See generally* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM (BASIC PRINCIPALS) (2003) ch. 6, Special Note on Proximate Cause (Am. L. Inst. 2003) [hereinafter RESTATEMENT BASIC PRINCIPALS] (observing that "the term 'proximate cause' has been in widespread use in judicial opinions, treatises, casebooks, and scholarship"). Prior Restatements used the term "legal cause" to denote both factual cause and proximate cause. *See* RESTATEMENT (SECOND) OF TORTS § 431 (1965).

55. *See* RESTATEMENT BASIC PRINCIPALS, *supra* note 54, at ch. 6, Special Note on Proximate Cause (noting that "proximate cause" is not generally used in the chapter because the term "is an especially poor one to describe the idea to which it is connected").

56. RESTATEMENT (THIRD) TORTS, *supra* note 51, § 29.

57. *See id.* § 29 cmt. a ("No serious question exists that some limit on the scope of liability for tortious conduct that causes harm is required.").

58. *See* RESTATEMENT BASIC PRINCIPALS, *supra* note 54, at ch. 6, Special Note on Proximate Cause; RESTATEMENT (THIRD) TORTS, *supra* note 51, § 29 cmt. b. In particular, "the term 'proximate cause' implies that there is but one cause—the cause nearest in time or geography to the plaintiff's harm—. . . [but] multiple proximate causes are often present." *Id.* § 29 cmt. b.

59. For example, in BCS Servs., Inc. v. Heartwood 88, LLC, 637 F.3d 750, 754 (7th Cir. 2011) (Posner, J.), the court observes that proximate cause cuts off liability where

> too many unexpected things had to happen between the defendant's wrongdoing and the plaintiff's injury, in order for the injury to occur—so many unexpected things that the defendant couldn't have foreseen the effect of his wrongdoing and therefore couldn't have been influenced, in deciding how much care to employ in the activity that produced the wrongful act, by the prospect of inflicting such an injury as occurred. And then holding him liable would have little effect in deterring wrongful conduct.

(citing Gallick v. Baltimore & Ohio R.R., 372 U.S. 108, 118 (1963)) (citations omitted).

60. *See* United States v. Carroll Towing Co., 159 F.2d 169, 173 (2d Cir. 1947) (L. Hand, J.) ("[I]f the probability be called P; the injury, L; and the burden, B; liability depends upon whether B is less than L multiplied by P: i.e., whether B less than PL.").

Court, have described this principle as the requirement of proximate cause.[61] Injuries that are in a meaningful sense remote from the violation are not compensable. This principle, which the Court has found implicit in the statutory causation requirement,[62] is often formally recognized in the broader requirement of antitrust standing, which is considered below.[63]

In addition to the requirements set out above, the plaintiff's injury must be of a kind the antitrust laws were intended to prevent. It must be an antitrust injury.[64] The Court first articulated the antitrust injury requirement in *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*[65] That case involved a claim by the owner of bowling centers that the acquisition of several financially distressed competing centers by Brunswick, one of the two largest manufacturers of bowling equipment, violated § 7 of the Clayton Act.[66] Had Brunswick not rescued the centers, they would have exited the market, and the plaintiff, then faced with less competition,

61. *See*, *e.g.*, Lexmark Int'l, Inc. v. Static Control Components, Inc., 572 U.S. 118, 126 (2014) (citing Associated Gen. Contractors v. Cal. State Council of Carpenters, 459 U.S. 519, 532–33 (1983)) (noting that the Court had held that § 4 of the Clayton Act limits recovery "to plaintiffs whose injuries were proximately caused by a defendant's antitrust violations"); Holmes v. Sec. Inv'r Prot. Corp., 503 U.S. 258, 268 (1992) (noting that the Court had "held that a plaintiff's right to sue under § 4 required a showing that the defendant's violation not only was a 'but for' cause of his injury, but was the proximate cause as well"); Supreme Auto Transp., LLC v. Arcelor Mittal USA, Inc., 902 F.3d 735, 743 (7th Cir. 2018) ("Proximate causation is an essential element that plaintiffs must prove in order to succeed on [their antitrust and tort claims]."); Lotes Co. v. Hon Hai Precision Indus. Co., 753 F.3d 395, 412 (2d Cir. 2014) (citing Blue Shield of Va. v. McCready, 457 U.S. 465, 476–77 & n.13 (1982)) (explaining that antitrust courts in determining a plaintiff's right to sue consider the directness and indirectness of the asserted injury "using familiar principles of proximate causation"); Doctor's Hosp. of Jefferson, Inc. v. Se. Med. All., 123 F.3d 301, 305 (5th Cir. 1997) (citing McCormack v. Nat'l Collegiate Athletic Ass'n, 845 F.2d 1338, 1341 (5th Cir. 1988)) (noting that an antitrust plaintiff must prove an injury to it "proximately caused by the defendants' conduct").

62. *See Lexmark*, 572 U.S. at 126 (citing *Associated Gen. Contractors*, 459 U.S. at 532–33).

63. *See infra* notes 80–100 and accompanying text.

64. The terminology used to describe the private right to bring an antitrust action is maddeningly inconsistent. One court identified "four requirements for antitrust injury: (1) unlawful conduct, (2) causing an injury to the plaintiff, (3) that flows from that which makes the conduct unlawful, and (4) that is of the type the antitrust laws were intended to prevent." Am. Ad Mgmt., Inc. v. Gen. Tel. Co. of Cal., 190 F.3d 1051, 1055 (9th Cir. 1999). Under this formulation, causation and injury in fact are components of antitrust injury rather than independent requirements. *See id.* However organized, these elements are necessary to the private right of action.

65. 429 U.S. 477, 489 (1977).

66. *Id.* at 479–81; 15 U.S.C. § 18 (2021) (prohibiting acquisitions of stock or assets that may "substantially lessen competition[] or tend to create a monopoly.").

would have earned higher profits.[67] Moreover, the vertical acquisitions might have lowered Brunswick's costs, confronting the plaintiff with a more efficient competitor.[68] The plaintiff sought to recover its lost profits caused by the allegedly unlawful acquisitions.[69] Just why acquisitions that preserve competition and perhaps increase efficiency would ever violate § 7 is opaque.[70] But Brunswick in the Supreme Court did not challenge the appellate court's determination that a jury could find a violation; the Court merely observed that "[i]f the acquisitions here were unlawful, it is because they brought a 'deep pocket' parent into a market of 'pygmies.'"[71] Rather, the Court held that, for a different reason, the plaintiff could not recover for its claimed losses: To recover damages on account of § 7 violations,

> [p]laintiffs must prove *antitrust* injury, which is to say injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful. The injury should reflect the anticompetitive effect either of the violation or of anticompetitive acts made possible by the violation. It should, in short, be "the type of loss that the claimed violations . . . would be likely to cause."[72]

A loss sustained as a result of maintaining competition was not the kind of loss that a violation of § 7 was likely to cause.[73] The Court later explained that antitrust injuries are losses that "stem from an anticompetitive aspect of the defendant's conduct," and it confirmed that the antitrust injury requirement applies to all antitrust violations, not merely Clayton Act § 7 violations.[74]

In short, the antitrust injury doctrine means that the plaintiff must be "hurt . . . in the way that the framers of the antitrust laws had in mind."[75]

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67. *See Brunswick Corp.*, 429 U.S. at 479–81.
68. *See id.* at 483.
69. *See id.* at 480–81.
70. For a discussion of the Court's failure to address substantive merger law in *Brunswick* and possible reasons for resolving the case on antitrust injury grounds, see John E. Lopatka & William H. Page, *Brunswick at 25: Antitrust Injury and the Evolution of Antitrust Law*, 17 ANTITRUST 20, 21, 24–25 (2002).
71. *Brunswick Corp.*, 429 U.S. at 487.
72. *Id.* at 489 (quoting Zenith Radio Corp. v. Hazeltine Research, 395 U.S. 100, 125 (1969)) (second alteration in original).
73. *See id.* at 490.
74. Atl. Richfield Co. v. USA Petroleum Co., 495 U.S. 328, 340–41 (1990).
75. Jack Walters & Sons Corp. v. Morton Bldg., Inc., 737 F.2d 698, 709 (7th Cir. 1984); *see also* Bucklew v. Hawkins, Ash, Baptie & Co., 329 F.3d 923, 932 (7th Cir. 2003) (explaining that firms forced to lower prices in response to their competitors' efficient merger suffer actual injury but not antitrust injury because their injury "is not the sort of injury that antitrust law is concerned with preventing or remedying"). Judge Posner observed that the antitrust injury doctrine is merely the application to antitrust of the tort doctrine of negligence

The framers intended to prohibit conduct that restrains competition, understood as a process that maximizes economic welfare.[76] A competitive restraint that reduces allocative efficiency violates the antitrust laws, and in many cases an antitrust injury is a kind of loss that varies in proportion to the size of the inefficiency.[77] The key concept, however, is that an injury is of a kind that a restraint on competition is likely to cause, even if it produces no inefficiency. Antitrust injury and antitrust standing can be understood as doctrines that result in damage liability that approximates the optimal antitrust penalty, which equals the net harm suffered by persons other than the offender.[78] As we shall see, some actors can suffer antitrust injury by a platform's exercise of ill-gotten monopoly power even when it produces no static welfare loss.[79]

The Supreme Court has recognized that not every person who has suffered an antitrust injury caused by an antitrust violation is entitled to bring an antitrust claim. The doctrine of antitrust standing limits the scope of those entitled to sue to a subset of victims.[80] In *Associated General Contractors v. California Council of Carpenters*, the Court identified a number of factors as relevant in determining whether a plaintiff has

per se, illustrated by Gorris v. Scott, 9 L. R. Exch. 125 (Eng. 1874) (rejecting claim that ship owner's failure to comply with statute intended to prevent spread of contagious disease among animals by requiring that they be confined in pens onboard ships established negligence when compliance would have prevented sheep from being washed overboard during storm); *see Jack Walters*, 737 F.2d at 708–09. As the Supreme Court stated in *Lexmark Int'l, Inc. v. Static Control Components, Inc*., the tort rule epitomized by *Gorris* is "that a plaintiff may not recover under the law of negligence for injuries caused by violation of a statute unless the statute 'is interpreted as designed to protect the class of persons in which the plaintiff is included, against the risk of the type of harm which has in fact occurred as a result of its violation.'" 572 U.S. 118, 130 n.5 (2014) (quoting W. PAGE KEETON, DAN D. DOBBS, ROBERT E. KEETON, & DAVID G. OWEN, PROSSER AND KEETON ON LAW OF TORTS § 36, at 229–30 (5th ed. 1984)); *see also* RESTATEMENT (THIRD) TORTS, *supra* note 51, § 14 (stating version of the negligence per se doctrine). In *Lexmark*, the Court referred to this principle as the "zone-of-interests test" and emphasized that "it applies to all statutorily created causes of action" a universe that includes antitrust actions. 572 U.S. at 129 (quoting Bennett v. Spear, 520 U.S. 154, 163 (1997)). One could say, then, that the antitrust-injury requirement of private standing under the antitrust laws is synonymous with the zone-of-interests test. *See id.*

76. *See* Khan v. State Oil Co., 93 F.3d 1358, 1364 (7th Cir. 1996) (referring to "competition . . . as a process for maximizing consumer welfare"), *vacated on other grounds*, 522 U.S. 3 (1997).

77. *See* William H. Page, *The Scope of Liability for Antitrust Violations*, 37 STAN. L. REV. 1445, 1459–61 (1985).

78. *See* William M. Landes, *Optimal Sanctions for Antitrust Violations*, 50 U. CHI. L. REV. 652, 656 (1983).

79. *See infra* notes 98–99, 106 and accompanying text.

80. As one court observed, "[I]f a manufacturer is the target of anticompetitive conduct, not every firm linked to him by the forces of demand and supply is entitled to sue for damages caused, indirectly, by that conduct." Grip-Pak, Inc. v. Ill. Tool Works, Inc., 694 F.2d 466, 473 (7th Cir. 1982) (citing *In re* Indus. Gas Litig., 681 F.2d 514, 519–20 (7th Cir. 1982)).

antitrust standing.[81] The list is confusing, in part because it includes as mere considerations conditions that are independent requirements, such as antitrust injury and causation,[82] and in part because some of the factors are redundant. Indeed, even the factors themselves are not crisply presented but must be teased out of the Court's opinion. The Third Circuit, for example, derived five relevant considerations from *Associated General*:

(1) The nature of the plaintiff's alleged injury: Is the injury "of a type that Congress sought to redress in providing a private remedy for violations of the antitrust laws"?

(2) The directness or indirectness of the asserted injury.

(3) The proximity or remoteness of the party to the alleged injurious conduct.

(4) The speculativeness of the damages claim.

(5) The risk of duplicative damages or complexity in apportioning damages.[83]

Without disputing the accuracy of the Third Circuit's reading of *Associated General*, the Supreme Court in *Lexmark International, Inc. v. Static Control Components, Inc.*,[84] disparaged the list, as adapted for actions brought under the Lanham Act.[85] The Court noted, for instance, that the first factor, requiring that the plaintiff's injury be in the zone of interests protected by the relevant statute, and the second and third factors, which redundantly require proximate cause, are not mere factors to be weighed but are instead "requirements, which must be met in every case."[86] Thus, an injury of the type the antitrust laws were intended to address is an antitrust injury, which is a necessary condition for a private

81. 459 U.S. 519, 538 (1983).

82. *See*, *e.g.*, Phila. Taxi Ass'n v. Uber Techs., Inc., 886 F.3d 332, 343 (3d Cir. 2018) (quoting Barton & Pittinos, Inc., v. Smithkline Beecham Corp., 118 F.3d 178, 182 (3d Cir. 1997) (noting that "antitrust injury is 'a necessary but insufficient condition'" for antitrust standing)); Daniel v. Am. Bd. of Emergency Med., 428 F.3d 408, 443 (2d Cir. 2005) (citing *Associated Gen. Contractors*, 459 U.S. at 540–46) (observing that a showing of antitrust injury is necessary but not sufficient to establish standing).

83. Conte Bros. Auto., Inc. v. Quaker State-Slick 50, Inc., 165 F.3d 221, 233 (3d Cir. 1998) (citations omitted) (citing *Associated Gen. Contractors*, 459 U.S. at 538, 540, 542, 543–44).

84. *See* 572 U.S. 118, 134–36 (2014).

85. *See id.* at 135. For example, when the *Associated General* factors were used to determine Lanham Act standing, the first factor was modified to ask whether the injury was a type that Congress sought to redress in providing a private remedy for violations of the Lanham Act rather than of the antitrust laws. *See id.* The federal Lanham Act, 15 U.S.C. § 1125(a) (2021), prohibits inter alia false associations in the sale of goods or services and false advertising. *See Lexmark Int'l Inc.*, 572 U.S. at 122.

86. *Id.* at 135.

antitrust cause of action, and proximate cause is the appropriate meaning of the statutory causation requirement.[87] The fourth and fifth factors are problematic because potential difficulty in apportioning damages is not, as the Third Circuit's summary of *Associated General* might suggest, an independent basis for denying standing where the plaintiff's injury is within the zone of interests protected by the statute.[88] A plaintiff might be entitled to equitable relief, and difficulty in apportioning damages could not justify denying standing.

In all, the Court instructed that a plaintiff has a right to sue under a federal statute when he or she has constitutional standing and is within the class of plaintiffs authorized to sue.[89] Statutory authorization, in turn, depends upon statutory interpretation, and statutes are interpreted in light of two background principles:[90] a statutory cause of action extends only to plaintiffs whose interests fall within the zone of interests protected by the law;[91] and a statutory cause of action is presumptively limited to plaintiffs whose injuries are proximately caused by violations of the statute.[92]

Despite the confusion in the meaning of *Associated General*, the Court's objective in that case is clear: To limit the right to sue for antitrust violations in ways that promote the appropriate private enforcement of the law. As some courts have put it, the right to sue is confined to "efficient enforcers."[93] But even this conception of the enforcement

87. Recall that one could alternatively limit statutory causation to factual causation and require proximate causation through a separate doctrine of antitrust standing. *See supra* notes 6–7 and accompanying text. Reading the statutory requirement to include proximate cause means that the statute on its face requires both actual and proximate cause, for under traditional tort analysis, only an actual cause can be a proximate cause.

88. *Lexmark Int'l Inc.*, 572 U.S. at 135.

89. *See id.* at 128.

90. *Id.* at 129.

91. *Id.* (citing Allen v. Wright, 468 U.S. 737, 751 (1984)).

92. *Id.* at 132. Limiting a statutory right of recovery to those suffering injury proximately caused by a violation is equivalent to excluding from the right those suffering remote injuries as a result of the violation. Judge Posner has referred to "the age-old tort principle of remoteness of damage," which he explains "serves practical goals of preventing duplicate recovery of damages and proliferation of lawsuits." Grip-Pak, Inc. v. Ill. Tool Works, Inc., 694 F.2d 466, 473 (7th Cir. 1982). "[T]he tort principle of remoteness [has been] absorbed by implication into section 4 [of the Clayton Act]." *Id.* at 474.

93. *See*, *e.g.*, Eastman Kodak Co. v. Henry Bath LLC, 936 F.3d 86, 94 (2d Cir. 2019) (quoting Port Dock & Stone Corp. v. Oldcastle Ne., Inc., 507 F.3d 117, 121 (2d Cir. 2007)) ("To satisfy the antitrust standing requirement, a private antitrust plaintiff must demonstrate that (1) it has suffered 'a special kind of antitrust injury,' and (2) it is an 'efficient enforcer' of the antitrust laws."); Gatt Commc'ns, Inc. v. PMC Assocs., LLC, 711 F.3d 68, 78 (2d Cir. 2013) (noting that antitrust standing analysis is intended to determine whether plaintiff "is an 'efficient enforcer' of the antitrust laws"). In *Gelboim v. Bank of Am. Corp.*, 823 F.3d 759,

objective is not self-defining.[94] Antitrust standing might be understood as a doctrinal method of ensuring that private damages approximate the optimal penalty for an antitrust violation.[95] The optimal sanction for an antitrust violation is the net social harm caused by the offense, adjusted by the probability of imposition.[96] Certain antitrust injuries are not part of the optimal penalty. Allowing recovery for those injuries would necessarily result in an excessive penalty.

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772 (2d Cir. 2016), the Second Circuit explained that private plaintiffs must suffer antitrust injury and be "efficient enforcers of the antitrust laws." Further, it stated:

> The efficient enforcer inquiry turns on: (1) whether the violation was a direct or remote cause of the injury; (2) whether there is an identifiable class of other persons whose self-interest would normally lead them to sue for the violation; (3) whether the injury was speculative; and (4) whether there is a risk that other plaintiffs would be entitled to recover duplicative damages or that damages would be difficult to apportion among possible victims of the antitrust injury. Built into the analysis is an assessment of the "chain of causation" between the violation and the injury.

Id. (internal citations omitted) (citing *Port Dock & Stone Corp.*, 507 F.3d at 121–22). Another, substantively similar formulation is that the antitrust standing requirement ensures that "other parties are not better situated to bring suit." Doctor's Hosp. of Jefferson, Inc. v. Se. Med. Alliance, 123 F.3d 301, 305 (5th Cir. 1997) (citing McCormack v. Nat'l Collegiate Athletic Ass'n, 845 F.2d 1338, 1341 (5th Cir. 1988)).

94. Some courts have implicitly sought to identify efficient enforcers by limiting the right to recover to participants in the market in which the defendants acted anticompetitively; some of these courts impose the limitation under the rubric of antitrust injury, but it fits more comfortably under that of antitrust standing. *See*, *e.g.*, *In re* Aluminum Warehousing Antitrust Litig., 833 F.3d 151, 158 (2d Cir. 2016) (citing Hughes v. Tobacco Inst., Inc., 278 F.3d 417, 423 (5th Cir. 2001)) ("Generally, only those that are participants in the defendants' market can be said to have suffered antitrust injury."); *id.* (noting that plaintiff must "be a participant in the same market as the alleged malefactors"); American Ad Mgmt., Inc. v. General Tel. Co., 190 F.3d 1051, 1057 (9th Cir. 1999) ("Antitrust injury requires the plaintiff to have suffered its injury in the market where competition is being restrained."). But the Supreme Court has recognized an exception to this principle for non-participants who suffer an injury "inextricably intertwined with the injury the conspirators sought to inflict." Blue Shield of Va. v. McCready, 457 U.S. 465, 484 (1982); *see also Aluminum Warehousing Antitrust Litig.*, 833 F.3d at 158 (noting that because of the inextricably intertwined exception, "[t]he universe of potential plaintiffs is not strictly limited to participants in the defendants' market"); Southaven Land Co. v. Malone & Hyde, Inc., 715 F.2d 1079, 1086 (6th Cir. 1983) ("[A] finding or concession that [plaintiff] is not a direct participant in the relevant market is not dispositive of the § 4 'standing' issue [because] *McCready* instructs that an injury 'inextricably intertwined' with the injury sought to be inflicted upon the relevant market or participants therein may fall 'within the area of congressional concern' so as to satisfy the § 4 inquiry."). The frequency with which the "inextricably intertwined" exception is litigated has robbed the rule of much of its value. *See* BAUER, *supra* note 6, § 78.6 nn.102–03 (collecting cases).

95. Doctrines that result in private recoveries equal to the optimal penalty can lead to over-deterrence when public sanctions are also imposed. Neither private nor public antitrust penalties formally take into account the possibility that the other set of sanctions will render the first set excessive.

96. Landes, *supra* note 78, at 656–57.

However the antitrust standing doctrine is characterized, a critical implication is that input suppliers selling to an actor with lawful monopsony power or to actors who compete in a market for the purchase of the input but exercise ill-gotten monopoly power in an output market do not have antitrust standing to recover for any injuries sustained from a reduction in the amount of input the antitrust offenders buy from them as a result of the exercise of monopoly power.[97] If the actors exercising monopoly power do not possess or at least do not exercise monopsony power, the input suppliers will sell less to them but at the same competitive input price. The suppliers would not absorb an underpayment, though they might incur an antitrust injury in the form of avoidable transaction costs incident to selling the input in other markets. If the actors exercise monopoly power, have monopsony power, and do not price discriminate, the suppliers will sell less to them at a price below that received prior to the exercise of monopoly power even if the actors do not exercise their monopsony power. Whether the actors have or do not have monopsony power, the suppliers do not have antitrust standing to complain about an unlawful exercise of monopoly power. In corresponding fashion, if actors exercise monopsony power but not monopoly power, suppliers have antitrust standing, but output purchasers do not, even if they suffer an injury.

The damages a private plaintiff may recover for an antitrust violation are intended to be compensatory, with adjustments made to account for various factors, the most important of which is the probability of recovery.[98] As a first approximation, damages are calculated to place the victim of an antitrust violation in the position it would have occupied but for the unlawful conduct.[99] The calculation, therefore, compares two

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97. *See* Asahi Glass Co. v. Pentech Pharms., Inc., 289 F. Supp. 2d 986, 990 (N.D. Ill. 2003) (Posner, J.) (citing Serfecz v. Jewel Food Stores, 67 F.3d 591, 597–99 (7th Cir. 1995)) (observing in a case where customers allegedly conspired to raise the price of a product that "[t]he general rule is that suppliers do not have 'standing' (a word that is used in this context to denote the right to sue rather than the existence of jurisdiction) to complain about a violation of the antitrust laws at the customer level."); *see also* Internal Med. Nephrology, Inc. v. Bio-Medical Applications of Ind., Inc., No. 2:18-cv-00506, 2019 U.S. Dist. LEXIS 165228, at *16–17 (S.D. Ind. Sept. 26, 2019) (holding that nephrology service provider did not have antitrust standing to assert claim that kidney dialysis provider had monopolized dialysis market).

98. *See* Landes, *supra* note 78, at 656–57.

99. *See*, *e.g.*, Bigelow v. RKO Radio Pictures, Inc., 327 U.S. 251, 263–64 (1946) (approving measure of damages based on difference between profits actually realized and "what, but for the conspiracy, would have been realized"); J. Truett Payne Co. v. Chrysler Motors Corp., 451 U.S. 557, 566 (1981) (recognizing that damages are based on "what plaintiff's situation would have been in the absence of the defendant's antitrust violation"); BAUER, *supra* note 6, § 79.1(b)(1) ("Damages for the victim of an antitrust violation should

states of the world, one of which is theoretical. Courts have long recognized that proving what the plaintiff's condition would have been but for the violation is difficult.[100] Further, rejecting an antitrust claim for insufficient evidence of the quantum of loss incurred creates a risk of both under-compensation and under-deterrence, the latter of which itself threatens to increase the social harm caused by antitrust violations. Courts have concluded that any uncertainty should benefit the victim rather than the wrongdoer.[101] They have, therefore, distinguished between proof of causal injury and proof of the amount of damages. A plaintiff must prove with a fair degree of certainty that the defendants' antitrust violation caused it some harm.[102] The burden of proving the dollar amount of that harm, however, is relaxed, though a loose constraint remains: The plaintiff's evidence of damages cannot be speculative.[103]

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attempt to place it in the same position as it would have been, absent the unlawful conduct. This analysis requires the trier of fact to determine the plaintiff's putative financial situation, 'but for' the violation.").

100. *See*, *e.g.*, *J. Truett Payne*, 451 U.S. at 565 (quoting Zenith Radio Corp. v. Hazeltine Research, Inc. 395 U.S. 100, 123 (1969)) ("'[Damage] issues in these cases are rarely susceptible of the kind of concrete, detailed proof of injury which is available in other contexts.'"); Texaco, Inc. v. Hasbrouck, 496 U.S. 543, 573 n.31 (1990) (quoting *J. Truett Payne*, 451 U.S. at 565–66, with approval).

101. *See* Eastman Kodak Co. v. S. Photo Materials Co., 273 U.S. 359, 379 (1927) (citing Hetzel v. Baltimore & Ohio R.R. Co., 169 U.S. 26, 39 (1898)) (noting that that "a defendant whose wrongful conduct has rendered difficult the ascertainment of the precise damages suffered by the plaintiff, is not entitled to complain that they cannot be measured with the same exactness and precision as would otherwise be possible"); *Bigelow*, 327 U.S. at 265 (citing Package Closure Corp. v. Sealright Co., 141 F.2d 972, 979 (2d Cir. 1944)) ("The most elementary conceptions of justice and public policy require that the wrongdoer shall bear the risk of the uncertainty which his own wrong has created.").

102. *See* Alabama v. Blue Bird Body Co., 573 F.2d 309, 317 (5th Cir. 1978) (holding that an antitrust plaintiff must prove injury causally linked to a violation "as a matter of fact and with a fair degree of certainty"); E. Compton Timberlake, *The Legal Injury Requirements and Proof of Damages in Treble Damage Actions Under the Antitrust Laws*, 30 GEO. WASH. L. REV. 231, 236 (1961) (noting that "the fact of damage [in private antitrust cases] must be proved with certainty").

103. As the Court in *Story Parchment Co. v. Paterson Parchment Paper Co.*, observed:

> [T]here is a clear distinction between the measure of proof necessary to establish the fact that petitioner had sustained some damage, and the measure of proof necessary to enable the jury to fix the amount. . . . Where the tort itself is of such a nature as to preclude the ascertainment of the amount of damages with certainty, it would be a perversion of fundamental principles of justice to deny all relief to the injured person, and thereby relieve the wrongdoer from making any amend for his acts. In such case, while the damages may not be determined by mere speculation or guess, it will be enough if the evidence show the extent of the damages as a matter of just and reasonable inference, although the result be only approximate.

282 U.S. 555, 562–63 (1931). *See Eastman Kodak*, 273 U.S. at 379 ("[T]he amount of damages could not be determined by mere speculation or guess, but must be based on evidence furnishing data from which the amount of the probable loss could be ascertained as a matter

The measure of damages varies by antitrust offense. When the antitrust violation takes the form of an exercise of monopoly power to raise the price the violators charged, the presumptive measure of actual damages suffered by purchasers is the overcharge, or the difference between the price charged and the price that would have been charged absent the violation, multiplied by the quantity purchased.[104] When the antitrust violation involves an unlawful exercise of monopsony power, the presumptive measure of actual damages is the underpayment, or the difference between the price received by the violator's supplier and the price that it would have received but for the violation, multiplied by the

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of reasonable inference."); *Zenith Radio Corp.*, 395 U.S. at 123 (recognizing "practical limits of the burden of proof" in exclusion case); New York v. Julius Nasso Concrete Corp., 202 F.3d 82, 88 (2d Cir. 2000) (recognizing that burden of proving causal injury is greater than burden of proving amount of damages); Fishman v. Estate of Wirtz, 807 F.2d 520, 550 (7th Cir. 1986) ("An antitrust plaintiff does not bear as onerous a burden in proving the dollar amount of his damages as he does in showing the fact of his antitrust injury."); Malley-Duff & Assoc., Inc. v. Crown Life Ins. Co., 734 F.2d 133, 148 (3d Cir. 1984) (quoting *Story Parchment*, 282 U.S. at 563); MCI Commc'ns Corp. v. Am. Tel. & Tel. Co., 708 F.2d 1081, 1161 (7th Cir. 1983) (citing *J. Truett Payne*, 451 U.S. at 566–67) ("Once *causation* of damages has been established, the *amount* of damages may be determined by a just and reasonable estimate as long as the jury verdict is not the product of speculation or guess work.") (emphasis in original); Terrell v. Household Goods Carriers' Bureau, 494 F.2d 16, 25 (5th Cir. 1974) ("We emphasize that once the causation hurdle has been overcome, the expert on damages need not be armed on the right hand with a slide rule, on the left hand with a computer. He is allowed some economic imagination so long as it does not become fantasy."); South-East Coal Co. v. Consolidation Coal Co., 434 F.2d 767, 794 (6th Cir. 1970) (citing *Story Parchment*, 282 U.S. at 563) ("The antitrust cases are legion which reiterate the proposition that, if the fact of damages is proven, the actual computation of damages may suffer from minor imperfections."); Arthur Murray, Inc. v. Oliver, 364 F.2d 28, 35 (8th Cir. 1966) (citing Anderson v. Mt. Clemens Pottery Co., 328 U.S. 680, 688 (1946)) ("When the fact is certain that antitrust injury has been inflicted on a party, it is sufficient as a basis for arriving at the damages that the evidence contains probative elements from which on reasonable inference their extent can with judgment be estimated."); K&G Men's Co. v. Carter, Civ. No. 10-309-JJB-SCR, 2010 U.S. Dist. LEXIS 95830, at *9–10 (M.D. La. Sept. 13, 2010) (first citing *Bigelow*, 327 U.S. at 265; and then citing *Eastman Kodak*, 273 U.S. at 379) ("After establishing that it has suffered damages, plaintiff must establish the amount of damages, and the evidence supporting its claim must be reliable and the amount of damages must not be speculative. Plaintiff's damages need not be calculated with absolute certainty, but there at least must be a reasonable basis for the computation.") (citations omitted); *see also* Roger D. Blair & William H. Page, *"Speculative" Antitrust Damages*, 70 WASH. L. REV. 423, 428 (1995) (arguing that "[s]peculativeness is primarily a deficiency in proof").

104. *See* Howard Hess Dental Labs. Inc. v. Dentsply Int'l, Inc., 424 F.3d 363, 374 (3d Cir. 2005) (citing ABA SECTION OF ANTITRUST LAW, PROVING ANTITRUST DAMAGES: LEGAL AND ECONOMIC ISSUES 172 (1996)) ("[T]he standard method of measuring damages in price enhancement cases is overcharge, not lost profits."); New York v. Hendrickson Bros., Inc. 840 F.2d 1065, 1077 (2d Cir. 1988) (citing Hanover Shoe, Inc. v. United Shoe Machinery Corp., 392 U.S. 481, 489 (1968)) ("Where the antitrust violation is a price-fixing conspiracy, the measure of damages to one of the coconspirators' customers is the difference between the prices actually paid and the prices that would have been paid absent the conspiracy.").

quantity it sold.[105] When the antitrust plaintiff is a competitor who is injured by the exclusionary conduct of the violators, the presumptive measure of damages is the profits lost by the plaintiff as a result of the unlawful conduct.[106]

B. The Indirect Purchaser Rules

The *Illinois Brick* doctrine generally bars remote buyers of price-fixed goods from suing sellers for antitrust damages.[107] But two cases decided before *Illinois Brick* undergird the doctrine. In *Hanover Shoe, Inc. v. United Shoe Machinery Corp.*, a shoe manufacturer sued to recover damages under § 4 of the Clayton Act from a shoe machinery manufacturer, which the courts had found in a government case had monopolized the shoe machinery industry.[108] The defendant argued that the plaintiff had not been injured, as required to assert a claim under § 4, because the plaintiff had passed on any overcharges attributable to its ill-gotten monopoly power to the plaintiff's customers, or shoe buyers.[109] The Court rejected the argument.[110] The Court was skeptical that the real-world economic conditions necessary for an overcharge in its entirety to be passed on to customers with no loss of profit could be established in litigation.[111] If the direct purchaser lost profits because of the overcharge, perhaps by being forced to absorb some of it, the direct purchaser would suffer an injury in fact sufficient to satisfy the injury requirement of § 4.[112]

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105. *See* Union Carbide & Carbon Corp. v. Nisley, 300 F.2d 561, 575–80 (10th Cir. 1961) (recognizing that measure of damages caused by price-fixing conspiracy among buyers is based on amount by which price was depressed from competitive price); 8 ANTITRUST LAWS AND TRADE REGULATION (2d ed.) § 171.03[3][a][i] ("In monoposony [sic] cases, where buyers exercise monopoly power over goods or services they purchase, the measure of damages may be the lower price paid or undercharge."); *see also* Sanner v. Bd. of Trade, 62 F.3d 918, 929 (7th Cir. 1995) (implying that damages suffered by farmers as a result of price fixing in soybean purchase markets was measured by depression in soybean prices).

106. *See Zenith Radio Corp.*, 395 U.S. at 123–24 (endorsing lost profits as measure of damages in exclusion case); *Bigelow*, 327 U.S. at 262–63 (holding that "a fair measure of the damage" from exclusion is lost profits); LePage's, Inc. v. 3M, 324 F.3d 141, 165 (3d Cir. 2005) (recognizing lost profits as the measure of damages in monopolization case); BAUER, *supra* note 6, § 79.1(b)(2) ("When the defendant's conduct excludes the plaintiff from a market or drives it out of business, . . . the most common form of relief is either the firm's lost profits and/or the going concern value of the business.").

107. *See* Illinois Brick Co. v. Illinois, 431 U.S. 720, 736 (1977).

108. 392 U.S. 481, 483–84 (1968).

109. *See id.* at 487–88, 491–92.

110. *See id.* at 492.

111. *Id.* at 492–93.

112. *See id.* at 493.

The Court was also concerned that recognizing a pass-on defense would allow an antitrust violator to prove that buyers at each successive level down a distribution chain passed on the overcharge to their customers, so that buyers at only the final level could recover.[113] But those buyers would have incurred only a trivial increase in the price of the finished good, such as the price increment in a pair of shoes attributable to an overcharge in shoe machinery prices, and they likely would have little interest in pursuing a class action.[114] As a result, antitrust violators would not be brought to task, and the treble-damage remedy would become less effective.[115]

The Court recognized the possibility that the passing-on defense might be permitted in some situations, explicitly identifying a "cost-plus" contract, where an illegal overcharge would be added in full to the price the direct purchaser would otherwise have charged its customer under a pre-existing contract and sell the same quantity.[116] In these circumstances, the direct purchaser would suffer no injury in fact.[117] Otherwise, the Court rejected the passing-on defense, which meant that a direct purchaser could recover as damages the entire overcharge imposed by the antitrust violator regardless of whether that purchaser in fact passed on part of that overcharge to its buyer.

In *Hawaii v. Standard Oil Co.*, decided four years after *Hanover Shoe*, the State of Hawaii sued for damages under § 4 of the Clayton Act for injury to its economy caused by a price-fixing conspiracy among oil companies.[118] The Court rejected the claim, primarily because permitting the claim "would open the door to duplicative recoveries."[119] Section 4 gives participants in the Hawaiian economy the right to recover damages for injuries they suffer, and a "large and ultimately indeterminable part of the injury to the 'general economy,' as it is measured by economists, is no more than a reflection of the injuries to the 'business or property' of

113. *See Hanover Shoe, Inc.*, 392 U.S. at 494.

114. *See id.*

115. *See id.*

116. *Id*. The Court also noted that "where no differential can be proved between the price unlawfully charged and some price that the seller was required by law to charge, establishing damages might require a showing of loss of profits to the buyer." *Id*. The suggestion is that in such a case, the antitrust violation does not result in an overcharge, but the direct purchaser may be able to recover its lost profits.

117. *See* Herbert Hovenkamp, *The Indirect Purchaser Rule and Cost-Plus Sales*, 103 HARV. L. REV. 1717, 1720 (1990).

118. 405 U.S. 251, 252–53 (1972).

119. *Id*. at 263–64.

consumers."[120] Implicit in the Court's reasoning is that the antitrust laws impose a limit on antitrust damage liability, and duplicative recoveries are impermissibly excessive.

In *Illinois Brick*, building purchasers, who happened to be governmental entities, alleged that concrete block manufacturers conspired to raise the price of block and sought damages under § 4.[121] Block manufacturers sold their output to masonry contractors, who included the price of the block in their bids to general contractors, whose own bids to building owners incorporated the block price.[122] The Court held that, with few exceptions, indirect purchasers do not have standing under § 4 to recover damages based on overcharges imposed by antitrust violators.[123] The Court first concluded, with support of the parties, that pass-on rules must be symmetrical.[124] If *Hanover Shoe*, which bars the use of the pass-on theory by direct-purchasing defendants, stands, indirect purchasers must be barred from recovering overcharge damages; if indirect purchasers are allowed to recover, direct purchasers must be allowed to assert the pass-on defense, and *Hanover Shoe* would have to be overruled or severely restricted.[125] The possibility of allowing offensive but not defensive use of the pass-on theory was all but foreclosed by *Hawaii*. That case rests on the principle that § 4 does not permit the imposition of multiple liability.[126] Asymmetrical pass-on rules favoring plaintiffs would allow indirect purchasers to recover damages from absorbing some of the overcharge while preventing defendants from avoiding liability to direct purchasers for the entire overcharge.[127]

The Court, therefore, had to choose between allowing use of the pass-on theory by both defendants and plaintiffs, a decision that would mean overruling or narrowing *Hanover Shoe*, and prohibiting use by both.[128] The Court chose the latter.[129] The Court reasoned that permitting symmetrical use of the theory would dramatically increase litigation costs, for potentially multiple levels of purchasers would have to be

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120. *Id.* at 264. Congress amended § 4 of the Clayton Act in 1976 to permit parens patriae actions by state attorneys general, cabining the right of action to avoid duplicative recoveries. *See* 15 U.S.C. § 15c(a)(1) (2021).

121. *See* Illinois Brick Co. v. Illinois, 431 U.S. 720, 726–27 (1977).

122. *See id.*

123. *See id.* at 736.

124. *Id*. at 728.

125. *See id.*

126. *See Illinois Brick*, 431 U.S. at 730–31 (citing Hawaii v. Standard Oil Co., 405 U.S. 251, 264 (1972)).

127. *See id.*

128. *See id.* at 736.

129. *Id.*

involved, and proving the amount of overcharge absorbed at each level would be difficult.[130] Already complex antitrust litigation would become more complex.[131] Further, private antitrust enforcement is promoted by concentrating the right to recover in a single distribution level.[132] As the stakes increase, parties are more likely to incur the expected costs of litigation.

The Court observed that § 4 serves two purposes: deterrence and compensation.[133] One can argue on economic grounds that deterrence is the more important purpose, for if a remedy effectively deters a violation, no compensation is required.[134] The Court took a different tack. Prohibiting indirect purchasers from recovering could frustrate the legitimate goal of compensation, but if indirect-purchaser suits were allowed, many indirect purchasers would have suffered such small losses that they would not bother to collect damages obtained in class actions brought on their behalf.[135] Further, much of the compensation to which they would be entitled would be consumed in expenses incurred in litigating pass-on amounts. Permitting offensive use of pass-on, therefore, would not result in meaningful compensation for indirect purchasers.[136] In short, the benefits of efficient deterrence outweigh the costs of imperfect compensation.

130. *See id.* at 730–33.

131. *See Illinois Brick*, 431 U.S. at 730–33.

132. *See id.* at 745–46. Direct purchasers are the most appropriate recipients of the right to recover all damages because their proximity to the offenders results in information costs of detecting a violation that are lower than the costs incurred by indirect purchasers. *See* William M. Landes & Richard A. Posner, *Should Indirect Purchasers Have Standing to Sue Under the Antitrust Laws?: An Economic Analysis of the Rule of* Illinois Brick, 46 U. CHI. L. REV. 602, 609 (1979).

133. *See Illinois Brick*, 431 U.S. at 746 (quoting *Hanover Shoe,* 392 U.S. at 494).

134. *See* Landes & Posner, *supra* note 132, at 605; *see also* KENNETH G. ELZINGA & WILLIAM BREIT, THE ANTITRUST PENALTIES 96 (1976) (arguing for antitrust fines as the efficient antitrust remedy because the compensatory remedy established in the statutory right to treble damages is an inefficient method of achieving deterrence).

135. *See Illinois Brick*, 431 U.S. at 747.

136. One can argue that expected damages recoveries by direct purchasers will be passed on to indirect purchasers, so that indirect purchasers will be compensated through reductions in the price of the goods. *See* Landes & Posner, *supra* note 132, at 605 (explaining that indirect purchasers "obtain, in the form of lower prices, a benefit equivalent to the anticipated value of the antitrust damage claims that they are denied, discounted for the uncertainties of recovery"); Paper Sys. Inc. v. Nippon Paper Indus. Co., 281 F.3d 629, 633 (7th Cir. 2002) ("The prospect of recovery also acts like a cents-off coupon to the initial buyer, which given competition at the distribution stage is forced to pass on this anticipated discount, and so protects remote customers from the effects of the cartel if deterrence fails."); *see generally* John E. Lopatka & William H. Page, *Indirect Purchaser Suits and the Consumer Interest*, 48 ANTITRUST BULL. 531 (2003) (arguing that indirect purchaser suits by consumers, which are permitted under some state laws, did not result in significant compensation).

The Court rejected proposals to carve out broad exceptions to *Hanover Shoe*, which would have allowed symmetrical use of pass on for particular types of markets, such as those in which "middlemen . . . resell goods without altering them" or "contractors . . . add a fixed percentage markup to the cost of their materials in submitting bids."[137] The Court reasoned that determining whether an exception applied would entail just the kind of litigation complexity that *Hanover Shoe* wanted to avoid.[138] The Court noted that *Hanover Shoe* had given only one example of a situation in which a pass-on defense "might be permitted," that being a cost-plus contract,[139] and it suggested that the pass-on defense might be permitted as well "where the direct purchaser is owned or controlled by its customer."[140] Most likely the Court meant to include if not describe the situation where the direct purchaser is owned or controlled by its *supplier*,[141] and the exception so understood fits comfortably within the rationale of *Illinois Brick*. Both in the context of the cost-plus contract and the ownership-or-control circumstance, the administrative costs of calculating the amount of overcharge incurred by the indirect purchaser are relatively low. Moreover, in the latter context, the function of antitrust damages as a deterrent is undercut by a rigid application of *Illinois Brick* because the direct purchaser will have no incentive to sue its affiliated supplier.[142] The Court thus implied that any exceptions to the symmetrical

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137. *Illinois Brick*, 431 U.S. at 743.

138. *See id.* at 744–45.

139. *Id.* at 735–36.

140. *Id.* at 736 n.16 (citing Perkins v. Standard Oil Co., 395 U.S. 642, 648 (1969)).

141. *See*, *e.g.*, *In re* Brand Name Prescription Drugs Antitrust Litig., 123 F.3d 599, 605 (7th Cir. 1997) (quoting *Illinois Brick*, 431 U.S. at 736 n.16) ("*Utilicorp* implies that the only exceptions to the *Illinois Brick* doctrine are those stated in *Illinois Brick* itself—'where the direct purchaser is owned or controlled by its customer,' . . . or, we suppose, vice versa."); *In re* Mid-Atlantic Toyota Antitrust Litig., 516 F. Supp. 1287, 1292 (D. Md. 1981) (citing *In re* Beef Indus. Antitrust Litig., 600 F.2d 1148, 1160–61 (5th Cir. 1979) ("[T]he unanimous view is that the exception applies not only where the direct purchaser is owned or controlled by its customer, but also where it is owned or controlled by its supplier.").

142. The lower courts have emphasized this rationale for the ownership-or-control exception. *See*, *e.g.*, Freeman v. San Diego Ass'n of Realtors, 322 F.3d 1133, 1145–46 (9th Cir. 2003) (citing Royal Printing Co. v. Kimberly-Clark Corp., 621 F.2d 323, 326 (9th Cir. 1980)) (finding indirect purchaser had standing where direct purchaser owned antitrust violator because "indirect purchasers can sue for damages if there is no realistic possibility that the direct purchaser will sue its supplier over the antitrust violation."); *Royal Printing Co.*, 621 F.2d at 326 (noting that "*Illinois Brick* does not bar an indirect purchaser's suit where the direct purchaser is a division or subsidiary of a co-conspirator" because the likelihood of a suit by the direct purchaser is small). Courts have relied on the ownership-or-control exception to allow purchasers to sue their suppliers when those suppliers, though not owned or controlled by their own suppliers, enter into a vertical conspiracy with their suppliers, calling this the "co-conspirator," or "vertical conspiracy," exception to *Illinois Brick*. In such a case, the plaintiff is an indirect purchaser from the higher-level vertical conspirator. *See*,

pass-on rules would be narrow, recognized only when necessary to serve the objectives of the indirect-purchaser rules.

The Court later emphasized its reluctance to recognize exceptions. In *Kansas v. Utilicorp United, Inc.*, it denied standing to natural gas consumers who alleged that gas pipelines and production companies conspired to raise prices charged to gas utilities, who included the overcharge in the regulated prices they charged consumers.[143] The direct-purchasing utilities separately sued, and the Court concluded that even though the direct purchasers and indirect purchasers sought different, non-duplicative damages, thus eliminating the rationale of *Illinois Brick* based on the risk of multiple recovery, recognizing an exception would complicate litigation, another *Illinois Brick* concern.[144] The Court pointedly referred to a cost-plus contract as a "possib[le]" exception but concluded that sale by a direct-purchasing regulated utility does not fall within the principle underlying such an exception anyway because the indirect purchasers did not establish that "the direct purchaser will bear no portion of the overcharge and otherwise suffer no injury."[145] The Court

e.g., *In re* Nat'l Football League's Sunday Ticket Antitrust Litig., 933 F.3d 1136, 1157 (9th Cir. 2019) (allowing purchaser from vertical output-reducing conspiracy to maintain action for damages); Lowell v. Am. Cyanamid Co., 177 F.3d 1228, 1231 (11th Cir. 1999) (citing Arizona v. Shamrock Foods Co., 729 F.2d 1208, 1212 (9th Cir. 1984)); *Shamrock Foods Co.,* 729 F.2d at 1212 (citing Fontana Aviation, Inc. v. Cessna Aircraft Co., 617 F.2d 478, 481 (7th Cir. 1980)) (endorsing rule adopted by "[n]umerous other courts" that *Illinois Brick* is "inapplicable to claims against remote sellers when the plaintiffs allege that the sellers conspired with intermediates in the distribution chain to fix the price at which the plaintiffs purchased"); *Fontana Aviation*, *Inc.,* 617 F.2d at 481; Laumann v. Nat'l Hockey League, 907 F. Supp. 2d 465, 480–83, 482 n.94 (S.D.N.Y. 2012). Judge Easterbrook has asserted that, rather than referring to the vertical-conspiracy situation as an "exception" to the indirect purchaser rule, *Hanover Shoe* and *Illinois Brick* should be understood to establish a rule "allocat[ing] to the first non-conspirator in the distribution chain the right to collect 100% of the damages." Paper Sys. Inc. v. Nippon Paper Indus. Co., 281 F.3d 629, 632 (7th Cir. 2002); *see* Marion Healthcare, LLC v. Becton Dickinson & Co., 952 F.3d 832, 839 (7th Cir. 2020) (following *Paper Systems* in holding that purchasers from distributors that conspired with manufacturer were not barred by *Illinois Brick*; the "conspiracy 'exception' . . . is not so much a real exception as it is a way of determining which firm, or group of firms collectively, should be considered to be the relevant seller (and from that, identifying which one is the direct purchaser) for purposes of the [*Illinois Brick*] rule").

143. *See* 497 U.S. 199, 204, 208 (1990).

144. *See id.* at 212–13.

145. *Id.* at 218. The Seventh Circuit, in an opinion by Judge Posner, had held that consumers in the setting of regulated rates did fall within the cost-plus contract exception (*see* Illinois *ex rel.* Hartigan v. Panhandle E. Pipe Line Co., 852 F.2d 891, 899 (7th Cir. 1988)), and Judge Posner as an academic was a leading proponent of *Illinois Brick*. *See* Landes & Posner, *supra* note 132, at 603. The Supreme Court accepted certiorari in *Utilicorp* to resolve a conflict between the Tenth Circuit, which had barred the utility customers' action, and the Seventh Circuit's decision in *Panhandle*. *See Utilicorp*, 497 U.S. at 206. The fact that the

thus reserved the possible exception typified by a cost-plus contract to cases in which the direct purchaser obviously suffered no loss whatsoever. The Court observed generally, "[E]ven assuming that any economic assumptions underlying the *Illinois Brick* rule might be disproved in a specific case, we think it an unwarranted and counterproductive exercise to litigate a series of exceptions."[146]

The Court's indirect-purchaser cases are antitrust-standing decisions. In sum, they establish that direct purchasers have standing to recover damages under § 4 of the Clayton Act and indirect purchasers do not. Any exceptions to these rules are narrow. The rules apply whether the underlying antitrust offense is a violation of § 1 or § 2 of the Sherman Act, where the measure of the plaintiff's injury is an overcharge.[147] When the allegation is that an antitrust defendant has unlawfully increased the price of a good, the pass-on theory is implicated, and the principles apply. All these Supreme Court cases involve defendants who sold products. But § 1 prohibits conspiracies among buyers to decrease the price paid for goods,[148] and § 2 prohibits the unlawful acquisition and exploitation of

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Supreme Court rejected an exception for consumers paying regulated rates indicates how narrow the Court intended any exceptions to be.

146. *Id.* at 217. Another situation in which *Illinois Brick* has been held not to bar a suit by an indirect purchaser is that in which the indirect purchaser sues merely for prospective equitable relief, a case that would not be brought under § 4 of the Clayton Act but under § 16. *See*, *e.g.*, Lakeland Reg'l Med. Ctr. v. Astellas U.S., LLC, 763 F.3d 1280, 1290 (11th Cir. 2014) (citing *In re Beef Indus. Antitrust Litig*., 600 F.2d at 1167); Freeman v. San Diego Ass'n of Realtors, 322 F.3d 1133, 1145 (9th Cir. 2003) (citing Lucas Auto. Eng'g, Inc. v. Bridgestone/Firestone, Inc., 140 F.3d 1228, 1235 (9th Cir. 1998)); McCarthy v. Recordex Serv., Inc., 80 F.3d 842, 856 (3d Cir. 1996). The complexities of apportionment and the risk of multiple liability disappear when only an injunction is sought. Courts have held, however, that *Illinois Brick* bars indirect-purchaser suits for the equitable remedy of disgorgement under § 16, because even if these suits do not complicate litigation by requiring the calculation of pass-on percentages, they do pose a threat of multiple liability. *See*, *e.g.*, Ortiz v. Ferrellgas Partners, L.P. (*In re* Pre-Filled Propane Tank Antitrust Litig.), 893 F.3d 1047, 1058–59 (8th Cir. 2018); FTC v. Mylan Labs., Inc. 62 F. Supp. 2d 25, 41–42 (D.D.C. 1999) (citing *Illinois Brick*, 431 U.S. at 741). Though suits for prospective injunctive relief do not raise either of the concerns identified in *Illinois Brick*, the dissenting justices in *Apple* implied that they are barred because indirect purchasers are not proximately injured by an antitrust violation and therefore lack antitrust standing. *See* Apple Inc. v. Pepper, 139 S. Ct. 1514, 1527 n.1 (Gorsuch, J., dissenting) (citing Lexmark Int'l, Inc. v. Static Control Components, Inc., 572 U.S. 118, 135 (2014)).

147. Customers alleging that their supplier violated Clayton Act § 3, 15 U.S.C. § 14 (2021), by engaging in tying or exclusive dealing also would seek damages measured by an overcharge, and the indirect-purchaser rules would apply to them as well. *See In re* Keurig Green Mt. Singleserve Coffee Antitrust Litig., 383 F. Supp. 3d 187, 209, 223 (S.D.N.Y. 2019) (recognizing that direct purchaser but not indirect purchasers had standing to assert claims based in part on Clayton Act § 3).

148. *See*, *e.g.*, Mandeville Island Farms, Inc. v. Am. Crystal Sugar Co., 334 U.S. 219, 227 (1948) (concluding that complaint alleging a conspiracy among sugar refiners to depress the

monopsony power.[149] Buyers who exploit market power typically make underpayments to their suppliers. The Court's reasoning in crafting indirect-purchaser rules applies with equal force to cases in which a buyer or group of buyers exercise market power.[150] Direct sellers to an antitrust violator exercising monopsony power have standing to sue for damages based on the underpayment; indirect sellers do not.

The indirect-purchaser rules assume that goods are sold. For reasons apart from the application of the antitrust standing doctrine, the Court has grappled with the implications of consignment. In *Dr. Miles Medical Co. v. John D. Park & Sons & Co.*, the Court held that resale price maintenance agreements between a supplier and distributor were illegal per se.[151] Firms might be able to avoid the rule if sellers consigned rather than sold goods to distributors. The Court at first concluded that a consignment agreement under which the price charged by the agent is set by the principal does not violate § 1 of the Sherman Act.[152] Indeed, no one would argue that an artist setting the price a gallery can charge for his or her painting entered into an illegal vertical price-fixing agreement.[153] The Court, though, drastically narrowed its holding nearly forty years later and held that consignment agreements fixing the consignee's price, at least when used throughout a vast distribution system in which the agents serve the same economic function as ordinary distributors, do violate § 1.[154] One lower court, examining the Supreme Court's teaching, concluded that the test of illegality is "whether the agency relationship has a function other than to circumvent the rule against price fixing."[155] When the Supreme Court repudiated the per se rule against resale price maintenance in favor of the rule of reason,[156] the

prices paid to sugar beet growers stated an antitrust cause of action under § 1 as well as § 2 of the Sherman Act).

149. *See, e.g.*, Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 549 U.S. 312, 325 (2007) (recognizing that predatory bidding by a buyer can violate § 2 just as predatory pricing by a seller can do so).

150. *See, e.g.*, Zinser v. Cont'l Grain Co., 660 F.2d 754, 760–61 (10th Cir. 1981) (holding that the *Illinois Brick* rule applies when antitrust violators depress prices paid to suppliers); *see also In re* Beef Indus. Antitrust Litig., 600 F.2d 1148, 1158–59 (5th Cir. 1979) (holding that in general indirect sellers to antitrust violators are barred from suing for damages under *Illinois Brick*).

151. 220 U.S. 373, 408 (1911).

152. *See* United States v. GE Co., 272 U.S. 476, 488 (1926).

153. *See* Simpson v. Union Oil Co. of Cal., 377 U.S. 13, 18, 21 (1964) (recognizing that "[o]ne who sends a rug or a painting or other work of art to a merchant or a gallery for sale at a minimum price can, of course, hold the consignee to the bargain").

154. See *id.* at 21–22.

155. Morrison v. Murray Biscuit Co., 797 F.2d 1430, 1436 (7th Cir. 1986).

156. *See* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 885 (2007).

significance of the consignment cases waned.[157] Nevertheless, the possibility of consignment potentially complicates indirect-purchaser rules to the extent those rules are dependent on the sale of goods. For example, if the purchaser of goods is functioning as the agent of ultimate customers, those customers might be deemed the direct purchasers for purposes of an antitrust claim against the initial suppliers.[158]

To summarize, three principles emerge from the Court's pass-on cases. First, private parties have the right to recover the entire overcharge caused by an antitrust violation. Second, private parties may not recover more than the entire overcharge. Third, antitrust standing rules should accomplish the objective of optimal recovery as efficiently as possible. These principles apply analogously and with equal force when an antitrust violation results in an underpayment.

II. *APPLE INC. V. PEPPER* & PLATFORM CASES

In *Apple Inc. v. Pepper*, the Court confronted the application of the indirect purchaser rules to a platform market. Apple, the seller of the iPhone, through contract and technological limitations requires iPhone users to obtain apps solely through Apple's App Store.[159] Apps perform the myriad functions for which a modern "smartphone" can be used. Apps are written to specific operating systems used in smartphones, and so, for instance, an app written for the iOS in an Apple iPhone will not function on a smartphone running the Android operating system. The App Store at the time of the Court's decision contained some 2 million apps.[160] Most apps are created by independent developers, who contract with Apple to make their apps available to iPhone owners in the App Store. iPhone owners, or consumers, then purchase and download apps from the App Store. To sell an app in the App Store, app developers must pay Apple a

157. The significance waned but did not disappear. *See* Valuepest.com of Charlotte, Inc. v. Bayer Corp., 561 F.3d 282, 287–88 (4th Cir. 2009) (holding that *Leegin* did not overrule cases excluding consignment agreements from the ambit of the per se rule against vertical price fixing in favor of rule-of-reason analysis).

158. *See, e.g.*, *In re* Cathode Ray Tube (CRT) Antitrust Litig., 720 F. App'x 835, 837 (9th Cir. 2017) (implying that members of buyers' cooperative rather than cooperative itself would be direct purchasers from suppliers if cooperative served as agent of members); *see also* Diskin v. Daily Racing Form, Inc., No. 92 Civ. 6374 (MBM), 1994 U.S. Dist. LEXIS 9129, at *12–15 (S.D.N.Y. 1994) (finding sufficient facts to support determination that retailers of daily racing form were agents of publisher so that customers were direct purchasers from publisher); *see also In re* Toilet Seat Antitrust Litig., No. 75-184, 1976 U.S. Dist. LEXIS 14904, at *6 (E.D. Mich. 1976) (holding that purchasing company functioned as agent of its customer such that customer was the direct purchaser of goods procured by company from supplier).

159. Apple Inc. v. Pepper, 139 S. Ct. 1514, 1519 (2019).

160. *Id.*

ninety-nine dollar annual membership fee.[161] App developers set their own retail prices for apps, though Apple requires the prices to end in $0.99.[162] Apple keeps thirty percent of the sales price as a commission.[163] Consumers alleged that Apple monopolized the retail market for the sale of iPhone apps in violation of § 2 of the Sherman Act and consequently charges supra-competitive prices.[164] They sought damages under § 4 of the Clayton Act. Apple responded that iPhone owners are not direct purchasers of apps from Apple and that their claim, therefore, is barred under *Illinois Brick*.

The Court decided 5–4 in an opinion written by Justice Kavanaugh that the *Illinois Brick* rule does not bar the iPhone owners' suit. The Court ultimately found *Apple* a simple case: *Illinois Brick* allows only direct purchasers from an antitrust violator to sue for overcharge damages; iPhone owners bought apps directly from Apple; iPhone owners may sue Apple.[165] The Court observed that its conclusion was supported by the text of § 4 as well as its indirect-purchaser precedents, citing *UtiliCorp* and *Illinois Brick*:[166] "*Illinois Brick* established a bright-line rule that authorizes suits by *direct* purchasers but bars suits by *indirect* purchasers."[167] "The absence of an intermediary [between Apple and the consumer] is dispositive."[168] End of story.

The Court rejected Apple's proposed rule that "*Illinois Brick* allows consumers to sue only the party who sets the retail price, whether or not that party sells the good or service directly to the complaining party."[169] The rule would apply most naturally in consignment cases, where the principal sets the price of the product to be charged by the agent. The proposed rule would allow consumers to sue the principal, if he or she committed an antitrust offense that injured them, but not the agent. Such

161. *Id.*
162. *Id.* The economic implications of Apple's ninety-nine-cent rule are not explored in this article.
163. *Id.* Since the Court decided *Apple*, the company announced that in 2021 it would lower its commission to fifteen percent for developers that generate no more than one million dollars in revenue from its software platform. *See* Tim Higgins & Sarah E. Needleman, *Apple Slashes App Store Fees for Smaller Developers*, WALL ST. J. (updated Nov. 18, 2020, 5:23 PM), https://www.wsj.com/articles/apple-under-antitrust-scrutiny-halves-app-store-fee-for-smaller-developers-11605697203. The analysis in this article is not affected by the level of commission.
164. *Apple*, 139 S. Ct. at 1519.
165. *Id.* at 1520.
166. *Id.*
167. *Id.*
168. *Id.* at 1521.
169. *Apple*, 139 S. Ct. at 1521.

a theory, according to the Court, contradicts statutory text and precedent,[170] unlike its conclusion, which is supported by both.

Further, the proposed rule is economically and legally unpersuasive because it "would draw an arbitrary and unprincipled line" based on the form of relationship between retailers and their suppliers.[171] Arrangements between a supplier and retailer can take many forms, such as a traditional markup pricing model and a commission pricing model. In a markup model, a retailer buys the product from a supplier at one price, then sells it at a higher price. The Court explained that, for example, a retailer with monopoly power might pay six dollars to the supplier, sell the product for ten dollars, and keep four dollars.[172] In a commission model, the retailer does not buy the product from a supplier but agrees that it will sell the product for a specified price and retain a specified commission.[173] Thus, the retailer with monopoly power might agree with the supplier to sell the product for ten dollars and keep forty-percent of the sales price as a commission; the supplier receives six dollars, and the retailer retains four dollars.[174] The positions of the consumer, supplier, and retailer in the markup model are identical to those in the commission model, yet Apple's proposed rule would allow the consumer to sue the retailer in the markup model but not the commission model.[175] The disparate legal treatment would invite monopolistic retailers to insulate themselves from liability by using the commission model.[176]

The Court also observed that the reasons for the *Illinois Brick* rule cut against the proposed rule and in favor of the Court's conclusion. Those reasons, which mirror the principles identified above,[177] are as follows: "(1) facilitating more effective enforcement of antitrust laws; (2) avoiding complicated damages calculations; and (3) eliminating duplicative damages against antitrust defendants."[178] Enforcement is enhanced under a rule that will allow consumers to sue monopolistic retailers even if suppliers can sue them as well.[179] Damage calculations may be complicated, but that is not a sufficient reason to preclude recovery. They will require expert testimony to determine the price in a competitive retail market, but that is not unusual in an antitrust case.

170. *Id.* at 1522.
171. *Id.*
172. *Id.* at 1531.
173. *Id.*
174. *Apple*, 139 S. Ct. at 1531.
175. *See id.* at 1522.
176. *Id.* at 1523.
177. *See supra* text following note 168.
178. *Apple*, 139 S. Ct. at 1524.
179. *See id.*

Further, the calculations might be just as complicated in a markup case as in a commission case, yet Apple's rule would permit the consumer's action in the former.[180] Finally, the Court asserted its rule does not expose retailers to multiple liability because consumers asserting monopolization and suppliers asserting monopsonization against the same retailer would be seeking different measures of damages.[181] They would not be fighting over a common fund with the possibility of duplicative recoveries, as in the indirect-purchaser context examined in *Illinois Brick*.[182]

When an antitrust violator sells a product to a customer at an inflated price, the indirect-purchaser rules permit that customer but not its customers to recover damages. Is this because only the first customer transacts with the violator or because only the first customer is proximately injured by the violation? In a typical setting, the direct purchaser satisfies both the transaction condition and the proximate-cause condition. Justice Gorsuch, writing for four dissenting justices, argued that *Illinois Brick* merely applied a long-standing statutory requirement of proximate cause.[183] Purchasers who are injured because an overcharge imposed by an antitrust violator is passed on to them through intermediate purchasers have no antitrust standing because any injuries they suffer are not proximately caused by the violator. That they do not contract directly with the violator is unimportant:

> *Illinois Brick* held that . . . convoluted 'pass on' theories of damages violate traditional principles of proximate causation . . . [The Court] recast[s] *Illinois Brick* as a rule forbidding only suits where the plaintiff does not contract directly with the defendant. This replaces a rule of proximate cause and economic reality with an easily manipulated and formalistic rule of contractual privity.[184]

The dissenters argued that the rule of proximate cause permits only app developers to sue Apple for damages. According to the dissenters,

> the 30% commission falls initially on the developers. So if the commission is in fact a monopolistic overcharge, the *developers* are the parties who are directly injured by it. Plaintiffs can be injured only if the developers are able and choose to pass on the overcharge to them in the form of higher app prices that the developers alone control.[185]

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180. *See id.*
181. *See id.* at 1525.
182. *See id.* at 1524–25.
183. *Apple*, 139 S. Ct. at 1525–26 (Gorsuch, J., dissenting).
184. *See id.*
185. *Apple*, 139 S. Ct. at 1528 (Gorsuch, J., dissenting).

The dissenters claimed that the iPhone owners' damages claim "is *exactly* the kind of 'pass-on theory' *Illinois Brick* rejected."[186] The plaintiffs' theory, adopted by the Court, "will necessitate a complex inquiry into how Apple's conduct affected third-party pricing decisions."[187]

The dissenters believed that the Court's decision conflicts with two of the principles underlying *Illinois Brick*: administrative efficiency and avoidance of duplicative liability. Determining the extent to which a commission charged a developer for sale of an app on a platform is reflected in the price paid by the consumer will inevitably be complicated, implying high costs of litigation. Further, if the commission reflects a monopoly overcharge, the platform can in no event be held liable in damages for more than the amount of the commission.[188] The app developers have a claim, and the Court's decision, according to the dissenters, must mean that *Hanover Shoe* is overruled, thus allowing Apple to reduce its liability to them to the extent they passed on overcharges to consumers.[189] Consumers may recover for the portion of the commission they absorbed, and so the platform is at risk of excessive liability unless developers and consumers are joined in a single suit, representing precisely the kind of litigation complexity *Illinois Brick* sought to avoid.

The dissenters took direct aim at the Court's assertion that distinguishing between a markup and a commission distribution arrangement would be arbitrary. The dissenters claimed that allowing only consumers to sue when a retailer uses a markup model and only suppliers to sue when it uses a commission model is consistent with a rule of proximate cause, and using that rule is not arbitrary. In the markup model, "the markup falls initially on the consumer, so there's no doubt that the retailer's anticompetitive conduct proximately caused the consumer's injury."[190] In the commission model, however, "the commission falls initially on the manufacturer, and the consumer won't feel the pain unless the manufacturer can and does recoup some or all of

186. *Id.* (Gorsuch, J., dissenting).

187. *Id.* (Gorsuch, J., dissenting).

188. *See id.* at 1529 n.3 (Gorsuch, J., dissenting) ("Apple charged only one commission on each sale. So even assuming for argument's sake that the 30% commission was entirely illegal, Apple can only be required to pay out in damages, at most the full amount it received in commissions").

189. *See id.* at 1529 (Gorsuch, J., dissenting).

190. *Apple*, 139 S. Ct. at 1531 (Gorsuch, J., dissenting).

the elevated commission by raising its own prices."[191] When the retailer charges a commission, consumers can't establish proximate cause.

Apple was not the first case in which a court grappled with the issue of standing to sue a platform for damages. The Ninth Circuit in *Apple*, which had held that iPhone owners did have standing, disagreed with an Eighth Circuit decision denying consumer standing in "a transaction closely resembling" the *Apple* transaction.[192] In *Campos v. Ticketmaster Corp.*,[193] concertgoers alleged that a ticket distribution service, Ticketmaster, unlawfully monopolized ticket distribution services to large-scale popular music shows. It acquired monopoly power by entering into exclusive dealing arrangements with promoters, which allowed it to force venues and consumers to use its services.[194] Consumers transacted directly with Ticketmaster, which charged them supra-competitive ticketing fees "as high as twenty dollars per ticket."[195] The court found that the "billing practices" were not determinative.[196] The court, 2-1, held that the consumers' suit was barred by *Illinois Brick*, and it implied that the venues were the proper plaintiffs to challenge any monopolization by the ticket distributor.[197] Dissenting, Judge Arnold argued that *Illinois Brick* bars an action by a purchaser only when an antecedent transaction (1) occurred "in a direct vertical chain of transactions" and (2) "resulted in the 'passing on' of monopoly costs from the direct purchaser to the indirect purchaser."[198] Neither condition was satisfied here. The monopoly product was ticket distribution services. Ticketmaster supplies the product to concertgoers, and the entirety of the assumed overcharge is borne by concertgoers.[199] The Circuit Court in *Apple* agreed with Judge Arnold.[200]

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191. *Id.* (Gorsuch, J., dissenting).

192. Pepper v. Apple Inc., 846 F.3d 313, 323–24 (9th Cir. 2017), *aff'd*, 139 S. Ct. 1514, 1518 (2019).

193. 140 F.3d 1166, 1168 (8th Cir. 1998).

194. *Id.*

195. *Id*. at 3d at 1169.

196. *Id*. at 1171 (citing McCarthy v. Recordex Serv., 80 F.3d 842, 853 n.18 (3d Cir. 1996)).

197. *Id*. at 1174.

198. *Campos*, 140 F.3d at 1174. (Arnold, J., dissenting) (citing Illinois Brick Co. v. Illinois, 431 U.S. 720, 746 (1977)).

199. *See id.* (Arnold, J., dissenting). In fact, economic theory predicts that venues would anticipate the overcharge in the fee imposed on concertgoers and would price tickets lower than they would otherwise. The overcharge, therefore, would impose a cost on venues. *See infra* text following note 250.

200. *See* Pepper v. Apple Inc., 846 F.3d 313, 323 (9th Cir. 2017) (citing *Campos v. Ticketmaster Corp.*, 140 F.3d 1166, 1166 (8th Cir. 1998) (Arnold, J., dissenting)).

III. PLATFORM ECONOMICS & ANTITRUST

In many markets, a supplier sells a good to a purchaser, and the purchaser either combines the good with other inputs and sells the output to customers or simply resells the good to customers. Either way, from the standpoint of the initial purchaser, the good can be considered an input. A supermarket, for instance, buys products from suppliers at wholesale and resells them to consumers at retail. A platform is different, and no one doubts that Apple functions as a platform when it transacts with app developers and iPhone owners. The question is whether the economics of platforms affects antitrust standing.

A platform provides services to at least two different groups of users, who interact with each other. It is an intermediary in a two-sided or multi-sided market. One can define a two-sided market broadly as "one in which (1) two sides of agents interact through an intermediary or platform, and (2) the decisions of each set of agents affect the outcomes of the other set of agents, typically through an externality."[201] The second condition is generally referred to as a network effect.[202] Network effects can be direct or indirect.[203] Direct network effects are demand-side scale economies or diseconomies, though only economies need be considered here. Thus, direct network effects arise when the value derived from a service by one user increases with the number of other users of the service. A classic example is telephone service: As the number of actors subscribing to the service increases, the value each subscriber obtains increases, for the number of individuals with whom any subscriber can communicate increases. Indirect network effects arise when the value to one group of users of some service depends on the number of a different group of users of services the platform provides.[204] The service provider

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201. Marc Rysman, *The Economics of Two-Sided Markets*, 23 J. ECON. PERSP. 125, 125 (2009) (The text mistakenly uses "affects," plural).

202. *See* Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM ECON. REV. 424, 424–25 (1985); *see also* Michael L Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93, 94 (1994); Oz Shy, *A Short Survey of Network Economics*, 38 REV. INDUS. ECON. 119, 119–20 (2011); S. J. Liebowitz & Stephen E. Margolis, *Network Effects and Externalities*, *in* 2 NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 671 (Peter Newmann ed., 1998); Willima H. Page & John E. Lopatka, *Network Externalities*, *in* 1 ENCYCLOPEDIA OF LAW & ECONOMICS 952, 966 (Boudwijn Bouckaert & Gerrit De Geest eds., 2000); Nicholas Economides, *The Economics of Networks*, 14 INT'L J. INDUS. ORG. 673, 678 (1996).

203. *See* Matthew T. Clements, *Direct and Indirect Network Effects: Are They Equivalent?*, 22 INT'L J. INDUS. ORG. 633, 633–34 (2004) (explaining difference between and direct and indirect network effects and arguing that they influence technological standardization differently).

204. *See, e.g.*, David S. Evans, *The Antitrust Economics of Multi-Sided Platform Markets*, 20 YALE J. REG. 325, 332 (2003); *see also* Jean-Pierre Dubé et al., *Tipping and Concentration*

is a platform, or an intermediary that facilitates transactions between the two groups of users.[205] For example, the Windows operating system functions as a platform.[206] The value a user derives from owning a computer running Windows depends on the number of apps written for Windows; the value an app developer derives from writing an app for Windows depends on the number of individuals using a computer running Windows. Even if the definition of a two-sided market does not include the existence of indirect network effects,[207] nearly all two-sided markets exhibit them.[208]

A platform can charge for its services through access fees and usage fees.[209] As the names imply, an access fee is a lump-sum charge that allows the customer access to customers in the other group; a cover charge to enter a nightclub where one wants to meet members of the opposite sex is an example.[210] A usage fee is a charge imposed on a transaction between members of the two groups. The charge a payment system's company imposes on a merchant when a customer uses the company's card to make a purchase is a usage fee. A platform can use

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in Markets with Indirect Network Effects, 29 MARKETING SCI. 216, 218 (2010) (describing positive indirect network effects).

205. Different kinds of platforms can be identified. For example, Evans and Schmalensee distinguish among market-makers, audience-makers, and demand-coordinators. *See* Evans, *supra* note 204, at 334–35; *see also* DAVID S. EVANS & RICHARD SCHMALENSEE, MATCHMAKERS 18 (2016). Apple is a demand-coordinator. It provides services, in the form of the iOS, that generate indirect network effects across two groups, app developers and iPhone owners. *See* Evans, *supra* note 204, at 335. Google, a competitor in the mobile phone platform market, is also a demand-coordinator, but it operates in a three-sided market, selling the Android operating system to handset manufacturers, app developers, and phone owners. *See* EVANS & SCHMALENSEE, *supra* note 205, at 35.

206. *See* United States v. Microsoft Corp., 253 F.3d 34, 53 (D.C. Cir. 2001) ("Operating systems . . . function as platforms for software applications").

207. *See* Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, J. EUR. ECON. ASS'N 990, 1017–18 (2006).

208. *See* Evans, *supra* note 204, at 338 ("Multi-sided platform markets . . . are subject to indirect network effects."); *see also* Rochet & Tirole, *supra* note 207, at 1017 ("Our premise is that many (probably most) markets with network externalities are two- (or multiple-) sided markets"). The central role of indirect network effects in the analysis of two-sided markets implies that the analysis of indirect network effects substantially overlaps with the analysis of platforms. *See* Rysman, *supra* note 201, at 127 ("The emphasis on market intermediaries is the main distinction between the literature on two-sided markets and the literature on network effects, and on indirect network effects in particular").

209. *See* David Evans & Richard Schmalensee, *The Industrial Organization of Markets with Two-Sided Platforms*, 3 COMPETITION POL'Y INT'L 151, 160 (2007). An access fee can also be called a "participation fee." *See* Rysman, *supra* note 201, at 131.

210. *See* Julian Wright, *One-sided Logic in Two-sided Markets*, 3 REV. NETWORK ECON. 44, 46, n.3 (noting that "[s]ome clubs have a lower cover charge or free entry for women, while others offer a ladies-night in which women pay nothing to enter the club on a given night").

one or the other kind of fee or both. Apple imposes both an access fee and, when iPhone owners download apps, usage fees.[211] The imposition of access fees and usage fees is a form of two-part pricing, familiar outside the context of platforms.[212] As in other uses, two-part pricing by platforms can facilitate price discrimination, which can increase social welfare and the rents of the price discriminator.[213]

The two-sidedness of a market has several implications for the conduct of the platform and for the application of antitrust law. Critically, when the platform sets the price it charges one group of customers, it must take into account not only the quantity effects on that side of the market but also the effects that the quantity on the first side of the market would have on the other side.[214] For instance, if Apple lowered the price of iPhones, more consumers would likely buy them. Considering only iPhone owners, the price reduction might or might not be profitable. But the larger number of iPhone users would also increase the price app developers would be willing to pay Apple for access to the larger base of app customers. A price reduction in iPhones might be profitable only because of the additional revenue Apple would earn from app developers. Of course, the larger number of apps written for the iPhone would make owning an iPhone that much more valuable, potentially increasing the price Apple could charge consumers for the iPhone. A platform's pricing decisions must account for the feedback effects, or the interaction between the sides of the market.

Although the size of each group may affect the other group in a two-sided market, the effect may be stronger for one group than the other. In general, a platform will set a low price to members of the group that exerts the larger positive externality, which allows it to set a higher price to members of the other group.[215] The low price need not even cover

211. Apple charges developers a ninety-nine dollar annual membership fee. Apple Inc. v. Pepper, 139 S. Ct. 1514, 1519 (2019). The price Apple charges customers for an iPhone could incorporate an access charge. *Id.* Apple charges a thirty percent commission on transactions between developers and iPhone owners. *Id.*

212. *See generally* Nikolaos Vettas, *Two-part Tariffs*, *in* THE NEW PALGRAVE DICTIONARY OF ECONOMICS (2011) (observing that "[a] two-part tariff is a pricing scheme according to which the buyer pays to the seller a fixed fee and a constant charge for each unit of the product or service purchased" and giving examples of its use).

213. *See, e.g.*, Mark Armstrong, *Competition in Two-Sided Markets*, 37 RAND J. ECON. 668, 669 (2006) (noting that "[b]ecause externalities are lessened with per-transaction charging, it is plausible that platform profit is higher when this form of charging is used").

214. *See, e.g.*, Rysman, *supra* note 201, at 129.

215. *See* Armstrong, *supra* note 213, at 668–69; *see also* Evans, *supra* note 204, at 343.

marginal costs; it may be zero or negative, as it would be if the platform provided rewards.[216]

Another variable that can affect optimal pricing in two-sided markets is the presence of multihoming, which is the use of more than one platform by an agent.[217] A consumer, for example, might use several different credit cards. In the credit services platform, the other side of the market consisting of merchants may also multihome by accepting different kinds of credit cards. Multihoming implies that platforms offer differentiated services, for otherwise an agent would have no reason to use more than one platform. In some markets, however, one side of a market multihomes while the other side does not.[218] For example, few consumers have more than one mobile phone; they might be said to single home. App developers may produce apps for more than one mobile operating system; they multihome.[219] Multihoming presupposes competition. When platforms are competing, the platforms have an incentive to attract members of the single homing group with low prices; the larger group of members on that side of the market will increase demand on the other side of the market, allowing the platform to charge members of that group higher prices.[220]

One antitrust implication of the economics of two-sided markets is that a proper analysis of the competitive effects of a platform's conduct must account for both sides of the market. The Supreme Court recognized this principle in *Ohio v. American Express Co.*, which involved anti-steering provisions in contracts between a credit card company and merchants who accepted the card.[221] The provisions prevented these merchants from steering customers away from use of the card at the point of sale and toward another service provider's card where the other service provider charges merchants less.[222] The Court recognized that the credit card company operated in a two-sided market, and it held that the firm's conduct would not violate the rule of reason unless it had anticompetitive effects in the market as a whole.[223]

A second implication is that whether a platform has monopoly power depends upon a proper definition of the market, or more

216. *See* EVANS & SCHMALENSEE, *supra* note 205, at 33.
217. *See* Rochet & Tirole, *supra* note 207, at 991–92.
218. Rysman observes that "two-sided markets often seem to evolve toward a situation where members of one side use a single platform and the other side uses multiple platforms." Rysman, *supra* note 201, at 130.
219. *See* Evans, *supra*, note 204, at 346.
220. *See* Rochet & Tirole, *supra* note 207, at 993, 1008.
221. 138 S. Ct. 2274, 2286 (2018).
222. *Id.* at 2283.
223. *See id.* at 2287.

accurately, a proper accounting of all the competitive constraints affecting a platform's conduct.[224] A platform may compete against some firms on one side of a market and against none or different firms on the other, and it may compete against other platforms on both sides. An analysis of a platform's economic power then depends upon its position in a complicated market, perhaps a multi-platform market. Indeed, the *American Express* Court instructed that a single market should be defined comprising both sides of a platform when indirect network effects on both sides are strong.[225] "A market should be treated as one sided when the impacts of indirect network effects and relative pricing in that market are minor."[226] For a transaction platform—a particular kind of platform in which the platform "cannot make a sale to one side of the platform without simultaneously making a sale to the other"[227]—indirect network effects are strong, and the market must be defined to include both sides. Even though iPhone owners buy apps from Apple through the App Store, Apple operates a transaction platform. The economic if not legal transaction is between the developer and the iPhone owner, for the iPhone owner receives the app in exchange for a payment ultimately received by the developer. For every sale of an app by a developer, there is a purchase by an iPhone owner, albeit mediated by Apple. There is a one-to-one correspondence between the developer's sale and the owner's purchase.

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224. *See* David S. Evans & Michael Noel, *Defining Antitrust Markets When Firms Operate Two-Sided Platforms*, 2005 COLUM. BUS. L. REV. 667, 697 (2005) (arguing against mechanical approaches to market definition when two-sided platforms are at issue but in favor of taking into account all constraints on business behavior).

225. *See American Express*, 138 S. Ct. at 2280.

226. *Id*. at 2286.

227. *Id*. at 2280. Notably, the Court does not say that a single market comprising both sides of a platform should only be defined for transaction platforms; transaction platforms, it says, are one kind of platform in which indirect network effects are strong, but strong indirect network effects is the condition that justifies defining the single market comprising both sides. Nevertheless, the Second Circuit suggested that *American Express* is limited to transaction platforms. *See* US Airways, Inc. v. Sabre Holdings Corp., 938 F.3d 43, 56 (2d Cir. 2019). Further, Filistrucchi et al., argue that only transaction markets should be defined as single markets. Lapo Filistrucchi, Damien Geradin, Eric Van Damme, & Pauline Affeldt, *Market Definition in Two-Sided Markets: Theory and Practice*, 10 J. COMP. L. & ECON. 293, 301 (2014) ("Whether one should define a single market or two interrelated markets depends on whether we are dealing with a two-sided transaction market or a two-sided non-transaction market."); *see also US Airways, Inc*., 938 F.3d at 58 (holding that a travel global distribution system "is a transaction platform, and the relevant market for such a platform must as a matter of law include both sides"); *see also* United States v. Sabre Corp., 452 F. Supp. 3d 97, 136 (D. Del. Apr. 7, 2020) (concluding travel global distribution systems are two-sided transaction platforms and market consists only of these platforms for Clayton Act § 7 purposes). Because Apple is a transaction platform, the full reach of *American Express* is not important here.

The critical feature is that Apple can charge a price both for joining the platform and for using it.[228]

A platform can have monopoly power, and it can acquire that power unlawfully. The economics of two-sided markets do not imply that platforms are incapable of violating § 2. Evidence that a platform restricted access to one group of agents by another group of agents, however, proves neither that the platform has monopoly power nor that the conduct is anticompetitive. When one side of a market multihomes and the other side does not, for example, the platform's optimal pricing strategy is to charge low prices to the single homing side and high prices to the multihoming side. If the multihoming side can bypass the charge, the strategy fails, even though the platform may be operating in an intensely competitive platform market. Maintaining exclusive access to one group of customers is not by itself exclusionary conduct under § 2.

IV. INTERMEDIARIES & PRIVATE ANTITRUST STANDING

The right to obtain damages for an antitrust violation depends initially on the violation's economic effects. As explained above, any successful plaintiff must prove injury in fact, antitrust injury, causation, antitrust standing, and non-speculative damages. An aspect of antitrust standing is that the plaintiff must be a direct purchaser. These are fundamentally economic conditions. Before assessing private standing in cases brought against platforms, consideration of the economics of cases brought against intermediaries in one-sided markets is helpful.

A. Economic Effects in One-Sided Markets

The *Apple* Court suggested that when an intermediary exercises both monopoly and monopsony power, consumers and suppliers are injured and are entitled to recover damages, and their recoveries do not overlap.[229] Suppose a firm purchases a product from suppliers and resells it to consumers. The firm would function as a distributor in a typical one-sided market, such as a grocery store buying lettuce from farmers and selling it to consumers.[230] The difference between the price the firm paid

228. *See* Filistrucchi et al., *supra* note 227, at 301.

229. *See* Apple Inc. v. Pepper, 139 S. Ct. 1514, 1525 (2019).

230. *See* Rysman, *supra* note 201, at 126. Rysman argues that the distinguishing feature of a one-sided market is that the supplier is not paid by the intermediary based on the success of the intermediary with buyers. The supplier collects that wholesale price and is then indifferent to the success of the intermediary in selling the good. Rysman notes, however, that a grocery store can be modelled as a two-sided market. *See* Rysman*, supra* note 201, at 126 n.1 (referring to Armstrong, *supra* note 213, at 684–86). In Armstrong's model, suppliers

for the product and the retail price it charges is the markup, and to the suppliers it represents their cost of distribution. If the intermediary functions in a perfectly competitive market, the markup will equal the marginal cost of distribution, for competition forces the intermediary to charge a price for its services equal to marginal cost. If the supplier also functions in a perfectly competitive market, the wholesale price it charges the distributor will equal its marginal cost of production, and consumers would pay the competitive price. Economic welfare is maximized.

Now suppose that the grocery store is the only one in town. It has monopoly power but no monopsony power, for lettuce growers can sell to stores throughout the country. The store charges a monopoly price for lettuce, implying a higher markup and thus a higher cost of distribution for growers, who sell less lettuce to the store. Consumers are injured—they pay more and collectively buy less lettuce because of the grocer's exercise of monopoly power. If the store acquired its monopoly power illegally, the consumers who bought lettuce incur an antitrust injury, and they have antitrust standing. Their damages are the difference between the price they paid and the price they would have paid absent the exercise of monopoly power, multiplied by the quantity purchased. If these consumers would have bought more lettuce at the lower, competitive price, they suffer additional injury, and consumers who did not buy lettuce but would have bought it at the lower price also suffer antitrust injury. Because proof of the counterfactual is infeasible, however, buyers are generally not allowed to recover damages for purchases not made.[231] Growers may also be injured, but not by much. They sell to the store at the same price and make the same profit on the lettuce sold, but they sell less lettuce.[232] In a competitive wholesale lettuce market, the difference

multihome and consumers single-home over the relevant period. *See* Armstrong, *supra* note 213, at 684.

231. Purchases that were not made at the monopoly price but would have been made at the competitive price represent the deadweight loss, or allocative loss, of monopoly pricing in standard economic depictions of monopoly. These losses, which are harm to persons other than the offender, are part of the optimal sanction for an antitrust violation. The trebling of cognizable damages can be understood to represent in part the deadweight loss for which buyers are unable to recover. *See* Frank H. Easterbrook, *Detrebling Antitrust Damages*, 28 J. L. & ECON. 445, 454–55 (1985) ("The multiplier of 1.5 thus may be a rough approximation of the lower bound [of the full allocative loss]. It takes care of the fact that the nonbuyers do not recover damages").

232. If the store competed in the purchase of lettuce with a small number of non-store buyers, such as institutional users, the purchasers collectively might confront a positively sloped supply curve. In that event, a reduction in the amount of lettuce bought by the store would reduce the price the store paid for lettuce. *See* Tirza J. Angerhofer & Roger D. Blair, *Monopoly and Monopsony: Antitrust Standing, Injury, and Damages*, 89 U. CINCINNATI L.

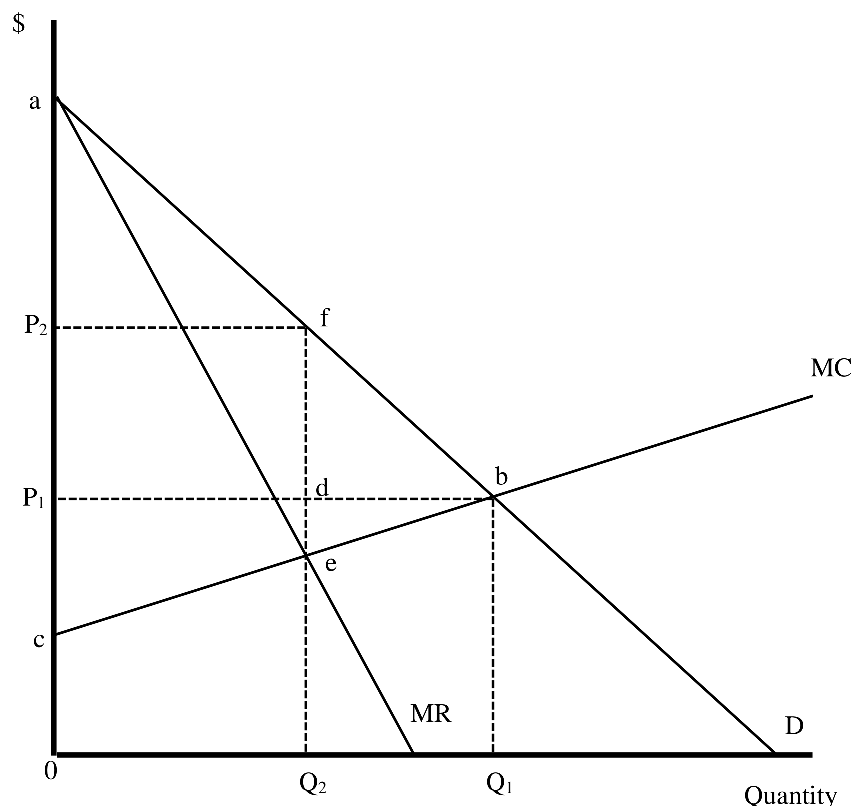
in quantity is small. If the growers cannot sell the lettuce they would have sold to a competitive store in town to buyers outside of town, they suffer an injury in the form of lost profits, and it is antitrust injury, but they have no antitrust standing.

The effects of monopoly pricing are depicted in Figure 1. In a competitive market, sellers set price equal to marginal cost and sell the quantity dictated by the demand curve.[233] The lettuce sellers collectively would sell quantity Q_1 at price P_1. The firms earn surplus, or revenue in excess of costs, equal to area cP_1b; consumers earn surplus, or value in excess of payment, equal to P_1ab; and economic welfare, which is the sum of producer surplus and consumer surplus, equal to cab, is maximized.

REV. 256 (2021). Even though their injury is greater than if price remained constant, the injured growers as input suppliers, would still lack standing to recover damages.

233. For a single firm that functions in a perfectly competitive market, the demand curve facing the firm would be horizontal at the competitive price and would coincide with the firm's marginal revenue curve. *See Price and Revenue in a Perfectly Competitive Industry and Firm*, LUMEN LEARNING, https://courses.lumenlearning.com/suny-microeconomics/chapter/price-and-revenue-in-a-perfectly-competitive-industry-and-a-perfectly-competitive-firm/ (last visited May. 13, 2021).

FIGURE 1: OUTPUT MARKET



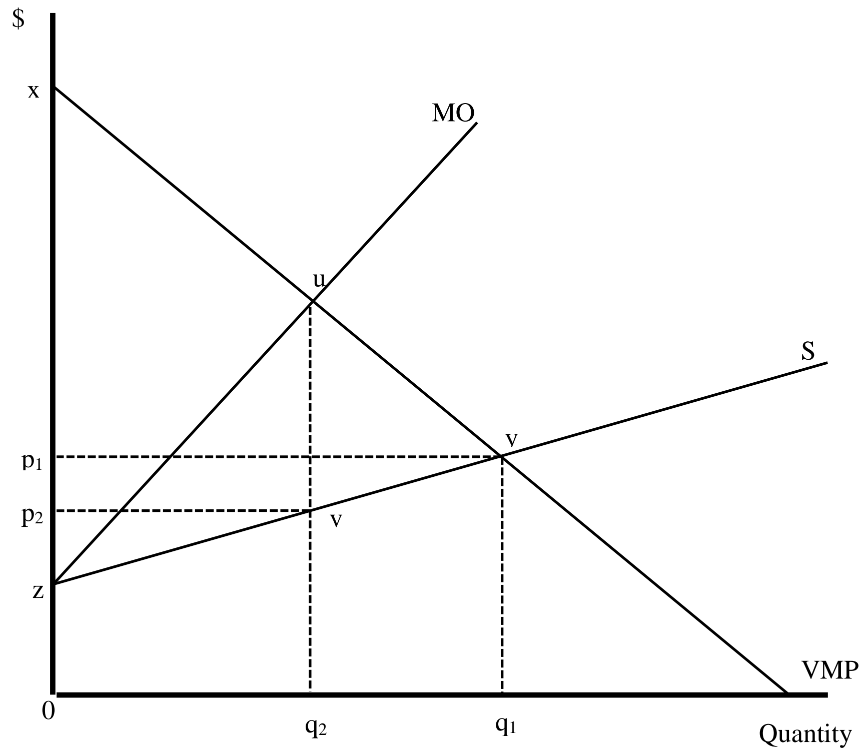
A monopolist sets quantity such that price is equal to marginal revenue (which will lie below the demand curve if the seller faces a negatively sloped demand curve). The monopoly grocer will sell Q_2 units of lettuce at price P_2. The area P_1P_2fd represents monopoly profits, or a wealth transfer from consumers to the seller. (Area cP_1de represents producer surplus that the seller would have earned in a competitive market.) Consumer surplus is now area P_2af; producer surplus is area cP_2fe; and economic welfare declines to area cafe. The loss of total welfare, or the deadweight loss or allocative inefficiency, is area efb. Lettuce consumers are entitled to damages equal to $(P_2\text{-}P_1) \text{ x } Q_2$. Lettuce growers sell less lettuce to the grocer, measured by $Q_1\text{-}Q_2$ units, but because the store has no monopsony power, those units represent a trivial proportion of lettuce growers' output and may be sold in other markets.

Suppose the market for the retail sale of lettuce is competitive. Figure 2 depicts the market for the wholesale purchase of lettuce, or the input market. If the input market is competitive, grocers purchase the quantity of lettuce determined by the intersection of supply (S) and the value of the marginal product (VMP),[234] or q_1. Price is determined by the supply curve and is p_1. If a single grocer unlawfully acquired monopsony power but had no monopoly power,[235] the grocer would determine the quantity purchased by equating the value of the marginal product and the marginal outlay (MO). The grocer would buy q_2 units and pay farmers the price determined by the supply curve, which is p_2. Farmers would be entitled to damages equal to $(p_1\text{-}p_2) \times q_2$. Total welfare declines from zxy to zxuv. Deadweight loss equals vuy.

234. The value of the marginal product can be thought of as the demand function, though technically a monopsonist does not have a demand function. *See* ROGER D. BLAIR & JEFFREY L. HARRISON, MONOPSONY IN LAW AND ECONOMICS 44 n.8 (2010).

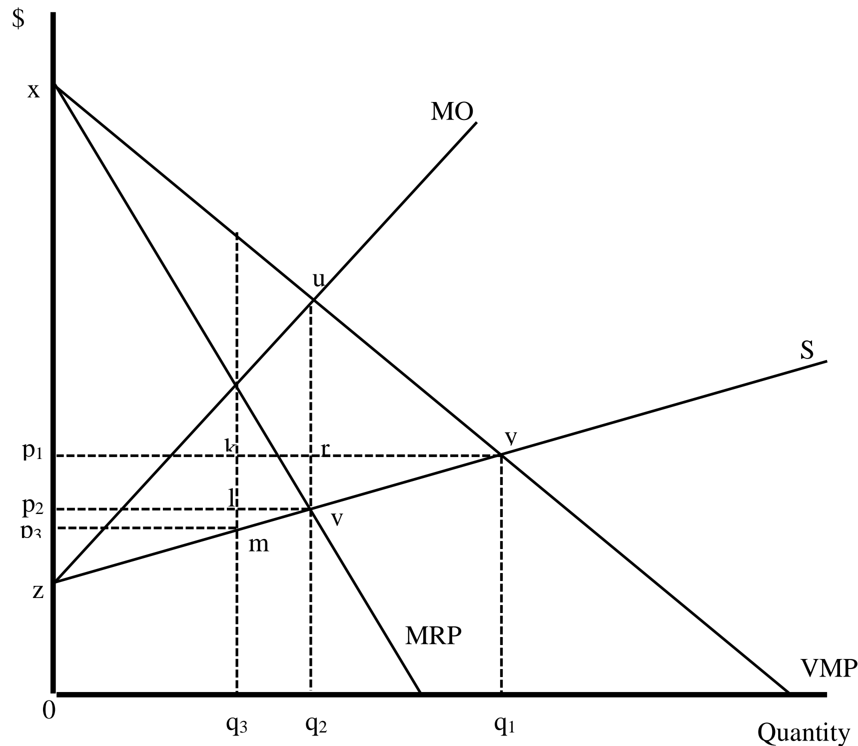
235. *See* Angerhofer & Blair, *supra* note 232. An intermediary might have monopsony power but not monopoly power. *Cf.* Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 549 U.S. 312 (2007) (resolving predatory buying claim against lumber buyer that allegedly had monopsony but not monopoly power). The monopsonist would buy less of the input and at a lower price than the quantity and price that would prevail in a competitive buying market. Input suppliers would suffer injury and have antitrust standing. Output purchasers would incur an increase in price because the exercise of monopsony power would raise the intermediary's marginal cost of production. But output purchasers would not have antitrust standing to recover damages. Their injury is indirect, just as the injury suppliers suffer from an exercise of monopoly power is indirect.

FIGURE 2: INPUT MARKET—NO MONOPOLY



Imagine now that the grocery store acquires monopoly power after acquiring monopsony power. It becomes the only store in town, and lettuce is grown nearby by multiple farmers and cannot economically be shipped out of the area. Figure 3 depicts the input market.

FIGURE 3: INPUT MARKET—WITH MONOPOLY



The grocery now determines the quantity of lettuce to buy based not on the intersection of the marginal outlay and supply curves but on the intersection of the marginal outlay and the marginal revenue product (MRP) curve, which lies below the VMP curve. Quantity is now q_3, and price is p_3. As shown in Figure 2, an exercise of monopsony power by itself reduces the quantity of lettuce bought from and the price received by growers relative to the quantity and price that would prevail in a competitive wholesale purchasing market, and therefore the markup is higher.

As for farmers, the exercise of monopoly power reduces the price they would be paid if the monopsonist had no monopoly power, from p_2 to p_3, but they are not entitled to damages based on this price decline because they lack standing for this loss; it is a loss incurred as a supplier to an antitrust violator in an output market.[236] The practical effect of this

236. *See generally* Angerhofer & Blair *supra* note 232 and accompanying text.

condition is that damages are not based on the difference between the price farmers were actually paid (p_3) and the price they would have been paid absent monopsony power (p_1). It is based on the difference between the price they would have been paid if the buyer had monopsony power but no monopoly power (p_2) and the price they would have been paid absent monopsony power (p_1). A damage calculation, which usually compares an actual price to a hypothetical price, becomes a calculation that compares two hypothetical prices, compounding the risk of error.

Moreover, as noted above, an exercise of monopoly power alone reduces the amount of lettuce bought from suppliers but not the price paid for it if the buyer lacks monopsony power. An exercise of monopsony power by a monopolist reduces the quantity of the product purchased from suppliers below that which would prevail if the purchaser had monopoly or monopsony power alone, and the purchaser will pay a lower price as a result of the exercise of monopsony power. But because their damages suffered from monopsony alone are based on the quantity actually sold and that quantity declines as a result of the buyer's monopoly power, their damages for monopsony decline as a result of the buyer's monopoly power, from $(p_1-p_2) \times q_2$ to $(p_1-p_2) \times q_3$. Thus, their damages are represented by area p_2p_1kl, not area p_2p_1rv, and they do not recover for area p_3p_2lm, even though this area represents damages they sustained.

Consumers are injured by the exercise of monopoly power but not monopsony power. The exercise of both monopoly and monopsony power, therefore, reduces economic welfare relative to competitive conditions in both markets and relative to an exercise of either kind of market power alone.

If monopoly and monopsony power are obtained unlawfully and exercised, both consumers and suppliers suffer antitrust injury and have antitrust standing, but not for all of their losses.[237] When the *Apple* Court

237. If monopoly power and monopsony power are obtained unlawfully but non-simultaneously, the price and welfare effects are invariant to the sequence in which they are obtained. For example, the grocery store may obtain monopoly power by predating against rival stores and monopsony power by predating against institutional buyers, and it may engage in these actions at different time. The damages to which suppliers and consumers are entitled, however, are affected by sequence. The analysis in the text presents the scenario in which monopoly power is acquired after monopsony power. If the reverse sequence occurs, the damages suppliers and consumers could recover would differ, but the differences need not be explored here. If monopoly power and monopsony power are obtained unlawfully and simultaneously, the price and welfare effects are identical to those under either pattern of sequential collusion but isolating the damages of suppliers and consumers is difficult. Both suppliers and output purchasers can demonstrate the difference between the actual price and the but for price, but each set of plaintiffs are entitled only to a portion of the difference,

noted that both app developers and iPhone owners might have standing to pursue claims against Apple, it may have had this circumstance in mind. The plaintiffs are iPhone users, and they suffer cognizable damages by an exercise of monopoly power. App developers could also recover if they could prove that Apple unlawfully acquired monopsony power. The damages each group could recover are not duplicative in theory and therefore do not require apportioning a common fund. In practice, determining the damages each group suffered could be difficult, but this is not a conceptual weakness. *Illinois Brick* would not bar suits by either group. Even if the facts of *Apple* do not fit this model, the model potentially applies to other real-world circumstances.

B. Economic Effects in More Complicated Markets

Apple, in fact, does differ from the analysis above and the example used to explain it in several ways. First, the markets just explored are one-sided markets, whereas Apple functions in a two-sided market. Second, lettuce is fungible, whereas mobile phone apps are differentiated products. Third, lettuce distribution entails marginal costs, whereas the marginal cost of mobile phone app distribution may be zero or close to it. And fourth, Apple did not impose a markup on app developers, but an ad valorem fee, or commission set at a percentage of revenue received. The question is whether any of these differences alone or in combination change the analysis.

That a firm operates in a two-sided market does not necessarily undermine the analysis or conclusions. A defining characteristic of two-sided markets is that a platform in setting prices must take into account the effect of a price charged to one group of customers not only on the demand of that group but also on the demand of the other group. Further, the platform's prices may or may not be affected by competition from other platforms or from entities competing only on one or the other side of the platform's market. The possession of monopoly power on either side of a market will affect the platform's price level but generally not its pricing structure.[238]

Apple, however, operates in a particular kind of two-sided market, a two-sided transaction market. The relevant condition for economic analysis is that a firm has the economic ability and legal right to impose

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because some of the difference is attributable to the exercise of economic power in the other market for which they cannot recover. *See generally* Angerhofer & Blair, *supra* note 232.

238. *See* Evans, *supra* note 204, at 355; *see also* Rochet & Tirole, *supra* note 207, at 1009; *see also* Richard Schmalensee, *Payment Systems and Interchange Fees*, 50 J. INDUS. ECON. 103, 118 (2002).

a fee on a transaction between two other parties. That condition by definition holds for transaction platforms, but it also holds in circumstances that are not conventionally described as two-sided markets, such as a firm with intellectual property rights that other firms use in executing transactions. A fee imposed nominally on one side will be anticipated by the other side, leading in many circumstances to a loss for both sides in much the same way that such an overcharge would injure suppliers and consumers when the intermediary functions in two one-sided markets.

The other features of Apple's economic ecosystem are also analytically significant. The definition of a differentiated product is that it has no perfect substitutes in consumption, which means that the producer faces a negatively sloped demand curve for its product. This does not mean that the product has monopoly power in a sense relevant to antitrust law; it may compete with imperfect substitutes in what would constitute an antitrust market. Nevertheless, the producer of a differentiated product recognizes that it can vary the quantity demanded by changing price. To repeat, in a two-sided market, price changes on one side of the market affect demand on the other side of the market, but this condition does not alter the fact that price changes on one side of a market do affect quantity on that side. Further, the distribution of mobile phone apps, because it takes place through the internet, has low marginal costs, perhaps approaching zero, whoever performs the distribution function. Indeed, as intellectual property, apps are subject to pronounced economies of scale on the supply side. The fixed costs of development are substantial, but the variable costs of production are low, and production is scalable.[239] Finally, as shown below, when a distributor charges an ad valorem fee for its services rather than a per-unit fee, the economic effects are dramatically different.[240] These effects depend on the size of the marginal costs of distribution.

When a platform imposes a per-unit fee on consumers and suppliers of the product desired by consumers sell differentiated products at prices they determine, each supplier will anticipate the fee in setting its price. If the fee is supra-competitive, because the distributor has monopoly power, the fee will result in higher prices paid and lower quantities purchased by consumers than the prices and quantities that would have prevailed at

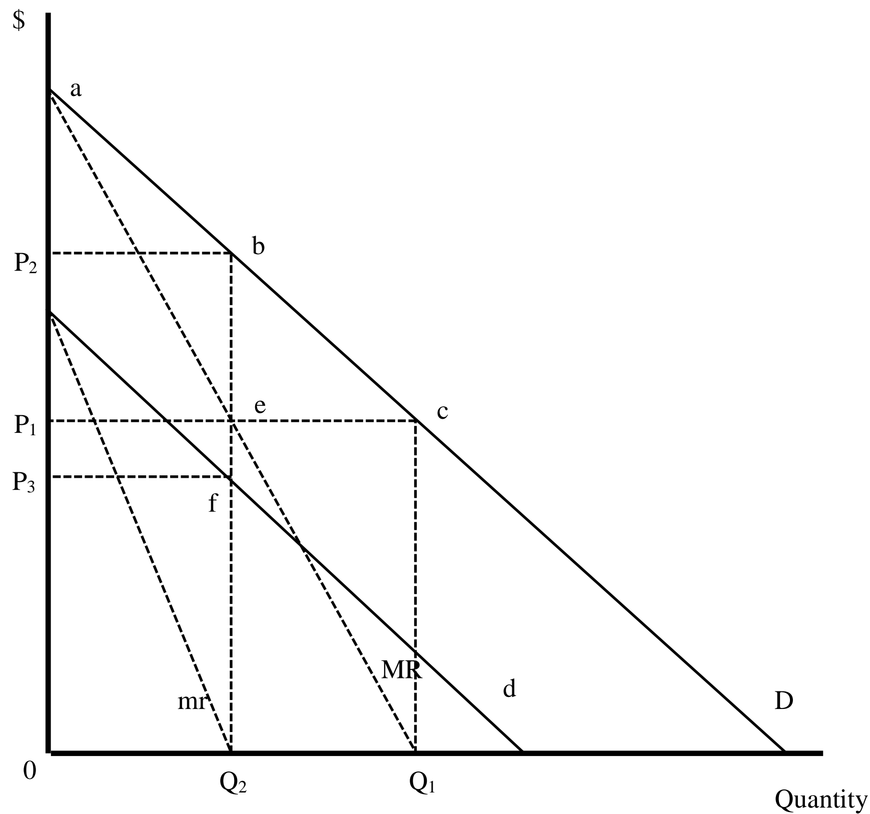
239. *See* STAN J. LIEBOWITZ & STEPHEN E. MARGOLIS, WINNERS, LOSERS, & MICROSOFT 82 (1999) (noting that in the production technology of software, "it is possible for the firm to alter its scale extremely rapidly," and observing that "[t]his *instant scalability* means that firms can acquire the means to expand production with little or no lag").

240. *See* Kobayashi & Wright, *supra* note 40, at 262.

competitive service fees. In these circumstances, suppliers and consumers are injured.

Begin with the assumption that marginal costs of distribution are zero. Figure 4 depicts the market for an app where the platform imposes a per-unit fee. For simplicity, assume that the entire fee is a monopoly tax, though the "tax" in this context means not a charge levied by government but the charge any owner of a facility can impose for use of the facility.

FIGURE 4: PER-UNIT FEE AND ZERO MARGINAL COSTS

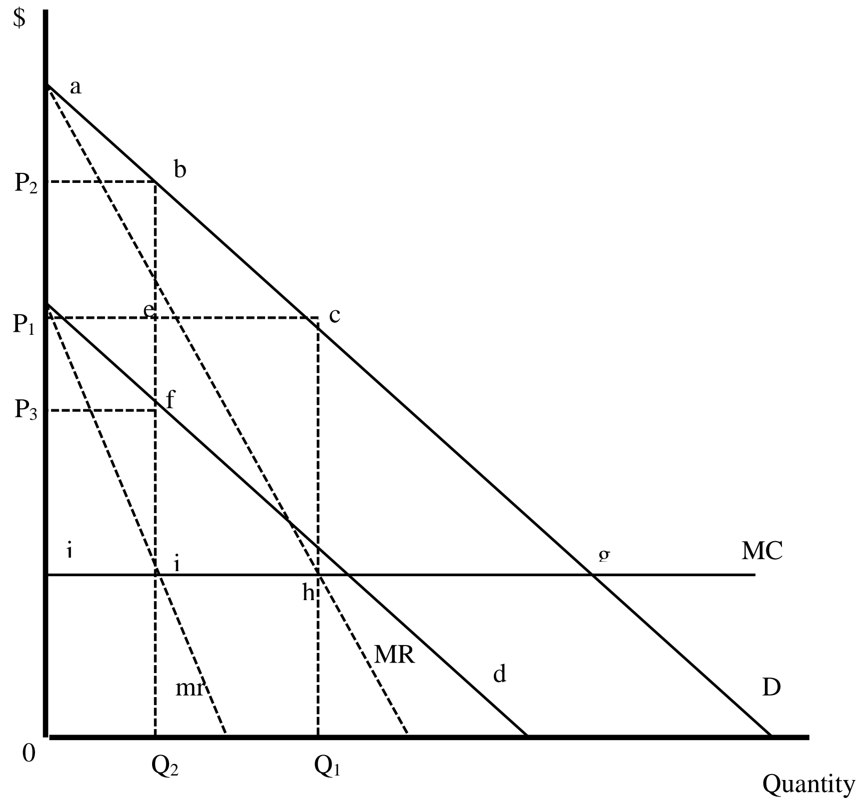


From the perspective of the app developer, D represents the demand for the app. The demand curve can usefully be thought of in this context as the average revenue curve. Absent a platform tax and assuming the developer would set a single price, the developer would set quantity where marginal revenue (MR) equals marginal cost, which is zero. The developer would sell Q_1 units at price P_1. The developer's revenue would

equal area $0P_1cQ_1$, and consumers would earn surplus of P_1ac. The per-unit fee reduces the average revenue by the amount of the fee, and it is constant, resulting in derived demand curve d. The developer would calculate a derived marginal revenue curve (mr) and set quantity where mr equals zero. The developer would sell Q_2 units at price P_2 because price is determined by the demand curve, not the average revenue curve that incorporates the tax. A deadweight loss results, equal to area ebc. Total revenue is the area $0P_2bQ_2$, which is divided between the platform and the developer. The platform takes area P_3P_2bf; the developer earns $0P_3fQ_2$. Consumers suffer damages equal to P_1P_2be, given that they can recover for the overcharge but not for the deadweight loss. The developer suffers a loss equal to the difference between P_1cQ_10 and P_3fQ_20, which is represented by area $P_3P_1cQ_1Q_2fP_3$. When damages are measured by the overcharge rather than lost profits, the developer's damages are P_3P_1ef. Critically, the damages suffered by consumers do not overlap with the damages suffered by the developer.

When marginal costs are positive, the magnitudes of losses change, but the important implications do not. In Figure 5, the platform imposes a per-unit charge that is entirely a monopoly tax, but marginal costs are significantly positive.

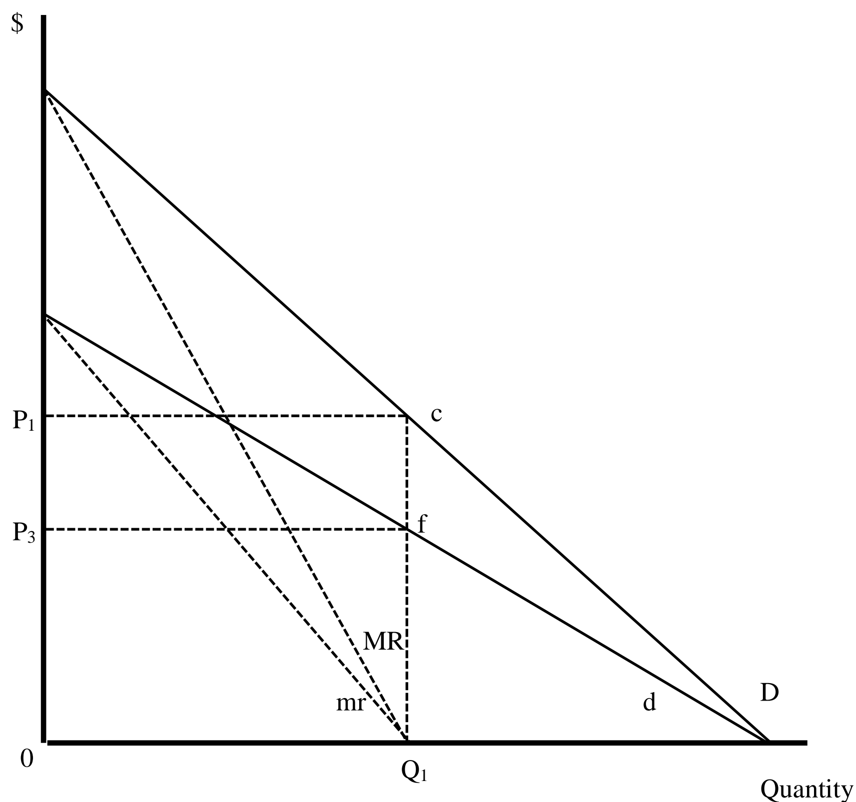
FIGURE 5: PER-UNIT FEE AND POSITIVE MARGINAL COSTS



Price increases from P_1 to P_2. Consumer surplus shrinks from P_1ac to P_2ab, reflecting a deadweight loss of ebc. The fee reduces total welfare. Consumers can recover damages equal to the difference between P_1 and P_2 multiplied by Q_2 units. The developer suffers loss equal to the difference between area jP_1ch and jP_3fi; the developer's overcharge damages are represented by area jP_3fi. Again, the damages of consumers and the developer do not overlap.

When the platform charges an ad valorem fee and marginal costs are zero, the effects are markedly different from the effects of a per-unit fee, whether marginal costs are zero or positive. Figure 6 (displayed below on page eighty-eight) depicts the case.

FIGURE 6: AD VALOREM FEE WITH ZERO MARGINAL COSTS

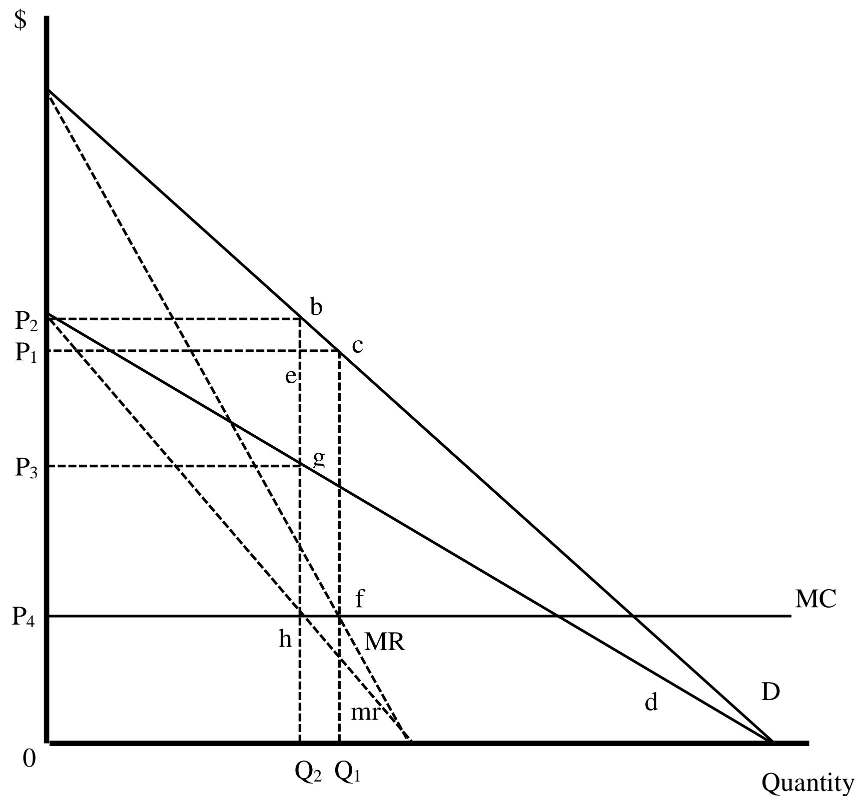


The essential difference between an ad valorem charge and a per-unit charge is that the former is a percentage of the sales price, and at the limit it is zero. In Figure 6, absent any charge, the developer sets quantity where marginal revenue (MR) equals marginal cost (0). Price is P_1, and quantity is Q_1. The ad valorem charge results in a derived demand curve (d), which coincides with the demand curve at a price of zero. As price increases, the difference between the derived demand curve (or derived average revenue curve) and the demand curve (or average revenue curve) increases. The developer sets quantity where derived marginal revenue equals marginal cost, or Q_1, and price, which is determined by quantity, is P_1. The price and quantity are identical to the price and quantity that would prevail if no charge were imposed. Consumers, therefore, suffer no static injury, and the tax creates no deadweight loss. The revenue of the developer, however, drops from area $0P_1cQ_1$ to area $0P_3fQ_1$. The total

profits remain the same, but those profits are now split between the developer and the platform, with the platform receiving revenue equal to area P_3P_1cf. The developer and only the developer suffers an antitrust injury, and only the developer can recover damages.

If marginal costs are substantially positive, however, both the developer and consumers are injured.[241] Figure 7 presents the situation.

FIGURE 7: AD VALOREM FEE WITH POSITIVE MARGINAL COSTS



The analysis is similar to the analysis when marginal costs are zero. Absent an ad valorem fee, the developer would equate marginal revenue (MR) and marginal cost (MC), which is now positive, and would sell Q_1

241. A price above marginal cost to any extent will theoretically reduce quantity sold. But small increments above marginal cost will have small effects on quantity, and hence on the harm suffered by consumers. The costs of recognizing an action by consumers and calculating damages in these circumstances are likely to outweigh the benefits of more precise compensation and more accurate deterrence.

units at price P_1. Profits would equal area P_4P_1cf. With an ad valorem fee, the developer sets quantity at the intersection of derived marginal revenue (mr) and marginal cost (MC). Quantity drops to Q_2 and price increases to P_2. Total profits decline to area P_4P_2bh, and total welfare declines by area ebc. Profits are divided between the developer and the platform, with the developer now earning area P_4P_3gh, and the platform receiving area P_3P_2bg. The developer's damages are $(P_1-P_3) x Q_2$. Consumers are injured: the fee results in a higher price and lower quantity. Consumers' damages are $(P_2-P_1) x Q_2$. The critical point is that when a monopoly ad valorem fee is imposed and marginal costs are significantly positive, both developers and consumers suffer cognizable harm, and their damages are not duplicative.

V. ANTITRUST STANDING, AD VALOREM CHARGES, & *APPLE*

The application to *Apple* and similar cases of the analysis set out above is straightforward. When an intermediary unlawfully exercises monopoly power through imposition of an ad valorem fee, static efficiency and private antitrust standing depend on the existence and level of the marginal costs of production and distribution. Where suppliers sell differentiated products, the marginal cost of production and distribution is zero, and the distributor imposes a supra-competitive ad valorem fee on transactions, the distributor's exercise of monopoly power will not reduce static efficiency or cause consumers who purchase the products to incur a short-run loss. Consumers will pay no higher a price for the products they buy or purchase less. Because the economic rewards suppliers reap from their efforts decline, however, the platform's supra-competitive fee may reduce the incentive to invest in development and thereby cause a long-run reduction in the availability of products.[242] Consumers will ultimately feel the pinch of this dynamic inefficiency, for they will not be able to buy products that are never produced. But this kind of loss, which is inherently difficult to measure, is generally not recognized as a compensable injury.[243] Because consumers suffer no cognizable injury in fact, they cannot recover antitrust damages.

Suppliers who sell products are injured. They sell the same quantity of products, but because of the antitrust violation their return is less by the amount of the marginal supra-competitive commission.[244] In *Apple*,

242. *See* Kobayashi & Wright, *supra* note 40, at 267.
243. *Id.*
244. *Cf.* Epic Games, Inc. v. Apple Inc., No. 4:20-cv-05640-YGR, 2020 U.S. Dist. LEXIS 154231, *2–5 (N.D. Cal. Aug. 24, 2020) (granting in part and denying in part temporary restraining order preventing platform from taking action against app developer for enabling in-app payment processing in violation of licensing and developer-tool agreements); Cecilia

the plaintiffs alleged that the entire commission was supra-competitive. The allegation is implausible, because Apple certainly incurred some costs in providing services both developers and iPhone owners valued. Still, developers suffered an injury-in-fact defined by the portion of the ad valorem fee attributable to anticompetitive conduct. Moreover, their injury is antitrust injury because it is the type of injury "the antitrust laws were intended to prevent and . . . flows from that which makes defendants' acts unlawful,"[245] even though the distributor's acts cause no short-run inefficiency. These suppliers would also have antitrust standing. They are the only efficient private enforcers of the antitrust laws, for the best alternative private enforcers—consumers—have no right to sue for damages. Moreover, their measure of damages is clear: the proportion of revenue taken by the intermediary from the sale of the suppliers' products, and calculation of their damages is relatively simple.

Recognizing that suppliers in these circumstances incur antitrust injury, have antitrust standing, and are entitled to damages equal to their lost revenue is also consistent with the economic principle of the optimal penalty. They are persons other than the offender who suffer harm. When conduct causes an allocative inefficiency, the optimal penalty consists of the deadweight loss plus the wealth transfer from buyers to the offender. In the circumstances presented here, the conduct causes no deadweight loss, but it does cause a wealth transfer, and the sum of zero plus the wealth transfer is the wealth transfer. As a general matter, the optimal penalty does not equal the gain to the offender because such a standard would eliminate the offender's incentive to engage in efficient violations—those in which a reduction in marginal cost brought about by the unlawful conduct exceeds the deadweight loss.[246] A penalty that does not deter such conduct entails lower administrative costs than defining liability rules that exclude the conduct, and it does deter inefficient violations. But in the circumstances here, the offender's marginal costs absent the violation are zero. The conduct does not lower marginal cost, and therefore the penalty, which here does equal the offender's gain, does not threaten to deter efficient conduct.

D'Anastasio, *Epic Games' Lawsuits Fire a Shot at Apple and Google's App Store 'Monopolies'*, WIRED (Aug. 13, 2020), https://www.wired.com/story/epic-games-sues-apple-fortnite-app-store/ (reporting monopolization complaint filed by app developer against Apple for equitable relief). Producers who are deterred from entering the market and those who are deterred from expanding their product offerings would also suffer antitrust injury, but like consumers who are denied the products that would have been produced, they would not suffer cognizable harm from these losses.

245. Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc. 429 U.S. 477, 489 (1977).

246. *See* Landes, *supra* note 78, at 655.

Because suppliers and not consumers are injured, *Illinois Brick* has nothing to say about whether both groups can recover damages. Suppliers do not pass on an overcharge to consumers. The groups are not staking claims to a common fund. Damages are not particularly difficult to calculate, but even if they were, the complexity would be no different than that attendant to damage calculation in any antitrust case.

The rules of private antitrust standing produce different results when the marginal costs of production and distribution are significantly positive. In this case, the intermediary's imposition of an ad valorem fee injures both suppliers and consumers. Damages for each group are conceptually distinct; they are not duplicative. Moreover, they can be calculated, albeit with more difficulty than where marginal cost is roughly zero. The proper calculation of damages depends upon the amounts both suppliers and consumers would pay absent the supra-competitive charge. But just what the charges would be in the but-for world is not clear. In *Apple*, for example, if Apple could not lawfully charge a thirty percent commission, it might charge a zero-transaction fee but increase the access fee charged developers. It might instead charge a per unit fee, or it might charge a lower ad valorem fee. The economics of two-sided markets teaches that price-setting must take into account feedback effects. What is clear is that if Apple incurs positive marginal costs of distributing apps, the commission it now charges cannot be the measure of damages. This recognition, in turn, has implications for the propriety of litigating claims through class actions. The competitive baseline for calculating damages differs among apps, as different apps have different elasticities of demand. If the but-for price has to be calculated for each app, individual issues would likely predominate over class-wide issues, precluding collective litigation.

What this means is that *Illinois Brick* does not stand as a bar to actions by suppliers and consumers. Recall that the indirect-purchaser cases rest upon three principles: (1) private parties must be allowed to recover the entire supra-competitive payment; (2) private parties may not recover more than the entire amount; and (3) antitrust standing rules should accomplish the objective of optimal recovery as efficiently as possible.[247] The first two principles speak to the optimal penalty. Putting aside the possibility of public enforcement,[248] if private parties are

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247. *See supra* Part II B.

248. The calculation of the optimal penalty should include both civil and criminal remedies. The expected deterrent is the sum of the expected criminal penalty and expected damages liability. *See* RICHARD POSNER, ANTITRUST LAW 47 (2019) ("Criminal and civil remedies for antitrust violations are usually considered and evaluated separately, but this is a mistake").

prevented from recovering collectively the net harm to others caused by an antitrust violation, adjusted for probability, anticompetitive conduct will be under-deterred. If private parties are allowed to recover more than the net harm to others, anticompetitive conduct will be over-deterred, resulting in socially costly measures to avoid liability.

Allowing distributors and consumers to recover their respective losses satisfies these conditions. Indeed, barring either suppliers or consumers from recovering and allowing only one group or the other to recover their damages would result in under-deterrence as well as under-compensation. The Court in *Illinois Brick* was concerned about the risk of excessive, or multiple, liability, which would result in over-deterrence. But the principal source of this risk was an asymmetric pass-on rule in which indirect purchasers would be allowed to recover but sellers would not be able to assert pass-on as a defense in an action by direct purchasers.[249] Such a set of pass-on rules would all but guarantee multiple liability because indirect purchasers would always recover the same damages that direct purchasers recover. Allowing both suppliers and customers to recover when a distributor has positive marginal costs and charges a supra-competitive ad valorem fee does not pose the same risk of multiple liability. Excessive recovery would only occur if courts misestimate damages for one or both groups in a way that overstates total harm, a possibility that itself depends as a practical matter on the groups of plaintiffs suing in separate actions. This is a risk, but it is a risk of a different kind and of a different order of magnitude than the one that most concerned the *Illinois Brick* Court.

The third consideration is more troublesome. Damage calculations may well be challenging, which implies significant litigation costs. As noted above, errors in calculations could result in excessive liability, but it could also result in inadequate liability. There is little reason to expect that calculations will be biased one way or the other. The expected cost of error could not justify foreclosing one group or the other from recovering for their injuries where optimal deterrence recognizes that the offender must be held liable for total losses.

An alternative to allowing both groups to recover, however, is to allow one group to recover both for their own losses and the other group's losses. How that alternative could be effectuated under current law is opaque. Notice that allowing both groups to recover does not pose the

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The possibility of public remedies here is ignored principally for expositional simplicity, but criminal penalties are not imposed for monopolization in any event.

249. *See* Illinois Brick Co. v. Illinois, 431 U.S. 720, 730 (1977) ("[A]llowing offensive but not defensive use of pass-on would create a serious risk of multiple liability for defendants").

standard pass-on problem. In the typical indirect-purchaser context, the initial overcharge is relatively easy to calculate. The direct purchaser is allowed to recover damages based on this amount even when economic theory indicates that the entity passed on some of that overcharge to its customer. Optimal deterrence is assured. The calculations are different when a distributor imposes an ad valorem fee on transactions or, indeed, when an intermediary imposes any kind of fee on transactions, such as the fixed fees imposed by Ticketmaster in *Campos*.[250] The fee in whatever form has a necessary and predictable impact on both parties to the transaction. In conventional overcharge cases, the overcharge will not necessarily be passed on to anyone. An animating concern in *Illinois Brick* was that multiple levels of indirect purchasers might exist. A rule that allowed indirect purchasers to recover would therefore invite suit by multiple groups of plaintiffs, thus increasing litigation costs with the increase in parties and the need to apportion the single overcharge across multiple groups of purchasers. When an intermediary incurs positive marginal costs of distribution and imposes a charge on a transaction between members of two groups, two groups are necessarily injured, for a transaction always involves two parties, and only two groups of plaintiffs would have standing under conventional standing doctrines. Litigation costs are thus cabined.

No other requirement of private antitrust standing would thwart the claims of suppliers and consumers. The injuries are caused by the antitrust violation. Both groups suffer injury in fact, and their injuries are antitrust injuries. Allowing both groups to recover would not conflict with any other consideration embodied in the rules of antitrust standing apart from the indirect-purchaser rules.

Because consumers' right to recover when the distributor charges an ad valorem fee depends on whether the supplier's marginal costs of production and distribution are significantly positive, the marginal costs of app developers in *Apple* are worth considering. A fair surmise is that the marginal costs of producing apps is at least close to zero. Apps fundamentally are intellectual property. They are not embodied in a physical medium, such as a compact disk. Whatever server capacity is necessary to store them is not likely to vary with output, at least for most apps. The marginal costs of distribution, however, are almost certainly positive. The App Store lowers consumer search costs, in part by gathering multiple apps in a single location and in part by assuring that

250. *See supra* notes 199–201 and accompanying text.

apps meet the level of quality and utility set by Apple.[251] Absent the App Store, developers would incur the costs of performing these functions, or more likely, would not be able to perform these functions at all. Some market evidence of the value of the App Store is provided by the distribution of apps for Android smartphones. Google owns Android and aggregates apps for Android phones on its Play Store. Google charges app developers a thirty percent commission on apps downloaded by consumers from the Google Play Store, the same commission Apple charges for iPhone apps.[252] But unlike Apple, Google does not limit distribution to downloads from its store. If Android app developers did not derive value from distributing apps through Google Play, one would expect them to distribute solely outside of that channel, thereby avoiding the thirty percent commission. Their willingness to pay the commission implies that the marginal costs of distribution for at least some developers is significantly positive.

That marginal distribution costs are positive does not mean that Apple's thirty percent commission reflects its marginal costs of distributing apps and the marginal costs that developers avoid. Rather, Apple's commission likely reflects Apple's attempt to set prices to both sides of its two-sided market in a way that maximizes demand for its platform and attendant profits. If Apple charges iPhone users a low price to expand the size of that group, recognizing that smartphone owners typically single-home, so that it can charge developers a relatively high price, it cannot allow developers to avoid the charge by selling to iPhone users outside of the App Store. The upshot, then, is that Apple's thirty percent commission may or may not be supra-competitive, but it almost certainly reflects positive marginal costs in providing a distribution function.

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251. Videogame consoles provide a useful comparison. Consoles are platforms, and console manufacturers charge videogame developers royalties based on sales of games to consumers. These royalties amount to ad valorem fees imposed per transaction on developers. *See* Rochet & Tirole, *supra* note 207, at 1012. Arguably, developers have low but positive marginal costs of distribution, and console manufacturers incur no such marginal costs. They do not aggregate video games, and they do not even process transactions, which take place solely between developers and consumers. Console manufacturers need not funnel transactions through a marketplace to impose transaction fees because they are able to enforce their intellectual property rights without such a mechanism.

252. *See* Priya Viwanathan, *iOS App Store v. Google Play Store*, LIFEWIRE (Mar. 9, 2020), https://www.lifewire.com/ios-app-store-vs-google-play-store-for-app-developers-2373130. More Android apps available in Google Play are free than are iOS apps available in the App Store, and Google's access fee, which is twenty-five dollars, is less than Apple's access fee of ninety-nine dollars. *See id.*

The plaintiffs in *Apple*, however, who are iPhone owners, alleged that Apple's thirty percent commission is "'pure profit.'" [253] The implication is that Apple's marginal cost of distributing apps is zero. The plaintiffs come perilously close to pleading themselves out of court. Given that the marginal costs of production are probably close to zero, if the marginal costs of distribution are also zero, the ad valorem charge would cause iPhone owners no cognizable injury. But as the analysis above indicates, the implicit allegation that Apple's marginal costs of distribution is zero is implausible, and even if it were, the app developers could theoretically incur positive costs of distribution whereas the platform's marginal costs of distribution are zero. The plausible allegation is that Apple's marginal cost of distribution is positive though less than thirty percent, and the plaintiffs would suffer a cognizable loss caused, as a first approximation, by the supra-competitive portion of the charge. Dismissing the complaint for an implausible allegation would accomplish little when the plausible allegation would defeat dismissal.

VI. ALTERNATIVE APPROACHES

A. The Apple Dissent

The dissenters resolved *Apple* primarily on the ground of proximate cause. They argued that *Illinois Brick* allows only buyers proximately injured by an antitrust violation to recover damages, and only app developers were proximately injured by Apple's alleged monopolization.[254] The dissent described the "rules of proximate causation" as "ancient" and suggested that their application in *Apple* was straightforward.[255] But "proximate cause" is an opaque term, and it is too blunt an instrument to separate antitrust claimants entitled to recover from other victims. As the Restatement Third observes, "There may be no legal term in as widespread usage as proximate cause that has been as excoriated as it has. One searches in vain to find a defender of the term; its critics are legion . . . ."[256]

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253. Apple Inc. v. Pepper, 139 S. Ct. 1514, 1519 (2019)

254. *See id.* at 1526–27 (Gorsuch, J., dissenting). The dissent used the term "proximate cause" or a cognate eighteen times.

255. *Id*. at 1526.

256. RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 29, cmt. a, Reporter's Note (Am. L. Inst. 2005); *see* DAN B. DOBBS ET AL., THE LAW OF TORTS § 198 (2d ed. June 2019 update) (noting that the "well-worn term [proximate cause] has been justly criticized for years as inaccurate, misleading, and confusing, and has been rejected by the Third Restatement of Torts, as it was in the Second") (footnote omitted); *see also* Jane Stapleton, *Legal Cause: Cause-in-Fact and the Scope of Liability for Consequences*, 54 VAND. L. REV. 941, 945 (2001) (calling "proximate cause" an "obfuscating" term); Richard

Even though the term is unfortunate, it does denote, albeit awkwardly, a fundamental concept that is uncontroversial. In tort law generally, an actor is not liable for all harms factually caused by his or her tort, recognizing that factual cause usually means a necessary, or "but for," condition.[257] The scope of the actor's liability is limited. Harms that are in a relevant sense too remote from tortious conduct are not within the tortfeasor's scope of liability. For antitrust violations, which are statutory torts,[258] the principle means that an offender is not liable in damages for all harms factually caused by his or her violation.[259] This unexceptional principle, however, does not lead to the dissenters' conclusion. It establishes a negative rather than a positive. It recognizes that an antitrust violator in not liable for all harms factually caused, but it does not establish the set of harms for which the violator is liable. In *Lexmark*, the Court acknowledged that "[t]he proximate-cause inquiry is not easy to define."[260] It then instructed that in the context of a statutory

W. Wright, *Once More into the Bramble Bush: Duty, Causal Contribution, and the Extent of Legal Responsibility*, 54 VAND. L. REV. 1071, 1074 (2001) (noting that the phrase proximate cause is inadequate for its intended purpose of referring to "the extent of legal responsibility for tortuously caused consequences").

257. *See* RESTATEMENT (THIRD) OF TORTS, *supra* note 51, § 26. A sufficient but not necessary condition can also be a factual cause. *See id.* § 27. Further, tortious conduct that is neither necessary nor by itself sufficient to result in an injury can be a factual cause when the conduct combined with the conduct of other actors overdetermines the harm. *See id.* § 27 cmt. f.

258. *See* Blue Cross & Blue Shield United v. Marshfield Clinic, 152 F.3d 588, 592 (7th Cir. 1998) (Posner, C.J.) ("A private suit under the antitrust laws is a suit seeking relief against a statutory tort . . . "); *see also* Delong Equip. Co. v. Washington Mills Abrasive Co., 840 F.2d 843, 848 (11th Cir. 1988) (observing that antitrust claims "sound in tort rather than contract"); Myers v. Am. Dental Ass'n, 695 F.2d 716, 723 (3d Cir. 1982) (noting that an antitrust claim is "in essence a form of tort alleging business injury"); Grip-Pak, Inc. v. Ill. Tool Works, Inc., 694 F.2d 466, 473 (7th Cir. 1982) (Posner, J.) (referring to "the novel statutory tort created by the federal antitrust laws"); Wilson P. Abraham Const. Corp. v. Texas Indus., Inc., 604 F.2d 897, 900 n.5 (5th Cir. 1979), *aff'd sub nom.*, Texas Indus., Inc. v. Radcliff Materials, Inc., 451 U.S. 630 (1981) (observing that "[t]he case law has uniformly characterized a private antitrust suit as a tort action"); Ohio Learning Ctrs., LLC v. Sylvan Learning, Inc., No. Civ. RDB-10-1932, 2012 U.S. Dist. LEXIS 102784, at *24 (D. Md. July 24, 2012) (referring to antitrust as "statutory tort" claim); King v. Town of Palisade, No. 16CV04, 2016 Colo. Dist. LEXIS 2006, at *23–24 (Colo. Dist. Ct. June 10, 2016) ("Generally, a private antitrust claim sounds in tort").

259. *See Grip-Pak*, 694 F.2d at 473 (noting that antitrust law incorporates "the age-old tort principle of remoteness of damage," meaning that not every firm linked to the target of anticompetitive conduct "by the forces of demand and supply is entitled to sue for damages caused, indirectly, by that conduct").

260. Lexmark Int'l, Inc. v. Static Control Components, Inc., 572 U.S. 118, 133 (2014).

tort, the question it presents "is whether the harm alleged has a sufficiently close connection to the conduct the statute prohibits."[261]

Nothing in the concept of proximate cause implies that an offender can be liable for only one injury. An injury can have more than one proximate cause,[262] and a wrongful act can proximately cause more than one loss. A negligent driver may kill a child in a crosswalk and emotionally traumatize her mother watching from nearby;[263] the driver proximately causes the death and the emotional distress.[264] *Lexmark* itself is a worthwhile example of the limits and expanse of proximate cause. There, an original equipment manufacturer of toner cartridges sold a line, called "Prebate" cartridges, at a discount.[265] These cartridges contained a microchip designed to prevent them from being refurbished by third parties.[266] Lexmark allegedly misrepresented to consumers that they were legally bound by terms of sale requiring them to return the cartridges to it.[267] It also falsely advised remanufacturers that that they could not lawfully refurbish these cartridges and that use of a third party's microchips, which they needed for refurbishing, was also unlawful.[268] The replacement microchip manufacturer alleged that the false representations violated the Lanham Act.[269] No one doubted that the injuries suffered by the remanufacturers, who competed directly with Lexmark, fell within the zone of interests protected by the statute, and were proximately caused by the alleged violation. Critically, the Court held that the replacement microchip manufacturer's injuries also fell within the zone of interests and were caused by the offense.[270] The false advertising proximately caused injuries to two sets of economic actors performing different but related functions.

The scope of liability is limited, of course. The Court opined that if the defendant's offense forced a competitor out of business, "the

261. *Id*. The Court continued, "[p]ut differently, the proximate-cause requirement generally bars suits for alleged harm that is 'too remote' from the defendant's unlawful conduct."

262. *See, e.g.*, DOBBS, *supra* note 256, § 198 ("[S]everal wrongdoers are frequently proximate causes of harm.") (footnote omitted).

263. *See* Dillon v. Legg, 441 P.2d 912, 914–15 (Cal. 1968).

264. Antitrust violations are almost always based on intentional rather than negligent conduct, and proximate cause is often discussed in relation to negligence-based torts. The concept, however, is applicable to all torts that require proof of damages. *See, e.g.*, DOBBS *supra* note 256, § 198 n.6 ("[S]cope of liability limitations are fundamental and can apply in any kind of case in which damages must be proven, not merely in negligence cases").

265. *Lexmark*, 572 U.S. at 121.

266. *Id.*

267. *Id.*

268. *Id.* at 123.

269. *See id.* at 122.

270. *Lexmark*, 572 U.S. at 137.

competitor's landlord, its electric company, and other commercial parties who suffer merely as a result of the competitor's 'inability to meet [its] financial obligations'" would not be able to recover.[271] The Court suggested that the incognizable harms are "purely derivative" of the harm inflicted on the competitor, but the "purely derivative" label is no more precise than the term "proximate cause."[272] For example, the emotional distress suffered by the bystander derives solely from the death suffered by the child, and yet both mother and child can sue.[273]

In short, the fact that a distributor proximately causes an injury to suppliers through an antitrust violation does not mean that it does not proximately cause an injury to consumers. Determining the scope of antitrust damages liability requires a more discerning analysis of the interests served by a legal limitation on liability than is provided by an incantation of "proximate cause."

In tort law, the scope of an actor's liability depends on the probability and extent of a particular kind of harm, the cost to the actor of avoiding it, and policy considerations.[274] From an economic perspective, the primary policy concern is the administrative costs of recognizing liability relative to the costs of the next best alternative,

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271. *Id.* at 134. (citing Anza v. Ideal Steel Supply Corp., 547 U.S. 451, (2006)).

272. *See id.* at 133.

273. Tort law has not used or applied the term "derivative" consistently. One can distinguish between a derivative injury and a derivative cause of action. *See* RESTATEMENT (THIRD) TORTS: APPORTIONMENT OF LIABILITY § 6 cmt. a-c (Am. L. Inst. 2000) (distinguishing between derivative "claims" and derivative injuries). The chief implication of declaring one cause of action derivative of another is that the derivative action plaintiff takes only the rights possessed by the principal cause of action plaintiff, so that defenses, such as contributory or comparative negligence, available in the principal cause of action are available in the derivative cause of action. If an injury is derivative, in that it is contingent upon injury to some other person, but the cause of action is deemed independent, defenses against one injured party are not imputed to the other. *See* Jo-Anne M. Baio, Note, *Loss of Consortium: A Derivative Injury Giving Rise to a Separate Cause of Action*, 50 FORDHAM L. REV. 1344, 1354–56 (1982) (describing judicial tendency to treat loss of consortium actions as derivative, thus requiring imputation of one spouse's contributory negligence to the other spouse, and arguing that loss of consortium is a derivative injury but an independent action). In bystander emotional distress cases, courts typically treat both the bystander's injury and cause of action as derivative. *See* RESTATEMENT (THIRD) TORTS, *supra* note 51, § 6 cmt. f, Reporter's Note on cmt. f.

274. *See, e.g.*, BARRY A. LINDAHL, MODERN TORT LAW: LIABILITY AND LITIGATION § 4:7 (2d ed. June 2019 update) (noting that "'proximate cause' or 'legal cause' may serve to limit responsibility for legal or policy reasons for negligent conduct") (footnote omitted). Tort law also uses duty rules to limit liability (*see* RESTATEMENT (THIRD) OF TORTS, *supra* note 51, § 29 cmt. f), and these rules are also shaped by policy considerations (*id.* § 7 cmt. a). Scope of liability, or proximate cause, determinations are made by the finder of fact based on factors specific to an individual case; duty rules are developed by courts based on factors applicable to categories or actors or patterns of conduct. *Id.*

whether that is simply to refuse to recognize liability or to augment recovery by others in lieu of recognition.[275] These considerations apply equally to antitrust standing. In a typical indirect-purchaser context, where a fixed overcharge is passed on to subsequent buyers, as the plaintiff occupies a link on the distribution chain farther from the offender, the probability that the plaintiff was actually injured as a result of the offender's overcharge decreases.[276] Further, the estimation of damages becomes more complicated, less accurate, and hence more costly as effect becomes farther removed from culpable act, and permitting claims by an expanding set of victims inevitably increases administrative costs. Finally, the objective of optimal deterrence can be served at lower administrative costs by allowing direct purchasers to recover the entire overcharge regardless of the proportion they pass on. In this context, the loss suffered by direct purchasers falls within the offender's scope of liability; the loss suffered by indirect purchasers does not.

The justification for the indirect purchaser rule, which corresponds to the justification for limitations on a tortfeasor's scope of liability, does not support an absolute limitation on an intermediary's liability to suppliers or consumers. As explained above, permitting both suppliers and consumers to recover from an intermediary that unlawfully monopolizes the intermediate market potentially results in liability that is neither inadequate nor excessive in deterring anticompetitive conduct and achieves this result at tolerable administrative costs.

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275. RESTATEMENT (THIRD) OF TORTS, *supra* note 51, § 29 cmt. e. For example, one justification for allowing a tort victim to recover punitive damages is that they in part account for the injuries suffered by victims whose injuries are incognizable, so that the damages recovered by the plaintiff more closely approximate the actual damage inflicted. Punitive damages to this extent conduce toward liability that forces the tortfeasor to internalize the full cost of his or her tort.

276. The Court alluded to this rationale in *Lexmark*. It acknowledged that the replacement microchip manufacturer's injuries were not directly caused by the OEM's misrepresentations to consumers but included the intervening link of injury to the remanufacturers. *See Lexmark*, 572 U.S. at 139. A conclusion that the microchip manufacturer's injury was proximately caused by Lexmark's consumer misrepresentations, therefore. superficially conflicted with the "'general tendency' not to stretch proximate cause 'beyond the first step.'" *Id*. (internal citation omitted).

> [T]he reason for that general tendency is that there ordinarily is a "discontinuity" between the injury to the direct victim and the injury to the indirect victim, so that *the latter is not surely attributable to the former* (and thus also to the defendant's conduct), but might instead have resulted from "any number of [other] reasons."

Id. at 139–40 (internal citations omitted) (emphasis added). The Court rejected this possibility in the circumstances presented. *Id*. at 140.

The dissent argues that Apple charges one commission, and actual damages cannot exceed this amount.[277] Therefore, an application of *Illinois Brick* that allows both consumers and developers to recover damages will necessarily require the supra-competitive commission to be divided between the two groups, and because pass-on must be allowed as a defense if *Illinois Brick* does not bar suit by consumers, Apple is at risk of duplicative damages.[278] To avoid that result, developers may need to be joined in any suit by consumers, complicating litigation in just the way *Illinois Brick* sought to avoid.[279] But determining the damages incurred by developers and consumers is not comparable to determining the amount of an overcharge passed on to potentially multiple levels of indirect purchasers. Only two groups of plaintiffs will have standing, and calculation of each group's damages is conceptually distinct. The supra-competitive commission is not divided between two sets of claimants; each set recovers its distinct damages, and the sum of the two equals the commission.

Hanover Shoe, which prohibited the pass-on defense, need not be overruled in this context. It is inapplicable because the issue is not pass-on. The issue is rather the measure of the loss suffered by two groups participating in a single transaction when the intermediary imposes an anticompetitive ad valorem fee. In a subsequent action by developers, Apple's defense is not that the developers passed on part of the commission to consumers. It is that developers suffered damage measured by the difference between the revenue they received for the sale of apps and the revenue they would have received absent a supra-competitive commission. To be sure, if consumers and developers are permitted to sue separately, courts could reach inconsistent conclusions in calculating damages, resulting in excessive liability. But errors are possible whenever damages are calculated, and these errors can lead to excessive liability. Simply because two groups are injured by the same conduct does not change that risk or justify a rule that prevents one group from recovering.

B. Apple's Argument

In the Supreme Court, Apple argued that the relevant product or service is distribution, not apps.[280] It sells distribution services directly to app developers. Therefore, iPhone owners are indirect purchasers, as the

277. *See* Apple Inc. v. Pepper, 139 S. Ct. 1514, 1530 n.3 (2019) (Gorsuch, J., dissenting).
278. *See id.* at 1529.
279. *See id.*
280. *See* Brief of Petitioner at 36, Apple Inc. v. Pepper, 139 S. Ct. 1514 (2019) (No. 17-204), 2018 WL 3870180 (U.S.) at *36.

cost of distribution is embedded in the price of the app. Allowing iPhone owners to recover damages from Apple exposes Apple to duplicative damages,[281] and separating the damages absorbed by the app developers from any damages passed on to iPhone owners involves precisely the sort of calculation deemed impermissible in *Illinois Brick*.[282] If Apple monopolized the distribution market, only app developers have standing to recover damages.

Apple also argued that it functioned as the agent of app developers.[283] As such, the relevant transaction that occurs when an iPhone owner acquires an app is between the app developer and the iPhone owner even if it takes place through the agency of the App Store. The ostensible seller is only an agent and not the actual seller for antitrust purposes when the actual seller sets the price of the product exchanged. As the Supreme Court explained, "Apple's theory is that *Illinois Brick* allows consumers to sue only the party who sets the retail price, whether or not that party sells the good or service directly to the complaining party."[284] Under this characterization, iPhone owners are direct purchasers of apps from app developers. An implication is that iPhone owners alone would be able to sue app developers for anticompetitive overcharges in the price of apps, but of course they would have a cause of action only if app developers committed antitrust violations. The iPhone owners did not make such a claim.

Apple's principal argument is too clever by half. Apple sells platform services, which are consumed by both app developers and iPhone owners. It functions as a demand coordinator.[285] Apple acknowledges that it "does various things that benefit consumers directly, for example hosting the App Store, maintaining account files, and processing and fulfilling app purchasers."[286] But it argues that these services are irrelevant because "the alleged anticompetitive activity is *on the other side of the platform*, in connection with Apple's role as a provider of *distribution services* to iOS developers."[287] The implicit claim that "hosting the App Store"[288] and "processing and fulfilling app purchases"[289] do not directly benefit app developers as well as consumers

281. *See id.* at 30.
282. *See id.* at 24.
283. *See id.* at 43–44.
284. Apple Inc. v. Pepper, 139 S. Ct. 1514, 1521 (2019).
285. *See* EVANS & SCHMALENSEE, *supra* note 205, at 138.
286. Brief of Petitioner, *supra* note 280, at 36.
287. *Id.* at 36.
288. *Id.*
289. *Id.*

is unfounded. But more important, to isolate services provided to one side of the platform ignores the nature of a platform. A platform provides an amalgam of discrete but interrelated services that reduce transaction costs for distinct groups of users. The value of the platform is in the amalgamation. The relevant service is platform service. That a platform might charge one side a high price and the other a low or even negative price does not change the fact that the platform is selling its service to both sides; indeed, for a transaction platform, no match occurs unless both sides simultaneously transact. The relevant market is the platform market, which might or might not be limited to the iOS platform.

Apple's argument suggests that consumers could sue Apple for overcharges in discrete services that directly benefit consumers, such as "processing and fulfilling app purchases."[290] But that is economically nonsensical, and the administrative costs of measuring such an overcharge, even if conceptually possible, would make tracing an overcharge through several distribution levels comparatively cheap. Perhaps Apple was highlighting a pleading defect, arguing that the plaintiffs alleged monopolization of distribution rather than platform services. But the substance of the argument is unconvincing. Further, as explained above, separating the damages suffered by app developers from those suffered by iPhone owners when an unlawful platform monopolist imposes a supra-competitive ad valorem charge on transactions, assuming positive marginal costs of distribution, neither inherently risks multiple liability nor involves the kind of pass-on calculations deemed impermissible in *Illinois Brick*.

Apple's argument that it is merely the agent of app developers is likewise unavailing. As explained above, agency has been significant in antitrust primarily in the context of resale price maintenance.[291] But it has no significance as either a legal or economic doctrine in applying the rules of antitrust standing to the circumstances under consideration. An intermediary can impose an ad valorem charge on the purchaser of a good or service based on a price set by the seller. For example, Airbnb, a popular platform that matches housing owners with short-term renters, earns most of its revenue in ad valorem fees imposed on renters based on rents set by owners.[292] Residential real estate brokers can formally

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290. *Id.*

291. *See supra* notes 159–166 and accompanying text. Notably, Apple cites United States v. Gen. Elec. Co., 272 U.S. 476 (1926), a vertical price-fixing case, as general support for its argument that "sales agents" cannot be held liable when they "follow their principals' instructions as to what price to charge." *See* Brief of Petitioner, *supra* note 280, at 19.

292. *See* EVANS & SCHMALENSEE, *supra* note 205, at 18; *see also What Are Airbnb Service Fees?*, AIRBNB, https://www.airbnb.com/help/article/1857/what-is-the-airbnb-service-fee

represent buyers and charge them a percentage of the house purchase price set by sellers, even though the fee is typically paid by the seller, who can anticipate the charge in establishing the sales price. It matters on which side a platform imposes a charge. The incidence of the charge is not invariant to the side of the transaction on which it is imposed, as it is in one-sided markets.[293] But a charge imposed on either side of the market will have an impact on the other side, so long as marginal costs are positive. The issue in *Apple* is whether iPhone owners have antitrust standing when a platform allegedly monopolizes a market and imposes a supra-competitive ad valorem fee on transactions. The resolution of that issue does not depend on whether the price of the good exchanged is set by app developers or whether Apple can be characterized as the agent of developers.

CONCLUSION

Simple economics makes for straight-forward law. The economics of intermediaries is not simple. When an intermediary functions in two, one-sided markets, as a buyer in one and seller in the other, it might unlawfully acquire and exercise monopsony power alone, monopoly power alone, or both. The principles of private standing to recover damages for antitrust violations permit input sellers to recover when the intermediary exercises monopsony power, output customers to recover when the intermediary exercises monopoly power, and both suppliers and customers to recover when the intermediary exercises both kinds of market power. The *Illinois Brick* rule, however, limits recovery to immediate suppliers and customers.

When an intermediary functions as a platform in a two-sided market, it can levy a charge on a transaction that uses the platform. If it has unlawfully acquired economic power in a platform market, the charge will be supra-competitive. When the charge takes the form of a per-unit fee, both parties to the transaction suffer a cognizable injury. When it takes the form of an ad valorem fee, its incidence depends on whether the marginal costs of the service the platform provides are significantly positive. If the platform's marginal costs are close to zero, only suppliers suffer a cognizable injury; if they are positive, both suppliers and customers suffer cognizable injuries. Neither *Illinois Brick* nor any other

(last visited May. 13, 2021) (stating that standard fee structure for individual homes is 3% for hosts and "typically under 14.2 percent of the booking subtotal," which consists primarily of the nightly rate).

293. *See* Rochet & Tirole, *supra* note 207, at 996 (explaining that when "neutrality" holds, meaning that a tax will have the same impact regardless of the party on whom it is imposed, markets should be treated as one-sided).

doctrine limiting the right to recover damages prevents both groups from recovering when they are injured. When only suppliers are injured, only suppliers can recover, but *Illinois Brick* is not the reason customers cannot recover.

Apple involves a platform operating in a two-sided market. Apple imposed an ad valorem charge on transactions occurring on the platform and sought to prevent off-platform transactions. The Court treated Apple as if it were an intermediary operating in two, one-sided markets. That was a mistake. The dissent believed that *Illinois Brick* prevents iPhone owners from recovering damages because only app developers were proximately harmed. That, too, was a mistake. Apple argued that iPhone owners could not recover because Apple was the agent of app developers. And that was a mistake. If the marginal costs of app distribution are positive, iPhone owners were injured, and *Illinois Brick* would not stand in their way. If the marginal costs are near zero, they have no standing, but *Illinois Brick* would not be the impediment.