OHIO V. AMERICAN EXPRESS: MARKET DEFINITION FOR TWO-SIDED TRANSACTION MARKETS

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American Express Company ("Amex") extends its cardholders a line of credit that is accessible only at vendors who accept payment from Amex cards. Each time an Amex cardholder makes a purchase, Amex processes the transaction for a fee—a percentage of the total purchase price—payable by the merchant. Amex differentiates its card as a premium product by providing greater cardholder rewards than its competitors to foster cardholder loyalty. To finance these superior rewards, Amex charges higher merchant fees than other card networks. While many merchants decline to accept Amex cards because of the high fees, others accept the card to attract loyal Amex cardholders – who, on average, make more frequent purchases and spend more per transaction – to their stores. Shrewd merchants found a way to retain the benefits of accepting Amex cards while avoiding the high fees by asking Amex cardholders to use a lower-cost card at the register. This practice ended when Amex started requiring merchants to agree to contractual provisions in the merchant agreement that prohibited them from communicating their preference for an alternative card. The Department of Justice ("DOJ") and several states challenged these provisions as an unreasonable restraint of trade in violation of Section 1 of the Sherman Act because they impeded price competition on merchant fees in the sale of network services to merchants. The challenge culminated in *Ohio v. American Express Co.*,[1] where the United States Supreme Court dismissed the case because the plaintiffs failed to make out a prima facie case of anticompetitive effects in a proper relevant antitrust market.

[1] *Ohio v. Am. Express Co.*, 138 S. Ct. 2274 (2018).

This paper defends the Supreme Court's decision to define a single, two-sided antitrust market when analyzing the restraints Amex imposed on merchants, or more generally, restraints in two-sided platforms that subsidize one side at the expense of the other. Legal commentators have criticized the Court's single-market approach because, in their view, a single two-sided market conceals market power on one side of the platform and confers "de facto antitrust immunity" on platform businesses.[2] Citing economic literature on two-sided markets, this paper supplements the majority's reasonings as to why the single-market approach is necessary to achieve the goal of market definition—the identification of market power—when performing antitrust analyses of platforms that cross-subsidize between the sides.

Part I of this paper sets out the factual background of *American Express*. Part II summarizes the market definition analyses of the case as it progressed from the district court to the U.S. Supreme Court. Part III examines the economic constraints that drive two-sided platforms to cross-subsidize between the sides. Part IV analyzes the ways in which the single-market approach is necessary to accurately portray economic constraints of two-sided platforms that cross-subsidize. Part V concludes.

I. Background

Credit cards have long replaced cash or personal checks as the primary method of payment for consumers in the United States. Unlike a debit card user who draws from existing funds to buy goods or services, a credit card user draws from a line of credit extended to him by the card-issuing network. On the other side of the counter, only merchants participating in the same credit card network as the cardholder can receive his payments. Put another way, a credit

[2] Lina M. Khan, *The Supreme Court Case That Could Give Tech Giants More Power*, N.Y. TIMES (Mar. 2, 2018), https://www.nytimes.com/2018/03/02/opinion/the-supreme-court-case-that-could-give-tech-giants-more-power.html

card network operates a platform on which buyers and sellers can enter into transactions facilitated by a simple swipe of a card. In the United States, there are four dominant credit card networks: Visa is the largest, with 45% of the total dollars processed by credit card networks; Amex, the second largest, with 26.4%; and MasterCard and Discover, with 23.3% and 5.3% respectively.[3]

For every transaction facilitated on its platform, the network extracts a fee. For example, when an Amex cardholder makes a purchase, Amex withholds a percentage of the total transaction value—called the "merchant discount fee"— before paying the remainder to the merchant.[4] Unlike Visa and MasterCard, whose revenue streams consist mostly of interest payments,[5] Amex earns most of its revenue from these merchant discount fees.[6] Accordingly, the profit-maximizing strategy for Amex is to increase the transaction volume from which the merchant fees are extracted. To that end, Amex stimulates cardholder spending by offering a suite of premium rewards—such as frequent flyer miles, airport lounge access, cash back, merchandise—that are redeemable with points earned from purchases.[7] Due to Amex's investment in robust reward programs, Amex became the preferred credit card brand for those who are "ready to spend"– that is, wealthy cardholders who make more frequent purchases and spend more per transaction.[8] Thus, aside from growing the number of transactions, Amex's spend-centric strategy also fostered cardholder loyalty since Amex cardholders would insist on maximizing their spend on Amex cards.[9]

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[3] *United States v. Am. Express Co.*, 88 F. Supp. 3d 143, 188 (E.D.N.Y 2015). For background, this paper cites to the district court's factual finding unless the finding was distributed by the Second Circuit or the Supreme Court.
[4] *Id.* at 157.
[5] *Id.* at 159.
[6] *Id.*
[7] *Id.* at 160.
[8] *Id.* at 159.
[9] *See id.* at 191.

To finance its superior cardholder rewards, Amex charges higher merchant fees than its network competitors. Since merchant fees reduce the profits merchants earned from each transaction, merchants wishing to accept high-cost cards could protect margins by passing on the fees to consumers through increased retail prices. Other merchants whose customers are sensitive to price increases elected not to accept Amex cards altogether.[10] Only those merchants that are confident that the net profits of Amex transactions will be positive – after accounting for the high merchant fees, the incremental sales resulting from accepting Amex, and the loss of sales due to higher retail prices – would choose to accept Amex cards.

Since networks charge varying merchant fees and a typical consumer carries more than one credit card, savvy merchants realized that they could maximize profits by "steering" customers towards the lowest-cost card at the register.[11] As such, while merchants signal acceptance to bring high-spending Amex cardholders in the door, they would try to steer the cardholders towards another card at the point of purchase. Visa and MasterCard capitalized on this practice with effective marketing campaigns that shifted between 25% and 45% of Amex's transaction volume to them.[12]

Amex responded by requiring merchants to accept in their contracts the Amex "Non-Discrimination Provisions" ("NDPs"),[13] which prohibit merchants from "attempting to influence their customers' card choices" through monetary incentives and non-monetary means.[14] Visa and MasterCard then promptly implemented their own antisteering rules.[15] Once the NDPs were in

[10] Three million merchants who accept Visa, MasterCard, and Discover do not accept Amex cards. *Id.* at 158.
[11] *Id.* at 149.
[12] *Id.* at 161.
[13] *Id.* at 149.
[14] *See id.* at 165.
[15] *Id.*

place for the three major networks, Visa, MasterCard, and Amex all implemented merchant fee increases.[16] Discover sought to gain transactions by offering lower merchant fees, only to find that the "restriction imposed by the other payment networks denied merchants the ability to express a preference for Discover."[17] Discover then started charging merchant fees more in line with the other networks.[18]

II. The History of the Case

A. The District Court

In 2010, the United States and seventeen states (collectively, "Plaintiffs") brought suit against Amex, Visa, and MasterCard challenging the antisteering rules found in their respective merchant agreements.[19] While Visa and MasterCard settled with DOJ in 2011,[20] Amex litigated the case on the merits. In 2015, the district court found that Amex's antisteering rules violated Section 1 of the Sherman Act because it impeded price competition in the sale of network services to merchants.[21]

Section 1 of the Sherman Act prohibits "every contract…in restraint of trade or commerce among the several states."[22] Since nearly every contract restrains trade to some degree,[23] the Supreme Court has repeatedly held that Section 1 is intended only to outlaw

[16] *Id.* at 201-02.
[17] *See* Brief for Discover Financial Services as Amicus Curiae Supporting Petitioners at 7-8, Ohio v. Am. Express Co. (Dec. 14, 2017) (No. 16-1454).
[18] 88 F. Supp. 3d at 214.
[19] *See id.*
[20] Final Judgment as to Defendants MasterCard International Incorporated and Visa Inc., United States v. Am. Express Co., No. CV-10-4496 (NGG) (RER) (E.D.N.Y. July 20, 2011), ECF No. 143.
[21] 88 F. Supp. 3d. at 238-39.
[22] 15 U.S.C. § 1.
[23] Bd. of Trade of City of Chicago v. U.S, 38 S. Ct. 242, 244 (1918) ("Every agreement concerning trade, every regulation of trade, restrains. To bind, to restrain, is of their very essence.").

"unreasonable restraints."[24] Because Section 1 prohibits "contract" in restraint of trade, which necessarily requires an agreement between two or more actors, "concerted actions" is the other element of a Section 1 violation.[25] Since it was undisputed that the NDPs—which are contained in Amex's card acceptance agreements—constituted "concerted action," the only question remaining for the district court was whether the NDPs unreasonably restrained competition.[26]

To adjudge "unreasonableness," federal courts have routinely utilized two evidentiary approaches with opposite degrees of intensiveness. The least evidence-intensive form, called the *per se rule*, is applicable to types of restraints that the Supreme Court recognizes as routinely causing egregious competitive harms—most notably price-fixing or allocating territories among horizontal competitors. It is a conclusive presumption of a restraint's unreasonableness under Section 1 and admits no procompetitive justification.[27] On the other end of the spectrum is the *rule of reason*: the most searching form of analysis that applies when a restraint arguably has both positive and negative effects and a court is called upon to balance them.[28] Since the NDPs constituted vertical restraints between firms at different levels of distribution, and vertical

[24] Standard Oil Co. of New Jersey v. United States, 31 S. Ct. 502, 505 (1911).
[25] *See* Geneva Pharm. Tech. Corp. v. Barr Labs. Inc., 386 F. 3d 485, 506 (2d Cir. 2004) ("To prove a Section 1 violation, a plaintiff must demonstrate: (1) a combination or some form of concerted action between at least two legally distinct economic entities that (2) unreasonably restrains trade.")
[26] *Id.* at 167.
[27] "[There] are certain agreements or practices which because of their pernicious effect on competition and lack of any redeeming virtue are conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use." *Northern Pac. Ry. Co. v. U.S.*, 356 U.S. 1, 1 (1958). *See, e.g., U. S. v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 150 (1940) (price-fixing); *Palmer v. BRG of Georgia, Inc.*, 498 U.S. 46, 46 (1990) (market allocation). *Cf. Broadcast Music, Inc. v. Columbia Broadcasting System, Inc.*, 441 U.S. 1, 1 (1979) (rejecting the application of the per-se rule to an apparent horizontal price-fixing agreement because the agreement was necessary to create a product desired by consumers).
[28] *See, e.g., Cal. Dental Ass'n. v. FTC*, 526 U.S. 756, 756 (1999) (an agreement among dentists to restrict advertising on price and quality); *Nat'l Collegiate Athletic Ass'n v. Bd. of Regents of Univ. of Oklahoma*, 468 U.S. 85, 85 (1984) (a television plan that limited the number of games member universities may televise).

restraints may have either procompetitive or anticompetitive effects depending on the context in which they were formed,[29] the district court analyzed them under the rule of reason.[30]

To perform the rule of reason analysis, the district court used a three-step burden shifting framework.[31] First, the plaintiffs bear the burden of producing evidence to show that the restraint has caused "adverse effects on competition as a whole in a relevant market."[32]Although the plaintiffs may satisfy this burden directly with evidence of actual adverse effects, such as "increased prices or a reduction in output,"[33] the plaintiffs may also invoke a rebuttable presumption of prima facie anticompetitive harm through circumstantial evidence. More specifically, the plaintiffs may discharge the burden indirectly by showing that the defendant "had sufficient market power to cause an adverse effect on competition" and that there are "other grounds to believe that the defendant's conduct will harm competition."[34] If the plaintiff satisfies its burden in Step 1, the burden shifts to the defendant in Step 2 to produce evidence of procompetitive effects resulting from the restraint.[35] Finally, if the defendants are able to demonstrate the justifications for the restraint, the burden reverts back to the plaintiff to persuade the court that any "legitimate competitive benefits" offered by the defendant could have been achieved "through less restrictive means."[36]

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[29] *See* Leegin Creative Leather Products, Inc. v. PSKS, Inc., 551 U.S. 877, 888 (2007) (resale price maintenance agreements between manufacturers and retailers restrict intrabrand competition to stimulate interbrand competition); Cont'l T. V., Inc. v. GTE Sylvania Inc., 433 U.S. 36, 38 (1977) (franchise agreement between manufacturer and retailer barring retailer from selling franchised products from unauthorized locations restricted intrabrand competition to enhance interbrand competition).
[30] 88 F. Supp. 3d. at 169.
[31] *Id.*
[32] *Id.*
[33] *Id*. *See Tops Mkts., Inc. v. Quality Mkts., Inc.*, 142 F.3d 90, 96 (1998).
[34] 88 F. Supp. 3d. at 169.
[35] *Id.* at 170.
[36] *Id.*

The district court found that, under step 1 of the rule of the reason, the plaintiffs had discharged their burden indirectly by showing that Amex has market power in the market for network services sold to merchants, and that the NDPs harmed competition by removing the incentives of networks to compete on merchant fees.[37] Market power has been defined by the Supreme Court to mean the "power to control prices or exclude competition."[38] Whether Amex has market power in a relevant product market is dependent on the court's definition of that market—a grouping of all products that consumers consider to be "reasonably interchangeable" with the defendant's product.[39] Because "the ability of consumers to switch to a substitute restrains a firm's ability to raise prices above the competitive level," identifying substitute products allows the court to "identify market participants and the competitive pressures" that constrain a firm's ability to engage in anticompetitive conduct.[40] In short, if there are many substitutes for the defendant's product, the defendant cannot "control price or exclude competition" and thus, does not have market power.

However, the district court did not apply this "reasonable interchangeability" standard to define the relevant market because it adopted the market definition in *Visa*—a Second Circuit precedent analyzing another restraint in the credit card industry.[41] In *Visa*, the DOJ challenged the "exclusionary rules" imposed by Visa and MasterCard which prohibited banks from issuing cards on the Amex and Discover networks.[42] There, the Second Circuit affirmed the district court's finding of "two interrelated, but separate, markets:" (1) a "general purpose card network services market" in which the four major networks competed to sell card-acceptance services to

[37] *Id.* at 238-239.
[38] United States v. E.I du Pont de Nemours & Co, 76 S. Ct. 994, 1005 (1956)
[39] 88 F. Supp. 3d. at 170.
[40] *Id.*
[41] United States v. Visa U.S.A., Inc., 344 F.3d 229, 237 (2d Cir. 2003)
[42] *See id.*

merchants; and (2) a "general purpose card market" in which issuing banks, Amex and Discover compete to sell card-issuance services to cardholders.[43] Because the Second Circuit separated card-acceptance and card-issuance services into two product markets, the district court rejected Amex's argument to define the product market in terms of "transactions" to avoid "collapsing" two products "into a single antitrust market."[44] More specifically, the district court rejected a transaction-based market because it would "obfuscate or confuse market realities" by concealing market power – if it does exist – on the card-acceptance or card-issuance level.[45] Thus, separating the markets was "necessary and appropriate" to properly account for the competition that occurs on each level of the industry.[46] The court found the market for card-acceptance services as the relevant product market for assessing the competitive effects of the challenged NDPs since the NDPs only applied to merchants.[47]

The court then performed the hypothetical monopolist test ("HMT") to determine whether debit network services should be included along with credit card services in the relevant market.[48] The HMT—a quantitative application of the "reasonable interchangeability" standard—asks whether a hypothetical monopolist could profitably impose a small but significant and non-transitory price increase ("SSNIP") on all the products in the candidate market.[49] Put another way, a relevant market is properly defined if a hypothetical monopolist supplier could impose a SSNIP and still retain enough sales for the SSNIP to be profitable.[50] If the SSNIP is not profitable, the candidate market fails the HMT because there are other products

[43] *Id. at 238.*
[44] 88 F. Supp. 3d. at 172.
[45] *Id.*
[46] *Id.* at 173.
[47] *Id.* at 170.
[48] *Id.* at 175.
[49] *Id.* at 176.
[50] *Id.*

outside of the market to which the customers can switch to protect themselves against anticompetitive price increases. In that scenario, the "proposed market definition likely needs to be expanded" to include those substitutes.[51] Since the district court found it is "implausible" that merchants would substitute credit network services for debit network services in response to a 5% or 10% increase in the cost of accepting credit cards,[52] a hypothetical monopolist supplier of credit network services would find a SSNIP profitable. As such, the district court found the market for credit network services passed the HMT, and excluded debit network services from the relevant market because they were not "reasonably interchangeable" with credit network services.[53]

Given this market definition, the district court concluded that Amex possessed market power in the relevant market.[54] The court based this finding on evidence showing the network services market to be highly concentrated with four dominant firms, high barriers to entry, and inelastic demand for card-acceptance services resulting from cardholders' loyalty to Amex.[55] In this market, Amex is the second largest firm with 26.4% of the total dollars processed by credit card networks.[56] The evidence also showed that Amex managed to retain all of its large merchants despite implementing repeated price increases, which under judicial precedent is further evidence that Amex had market power.[57]

In conjunction with a finding of Amex's market power, the district court found the NDPs anticompetitive because they reduced the incentives for Amex and its network rivals to compete

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[51] *Id.*
[52] *Id.* at 177.
[53] *Id.* at 179.
[54] *Id.* at 187.
[55] *Id.* at 188-95.
[56] *Id.* at 188 (market share is measured as a percentage of the total dollar value of transactions using credit cards).
[57] *Id.* at 195.

on merchant fees.[58] Because merchants are prohibited from steering customers to a lower-cost card, the NDPs effectively excluded Discover and other rivals seeking to compete for transactions by lowering merchant fees.[59] The court concluded that the NDPs contributed to higher merchant fees across the industry,[60] and so found that the plaintiffs had discharged their burden of proving a prima facie case that the NDPs caused adverse effects on competition in the market for network services and violated Section 1.

Since the court found the plaintiffs met their burden under Step 1 of the rule of reason, the burden shifted to Amex in Step 2 to produce evidence of the procompetitive effects of the NDPs. Amex offered two justifications—the preservation of Amex's differentiated business model and the protection of Amex's investment from merchant free-riding—but neither was cognizable as a matter of law.[61] The court found the first justification inconsistent with the law since it is "axiomatic" that the federal antitrust laws were enacted to protect competition, not individual competitors.[62] As such, the court rejected the "remarkable proposition" that the NDPs may be justified under Section 1 because Amex needed them to compete more effectively. The court then rejected the second justification as insufficient to "overcome the market-wide harms effected by the NDPs."[63] Since Amex lacked any plausible procompetitive benefits, it failed to discharge its burden in Step 2. The court concluded that Amex's antisteering rules unreasonably restrained competition in the network services market and entered judgment for the Plaintiffs.

B. The Court of Appeals

[58] *Id.* at 209-10.
[59] *Id.*
[60] *Id.* at 215.
[61] *Id.* at 225.
[62] *Id*. at 227.
[63] *Id*. at 237.

The Second Circuit Court of Appeals took a sharply different approach to analyzing the NDPs and found that they passed muster under Section 1 of the Sherman Act.[64] The defendants primarily appealed the district court's decision to the Second Circuit on the issue of market definition: "Whether, in evaluating the alleged anticompetitive effects of the NDPs under the rule of reason, the District Court committed legal error by defining the relevant market to exclude half of the relevant consumers."[65] Although the district court modeled its market definition after the Second Circuit's market definition in *Visa*, the Second Circuit found the district court's market definition "fatal to its conclusion that Amex violated [Section 1 of the Sherman Act]."[66]

The Second Circuit noted that, since the restraint in *Visa* occurred not among different sides of the same platform but between the platforms themselves, *Visa* does not "provide the template for resolution" in the current case.[67] In *Visa*, the exclusionary rules achieved two anticompetitive results for Visa and MasterCard: because 20,000 member banks agreed not to issue cards on the Amex or Discover networks, not only did the exclusionary rules restrict the number of cards in circulation, they also reduced the units of network services that Amex and Discover could have sold through those cards.[68] Thus, it was necessary to define two separate markets so that the court could fully assess the impact of the exclusionary rules on each market.[69] Here, Amex implemented the NDPs to hold merchants to their card-acceptance agreements so that Amex can continue to collect merchant fees and invest in cardholder rewards.

[64] *United States v. Am. Express Co.*, 838 F.3d 179, (2d Cir. 2016).
[65] Brief of Appellants on *United States v. Am. Express*, at 7 (Aug. 5, 2015) (No. 15-1672).
[66] 838 F.3d 179 at 197 ("The District Court erred in patterning its relevant market inquiry largely after that undertaken by this Court in Visa.").
[67] *Id.*
[68] *See* 344 F.3d 229 at 240-41.
[69] *See* 838 F.3d 179 at 198.

Because of the traditional rule against cross-market balancing,[70] separating the markets when one side is restrained for the other's benefit penalizes "legitimate competitive activities… no matter how output-expanding such activities may be."[71] Thus, the correct market definition here must include both sides of the Amex platform.

Next, the Second Circuit found the district court's application of the HMT erroneous because it "failed to quantify the change in cardholder behavior resulting from decreased merchant demand to use the hypothetical monopolist's network for credit-card transactions."[72] The Second Circuit held that the proper HMT analysis of a two-sided market "must consider the feedback effects inherent on the platform" by accounting for the reduction in cardholders' demand for cards (or card transactions) that would accompany any degree of merchant attrition in response to the SSNIP.[73] Ultimately, the Second Circuit found the district court's market definition erroneous because it failed to account for the feedback effects between the cardholder market and merchant market that would occur if merchant fees—and cardholder rewards—were reduced. It follows that the correct market definition, then, is one that properly accounts for the feedback effects between the two sides of the Amex network. In other words, the market in which to analyze the NDPs is a single market encompassing both the merchant side and the cardholder side, which is necessary to capture the effects of a price reduction or increase on one side on the other.

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[70] *See* 138 S. Ct. at 2302–03 (Breyer, J., dissenting) ("American Express might face an uphill battle. A Sherman Act § 1 defendant can rarely, if ever, show that a pro-competitive benefit in the market for one product offsets an anticompetitive harm in the market for another[.]")
[71] 838 F.3d 179 at 199.
[72] *Id.*
[73] *Id.* at 200.

Given the new market definition, the court gave some examples of the types of evidence that plaintiffs could show to satisfy their burden of proving a prima facie anticompetitive effect in this two-sided market: evidence of output reduction in the form of decreasing number of transactions;[74] evidence of worsening card services;[75] or evidence showing that the net price of Amex transactions—the sum of merchant fees and the value of cardholder rewards which reflects "the all-in price charged to merchants and consumers" across the entire Amex platform—is supracompetitive.[76] In its evaluation of the evidence, the Second Circuit found that the number of credit card transactions had actually increased in the relevant time period, and that the plaintiffs had not offered evidence showing that, without the challenged restraint, the number of transactions would have been even higher.[77] There was likewise no evidence that the NDPs have resulted in a higher net price, or two-sided price, of Amex transactions:[78] Since a correct market definition here must account for the feedback effects between the two sides of the network, the two-sided price is the most accurate measure of a restraint's effects on pricing in a two-sided market. As such, the court found the evidence of increased merchant fees, in isolation, were insufficient to show adverse effects in the entire market because "merchant pricing is only one half of the pertinent equation."[79]

Since the plaintiffs failed to prove net harm to both cardholders and merchants because they could not provide evidence showing the NDPs reduced the quality or quantity of credit card transactions – indeed, there is evidence showing that the "quality and output of credit cards across the entire industry continues to increase" – the Second Circuit concluded that the plaintiffs

[74] *Id.* at 205-06.
[75] *Id.*
[76] *Id.* at 202.
[77] *Id.*
[78] *Id.* at 206.
[79] *Id.* at 202.

failed to carry their burden to prove a Section 1 violation.[80] The Second Circuit then remanded the case with instructions to enter judgment in favor of Amex.

C. Supreme Court

While the DOJ elected not to seek review of the Second Circuit's decision, the states filed a writ of certiorari to the Supreme Court seeking review of the direct-effects case.[81] In a 5-4 opinion written by Justice Thomas, the majority—consisting of Chief Justice Roberts and Justices Kennedy, Alito, and Gorsuch—concluded that Amex's "antisteering provisions [did] not violate federal antitrust law."[82] Justice Breyer, joined by Justices Ginsburg, Sotomayor, and Kagan, dissented.[83]

Since direct evidence of anticompetitive effects include "reduced output, increased prices, or decreased quality *in the relevant market*," and the plaintiffs "rel[ied] exclusively on direct evidence" to discharge their initial burden,[84] it was necessary for Thomas to "first define the relevant market" to evaluate the sufficiency of the plaintiffs' evidence.[85] Although Thomas noted that the relevant market is typically defined as the "area of effective competition," or more specifically, "the arena within which significant substitution in consumption or production occurs,"[86] Thomas did not start the market analysis by identifying substitutes. Rather, he held

[80] *Id.* at 207.
[81] Petition for Writ of Certiorari, Ohio v. Am. Express Co., 138 S. Ct. 2274 (No. 16-1454). [I think you need a date in this citation—See Rule 10.8.3 (see the very end of the section)]
[82] 138 S. Ct. 2274 at 2277.
[83] 138 S. Ct. 2274 at 2290.
[84] *Id.* at 2285.
[85] *Id.* at 2284-85.
[86] *Id.* at 2285.

that the simultaneous two-sided nature of credit card transactions required a single, two-sided market definition and so upheld the Second Circuit's market definition.[87]

As Thomas explained, "two-sided transaction platforms," like the credit card networks, can only facilitate transactions "if merchant and cardholder both simultaneously choose to use the network."[88] As such, the activity on both sides of the platform is always joint, simultaneous, and in fixed proportions. Accordingly, to maximize the number of joint and simultaneous uses of a credit card, there must be a sufficient number of cardholders and merchants on each side of the platform. To bring both sides on board, the network must contend with indirect network effects—i.e., the phenomenon where the value of the platform to users on one side of the platform is driven by the number of users on the other side of the platform—inherent in multisided platforms.[89] "[T]wo-sided platforms cannot raise price on one side without risking a feedback loop of declining demand" on the other side of the market,[90]so that the presence of indirect network effects causes the pricing and demand on each side to be interrelated.[91] For example, if Amex were to lower merchant fees (which is usually profit-maximizing in the typical one-sided markets), it would have less funds to invest in cardholder rewards, which would reduce the value of using Amex card to cardholders and hence, reduce demand for the card. Put another way, decreasing price on one side of a two-sided market does not guarantee an increase in overall platform profit, which is dependent on the optimal balancing of prices between different user groups to bring the maximum number of users on board. This interdependence between the two

[87] *Id.* at 2285-86.
[88] *Id.*
[89] *Id.*
[90] *Id.* at 2281.
[91] *See id.* at 2278.

sides is a unique characteristic of credit card platforms – or more generally, two-sided transaction markets – which was overlooked by the district court's separate-markets approach.

Moreover, Thomas found that because transaction platforms "cannot make a sale unless both sides of the platform simultaneously agree to use their services," they are better understood as "suppl[yng] only one product."[92] In the context of credit card networks, that product is card transactions (as opposed to card-acceptance or card-issuance services).[93] To accurately assess competition for transactions, it is necessary to consider both sides of a platform because "only other two-sided platforms can compete with a two-sided platform for transactions."[94] Thomas explained that a credit card network without cardholders willing to use its card cannot compete with Amex; only those with users on both the merchant and cardholder sides can compete with Amex in the sale of transactions.[95]

To be sure, the majority cautioned, the single-market approach is not applicable in all platform cases.[96] For example, a newspaper with ad spaces operates a two-sided platform with readers on one side and advertisers on the other.[97] However, while "the value of an advertisement increases as more people read the newspaper,"[98] readers are largely indifferent – if not hostile – to a growing number of advertisements. Since the indirect network effects are weak and one-sided, the market for newspapers sold to readers and the market for advertising are properly

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[92] *Id.* at 2286.
[93] *Id.*
[94] *Id.* at 2287. The majority was obviously wrong here. Consider credit card networks at their birth. They were a two-sided transaction product but they strongly competed with cash and checks—the primary payment methods of the day. This is a very serious error in the Court's decision, since lower courts are using this as a required legal principle even when the facts show otherwise. *See United States v. Sabre Corp.*, 452 F. Supp. 3d 97 (D. Del. 2020).
[95] *Id.*
[96] *Id.* at 2286.
[97] *Id. See Times-Picayune Publishing Co. v. United States*, 345 U.S. 594 (1953).
[98] 138 S. Ct. 2274 at 2286.

analyzed as a one-sided markets.[99] On the other hand, since credit card platforms cannot make a sale to one side without simultaneously making a sale to the other, Thomas found the indirect network effects are strong and reciprocal – necessitating the networks to "find the balance of pricing that encourages the greatest number of transactions."[100] As such, it is necessary to consider both sides when a two-sided platform "facilitate[s] a single, simultaneous transaction between participants."[101] In other words, when analyzing restraints in two-sided transaction platforms, both sides of the platform should be included in the relevant antitrust market.

Since a single, two-sided market definition is necessary to account for the interdependence between the two sides of the Amex platform,[102] "the fact that two-sided platforms charge one side a price that is below or above cost reflects differences in the two sides' demand elasticity, not market power or anticompetitive pricing."[103] As such, Thomas rejected the evidence of increased merchant fees as insufficient to show adverse effects in the market, since "[p]rice increases on one side of the platform… do not suggest anticompetitive effects without some evidence that they have increased the overall cost of the platform's services."[104]

To summarize, the plaintiffs failed to discharge their initial burden under the rule of reason because they failed to make out a prima facie case of a relevant market and

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[99] *Id.* To be more precise, the indirect network effects are weak because the end users on both sides do not interact, unlike the merchants and cardholders on credit card networks who enter into transactions with each other. This lack of interaction and the resultant weakness of indirect network effects dispense the need for newspaper platforms to balance pricing or cross-subsidize between the sides to bring the optimal number of users on board. Without cross-subsidization, there is no reason to define single, two-sided markets because effects of a restraint on one market is contained to that market only. Unless the facts show that a newspaper imposes a restraint to keep advertising prices high in order to improve the quality of the newspaper, restraints imposed on the newspaper market and restraints imposed on the advertising market are properly analyzed in one-sided markets. *See*, *infra* Part IV.
[100] *Id.*
[101] *Id.*
[102] *Id.* at 2285 ("[C]ourts must include both sides of the platform—merchants and cardholders—when defining the credit-card market.")
[103] *Id.* at 2286.
[104] *Id.*

anticompetitive effects. Because the plaintiffs failed to prove a prima facie market definition, they could not raise a presumption of anticompetitive effects through indirect evidence. On the other hand, evidence of repeated increases in merchant fees—the "direct proof" of anticompetitive effects produced by the plaintiffs—were not prices in the relevant two-sided market. Ultimately, the Court affirmed the Second Circuit and concluded that there is "nothing inherently anticompetitive about Amex's antisteering provisions."[105]

In the dissenting opinion, Justice Breyer argued that market definition was not necessary in cases with direct evidence of anticompetitive effects, because "proof of actual adverse effects on competition is, a fortiori, proof of market power."[106] Even if market definition were necessary here, the dissent rejected the majority's definition of a single two-sided transaction platform market. The dissent characterized card-acceptance and card-issuance services as "complements,"[107] and as complements they cannot be included in the same product market, which is a grouping of substitutes. Furthermore, the description of "two-sided transaction platforms," as articulated by the majority, was not sufficiently unique to warrant a departure from the traditional market definition principles.[108] To make this point, the dissent asked whether the single-market approach would apply to farmer markets or travel agents since they also exhibit indirect network effects and interconnected pricing—the elements of the majority's definition of two-sided transaction platforms.[109] This critique demonstrates the gaps in the majority's reasoning, which communicated to the dissent that indirect network effects and the resultant

[105] *Id.* at 2289.
[106] *Id.* at 2291. *See* F.T.C. v. Indiana Fed'n of Dentists, 476 U.S. 447, 106 S. Ct. 2009, 90 L. Ed. 2d 445 (1986) ("[T]he purpose of the inquiries into market definition and market power is to determine *whether an arrangement has the potential for* genuine adverse effects on competition").
[107] *Id.* at 2296.
[108] *Id.* at 2298.
[109] *Id.* at 2299.

interconnected pricing are both necessary and sufficient to finding a single, two-sided market. What matters for a single-market approach is the choice to cross-subsidize between the sides to overcome the indirect network effects and bring both sides on board. Consider a farmer market organizer who imposes a restraint to keep the price of booth rental high for farmers and uses that elevated rent to improve the quality of the premises to attract more buyers. To evaluate whether that restraint is good or bad for competition, the single-market approach is necessary to capture the feedback effects resulting from a price decrease in rental fee on buyer demand. Ultimately, when performing an antitrust analysis of a restraint imposed by farmer market organizers, a traditional one-sided market for the sale of booth rentals is appropriate if there is no cross-subsidization between the sides. On the other hand, when there is cross-subsidization, the interrelationship between the sides of a transaction platform is amplified such that both sides of the platform should be considered in an antitrust analysis.

The dissent was further convinced that the price evidence compiled here was more than sufficient to advance the case to step two of the rule-of-reason analysis.[110] The district court had concluded that the antisteering restraints insulated Amex from competition and permitted increases in merchant fees – thereby increasing the retail prices for all customers regardless of whether they pay with Amex cards or not.[111] The restraints also blocked merchants from offering incentives to use lower-cost cards and reduced merchants' choices.[112] Therefore, the dissent would have concluded that, at the very least, the plaintiffs had satisfied their initial burden to make a prima facie case.

[110] *Id.* at 2294 ("I should think that, considering step 1 [of the rule of reason] alone, there is little more that need be said.")
[111] *Id.*
[112] *Id.*

Ultimately, Justice Breyer refuted the majority's position in a much lengthier opinion, focusing solely on the factual record from the district court. Breyer argued that the plaintiffs had discharged their initial burden by producing direct evidence of anticompetitive effects of the NDPs. Relatedly, the plaintiffs did not need to make out a prima facie case of market definition here because the direct evidence was sufficient to prove a Section 1 violation; and even if market definition were necessary, that the majority's market definition was erroneous. As such, Breyer would have reversed the Second Circuit.

IV. Analysis Of Two-Sided Transaction Platforms

The key inquiry for practitioners after *American Express* is whether the market definition applied to Amex is applicable in all platform cases, or alternatively, whether a two-sided business model shares sufficient similarities with Amex such that a single two-sided market must be defined. The dissent raised a valid concern over the Court's definition of two-sided markets: As articulated by Justice Thomas, the elements necessary for finding a two-sided market are also present in many markets which have heretofore been analyzed as one-sided.[113] Because of this perceived malleability, courts are "drowning in arguments" by antitrust defendants who hope to avail themselves of the "*Amex* exception" by shoehorning the facts into the Court's definition.[114]

While the Court's relatively short opinion leaves much to be clarified, a close reading through an economic lens reveals that, contrary to the dissent's characterization of the definition as overbroad, the competitive constraints the majority sought to recognize do not exist in every

[113] 138 S. Ct. 2274 at 2300 ("By failing to limit its definition to platforms that economists would recognize as 'two sided' in the relevant respect, the majority carves out a much broader exception to the ordinary antitrust rules than the academic articles it relies on could possibly support."). Although Thomas did limit the precedential effect of the case to two-sided transaction markets only and lower courts are free to assess whether the analysis should be extended to other types of two-sided platforms, the definition could still use some explication.
[114] Steven C. Salop et al., *Rebuilding platform antitrust: Moving on from Ohio v. American Express*, 84 ANTITRUST L.J. 883, 906 (2022).

two-sided platform.[115] A platform with two sides may nevertheless lack the "two-sidedness" that requires both sides to be considered in an antitrust analysis of a restraint: If there is no cross-subsidization between the sides, the effects of a restraint imposed on one side of the platform is contained to that side only.[116] As such, "two-sidedness" exists on a spectrum, only one end exhibits the prerequisite interrelationship resulting from cross-subsidization such that both sides must be considered in an antitrust analysis.[117] Thus, the scope of the majority's definition is more limited than critics suggest: Only "two-sided transaction platforms" that cross-subsidize qualify for the *American Express* single-market approach.

That interrelationship or "two-sidedness" is not an innate characteristic but is rather the result of a platform's business strategy:[118] If the two sides of a platform were two tanks of water kept separated by a valve, the platform chooses to open that valve when it needs to tax one side of the platform to subsidize the other side. Using the Amex platform as an emblematic example of platforms qualifying for the single-market approach, this section identifies the economic constraints that contribute to a platform's decision to adopt a "two-sided" strategy that requires cross-subsidization between the sides.

A. Indirect Network Effects

[115] Sanjana Parikh, *Defining The Market For Two-Sided Platforms: The Scope Of Ohio V. American Express*, 34 BERKELEY TECH. L.J. 1305, 1318 (2020).
[116] *See Times-Picayune Publishing Co.*, 345 U.S at 594.
[117] Parikh, *supra* note 115, at 1318; Marc Rysman, The Economics of Two-Sided Markets, 23 J. ECON. PERSPECTIVE 125, 127 (2009) ("That is, although two-sidedness may exist in practically all market, it is not always quantitatively important.").
[118] Bruno Jullien, Alessandro Pavan & Marc Rysman, *Two-sided Markets, Pricing, and Network Effects*, *in* HANDBOOK OF INDUSTRIAL ORGANIZATION 485, 491 (Kate Ho et al.eds., 1st ed. 2021) ("Two-sidedness is not a binary outcome endowed by a market but is typically rather a choice made by firms about what ways to be two-sided.")

Economists define indirect network effects as "membership externalities"[119]—benefits created by the presence or participation of a group—which are internalized by another group. In other words, indirect network effects exist when the value of a platform to participants on one side is positively correlated with the number of participants on the other side.[120] The operation of indirect network effects can be readily observed in the Amex platform: Because Amex cardholders are loyal and insistent on paying with Amex cards, a significant number of merchants still choose to participate in the Amex network despite the high merchant fees.

Because of indirect network effects, a two-sided platform must achieve sufficient participation on both sides to become profitable. Given the peculiar demand elasticity of each user group, however, the platform must solve a coordination problem—referred to as the "chicken-and-egg problem" in economic literature—to bring both sides on board.[121] In platforms exhibiting only direct network effects (i.e., membership externalities internalized by members of the same group, as seen between Facebook users or between users of telephone networks), if users believe no one will adopt the platform, the equilibrium is zero adoption.[122] In platforms exhibiting indirect network effects, even if side A believes no one will enter the platform, the platform can still achieve the profit-maximizing level of adoption by subsidizing participation on side B to attract side A.[123] Accordingly, platforms balance pricing between user groups to optimize indirect network effects and maintain the profit-maximizing number of users on each side of the platform.

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[119] Lapo Filistrucchi et al., *Market Definition in Two-Sided Markets: Theory and Practice*, 10 J. OF COMPETITION L. AND ECON. 293, 297 (2014).
[120] DAVID S. EVANS & RICHARD SCHMALENSEE, PAYING WITH PLASTIC: THE DIGITAL REVOLUTION IN BUYING AND BORROWING 136 (2005).
[121] Juan Manuel Sanchez-Cartas & Leon Gonzalo, *MULTISIDED PLATFORMS AND MARKETS: A SURVEY OF THE THEORETICAL LITERATURE*, 35 J. OF ECON. SURV. 452, 465 (2021).
[122] *Id.* at 459.
[123] *Id.*

Indirect network effects are often the most explicit characteristics of a platform, which led some economists to propose definitions of two-sided markets that focus only on the presence of indirect network effects.[124] However, while indirect network effects are necessary, they are not sufficient to find a two-sided market: what matters is whether a platform chooses to cross-subsidize to overcome the indirect network effects inherent on the platform and bring users on board.[125] Without cross-subsidization, a platform exhibiting indirect network effects still does not qualify for the single-market approach.

B. Asymmetric Price Structure

Because of indirect network effects, pricing is tricky for two-sided platforms. Generally, pricing in one-sided markets is a matter of algebra: firms calculate the marginal cost of production and impose a percentage markup that maximize profits.[126] On the other hand, a platform's net price is the sum of the prices charged to each side of the platform. To allocate a portion of that price to one side, a platform does not only consider the cost and demand of that side, but also the effects of that side's participation on the other side's participation.[127]

To understand how a platform could overcome the chicken-and-egg problem with pricing, consider a brand-new credit card network with zero adoption. The network needs to identify the user group whose presence creates bigger externalities on the other group and sets the price to

[124] *Id.* at 453.
[125] *See* Andrei Hagiu & Julian Wright, *Multi-sided platforms*, 43 INT'L J. INDUSTRIAL ORGANIZATION 162, 162 (2015) (arguing that indirect network effects exist whenever there are multiple groups interacting on a platform).
[126] EVANS & SCHMALENSEE, *supra* note 120, at 139.
[127] Rysman, *supra* note 117, 129 ("The main result is that pricing to one side of the market depends not only on the demand and costs that those consumers bring but also on how their participation affects participation on the other side and the profit that is extracted from that participation.").

that group first.[128] In the context of payment networks, that group is the cardholders. Given the importance of bringing cardholders on board, the cardholder price could be zero or even negative to induce cardholders' adoption.[129] Once cardholders have joined in sufficient numbers to bring merchants on board, the platform would charge the cost of providing services to both groups, plus a percentage markup, to the merchants. Not all merchants accept this price and stay in the network, but there are enough merchants remaining such that the network starts earning revenue and market share. This is how two-sided platforms calibrate pricing to solve the coordination problem.[130]

For this strategy to work, the platform must be able to implement an asymmetric price structure in which cross-subsidization between the sides is possible.[131] A price structure is asymmetric when one group bears a larger percentage of the total platform price than the other group, and the end users in each group cannot bargain away the difference: For example, because Amex merchants pay to use the network while Amex cardholders essentially get paid with rewards, the merchants bear 100% of the total price of Amex's platform services while the cardholders bear 0%. If merchants and cardholders could negotiate and split the price equally, each side would bear 50% and the price structure would be symmetric instead. When a platform chooses to cross-subsidize, if the value of the subsidy enjoyed by the subsidized side is not subtracted from the revenue earned from the non-subsidized side, there would be an accounting

[128] *See* e.g., Rysman, *supra* note 117, 131; Sanchez-Cartas & Gonzalo, *supra* note 121, at 460 ("[A] platform will compete for one group more aggressively than the other, either if that group is on the more competitive side of the market, or if it causes a larger benefit to the other group.").
[129] EVANS & SCHMALENSEE, *supra* note 120, at 143 ("One way to [get both sides on board] is to obtain a critical mass of users on one side of the market by giving them the service for free or even paying them to take it.").
[130] Jullien et al., *supra* note 118, at 505.
[131] Jean-Charles Rochet & Jean Tirole, *Two Sided Markets: A Progress Report*, 37 RAND J. ECON. 645 (2006) ("A market is two-sided if the platform can affect the volume of transactions by charging more to one side of the market and reducing the price paid by the other side by an equal amount; in other words, the price structure matters, and the platforms must design it so as to bring both sides on board.").

error in calculating the platform's profits. Thus, platforms that cross-subsidize exhibit the "two-sidedness" or interrelationship between the sides that renders one-sided analytical tools inapplicable.

C. Joint and Simultaneous Consumption of One Product

Another indication of the robust interrelationship between the sides is the ability of a platform to record transactions and charge a per-transaction fee. The need to facilitate transactions—joint and simultaneous use of the platform by different user groups—alters the competitive dynamics by introducing usage externalities to the platform.[132] Unlike membership externalities which arise from joining the platform (e.g., holding a payment card or installing a point-of-sale terminal), usage externalities arise from using the platform (e.g., paying with or accepting payment from a card).[133] As the value of joining the platform depends on the number of customers on the other side, the benefit of using the platform similarly depends on the appetite for usage of the other side.[134] One of Amex's justifications for the NDPs centers around usage externalities: Amex designed the NDPs to ensure "welcome acceptance" because a cardholder who is steered away from Amex at one merchant will be "less likely to use Amex at the next merchant, even if that second merchant does not attempt to influence the card choice."[135] Indeed, the value of the Amex network to cardholders depends not only on the willingness of Amex merchants to join the network, but also on the willingness to accept payment from Amex cards.

Because two-sided transaction platforms earn revenue from per-transaction fees, they don't just compete for membership; rather, they primarily compete for usage of the platform.[136] For

[132] Filistrucchi et al., *supra* note 119, at 297.
[133] *Id.*
[134] *Id.*
[135] 88 F. Supp. 3d at 156.
[136] *See* Filistrucchi et al., *supra* note 119.

example, in the context of payment networks, both cardholders and merchants typically "multihome" in adoption: cardholders carry multiple credit cards and merchants likewise accept multiple credit cards.[137] Assuming that the platform does not charge a membership fee to join the network, merely getting users on board does not earn the platform any revenue – it must also get participants to interact with each other on the platform. Thus, while non-transaction platforms (i.e., end users on each side of the platform do not interact) only need to balance pricing to bring both sides on board, transaction platforms must set a price structure that subsidizes one side sufficiently to make usage extremely attractive. Ultimately, for two-sided transaction platforms, a "two-sided" business strategy involving heavy cross-subsidization is crucial to maintain participation, usage, and most importantly, profitability.

V. The Relevant Market When Analyzing Restraints In Two-Sided Platforms That Compete For Usage Is A Single Two-Sided Market For Usage.

To evaluate the effects of restraints in two-sided platforms that subsidize one side at the expense of the other, it is necessary to include both sides of the platform in the relevant antitrust market. In fact, economists writing about two-sided platforms have warned that "market definition and market power analyses that focus on a single side will lead to analytical errors."[138] As this section will show, while the single-market approach in *American Express* drew sharp criticism from legal commentators,[139] it properly accounted for the nature of competition between two-sided transaction platforms that compete for usage.

A. Two-sidedness As a Result of Business Strategy – A Limiting Principle

[137] Filistrucchi et al., *supra* note 119, at 311 & n.67.
[138] David S. Evans, *The antitrust economics of multi-sided platform markets*, 20 YALE J. ON REG. 325, 325 (2003).
[139] *See* Salop et al., *supra* note 114, at 883 ("On June 25, 2018, the U.S. Supreme Court issued what may be the worst antitrust decision in many decades.").

Since any market could be characterized as two-sided because buyers and sellers need to be connected for markets to exist, discerning the appropriate application of the single-market approach is difficult. Another complication arises because a platform typically has multiple revenue streams or product segments, and it may pursue a one-sided business strategy in one product segment while pursuing a two-sided strategy in another. For example, Amazon is a one-sided supplier in the market for physical books but a two-sided platform in markets in which it is not a principal.[140] Even in specific product markets where Amazon operates as a platform—i.e., where it intermediates between third-party sellers and customers—Amazon may move away from the market for the sale of platform services and move towards the market for the sale of the product by vertically integrating and pushing the sale of its branded products.[141] Thus, identifying the relevant product market is the first step in the process of defining a relevant product market.

In the Amex network, for example, as one executive explained during trial Amex operates in three business segments: card-issuance, card-acceptance, and card-transactions.[142] To pinpoint the relevant segment, it is necessary to understand the purpose and effects of the challenged restraint, or in other words, the business problem that the platform is trying to solve with the restraint. At first glance, the NDPs seem to impact the card-acceptance business since it restrained merchants from steering customers to another card; however, there is no revenue stream to protect on the card-acceptance segment because Amex does not charge merchants a network fee for simply being a member of the network. In fact, Amex imposed the NDPs to preserve the price structure Amex uses to subsidize cardholder participation with merchant fees.

[140] Sanchez-Cartas & Gonzalo, *supra* note 121, at 456.
[141] Jullien et al., *supra* note 118, at 490-91.
[142] 88 F. Supp. 3d at 185 ("As one executive explained at trial, Amex competes in 'three businesses: we're an issuing bank, we're a merchant acquirer, and we're a network.').

The ability to cross-subsidize was necessary for Amex to optimize indirect network effects and achieve profit-maximizing participation on each side of the platform. Sufficient participation, in turn, is crucial for Amex to facilitate the profit-maximizing number of transactions. In short, Amex implemented the NDPs to protect the card-transaction segment wherein it pursues a two-sided business strategy. As such, the relevant antitrust market is a single two-sided market for transactions.

B. Market Definition of Two-Sided Transaction Platforms

This section examines the nature of competition between two-sided transaction platforms, which informs the application of the traditional tools of market definition such as the Brown Shoe factors and the hypothetical monopolist test. Then, this section identifies market participants in two-sided transaction markets, as well as identifies the exercise of market power of a dominant two-sided transaction platform.

1. Competition Between Two-Sided Transaction Platforms

Market definition is an exercise to find market power by identifying the set of competitive constraints that would make it unprofitable for a firm to impose supracompetitive prices.[143] Thus, to be informative, market definition must account for all the constraints that factor into a firm's pricing strategy. For a two-sided transaction platform, the calibration of pricing and benefits between the sides—i.e., price structure—affects its revenue and market share more than the price level (i.e., net price or total platform price).[144] Consider two platforms exhibiting similar indirect network effects and charging the same net price, if one price structure

[143] Salop et al., *supra* note 114, at 900.
[144] *See* Rochet & Tirole, *supra* note 131.

allocates the total price more efficiently between user groups, the platforms will end up with different levels of output.

To illustrate, the Amex network chose a high-cost and high-reward balancing which skews pricing heavily towards the merchants to fund robust cardholder rewards; MasterCard, on the other hand, offer different card tiers that reflect different calibrations of pricing and benefit. Despite being the most expensive card brand that is accepted at fewer merchant locations, Amex still overtook MasterCard as the second largest network: At the time of the *Visa* litigation in 2001, MasterCard accounted for 26% of the dollars processed by credit cards while Amex accounted for 20%;[145] by the time of the *American Express* litigation ten years later, MasterCard only accounted for 23.3% while Amex accounted for 26.4%.[146] Amex's success demonstrates that a large network size is not the ultimate prize in the contest between transaction platforms – Amex won market share by choosing to forego a large network in favor of a small network consisting of wealthy, loyal cardholders and obliging merchants. In other words, when the unit of competition is usage of the platform, defining separate markets for each side is not informative because that approach only measures the competition for membership.[147] Indeed, the district court's separate-markets approach confused market realities in *American Express*: while MasterCard has 3 million more merchants in its network than Amex – or in other words, a larger share of the market for card-acceptance services – MasterCard still captured 3% less than Amex in terms of the total dollars processed by credit card networks.[148]

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[145] 344 F.3d at 240.
[146] 88 F. Supp. 3d at 188.
[147] Filistrucchi et al., *supra* note 119, at 307 ("[T]o the extent that customers' multi-home in adoption, the adoption of a system by a customer does not guarantee that the system is used and generates revenues from such use. In such situation, identifying the market for adoption as the market in which competition takes place is misleading."). The district court was wrong to use the dollars processed by networks instead of the number of cards in circulation as the measure of output for the market for network services.
[148] 88 F. Supp. 3d at 188.

Given the nature of competition between transaction platforms, indirect network effects inherent on a platform constrain its pricing more than substitute platforms. To illustrate, among the many avenues of competition, one-sided firms can lower prices to gain market share. Thus, for one-sided suppliers, the pricing of substitutes presents the biggest price-constraining force. On the other hand, transaction platforms must consider both the price level and the price structure in its pricing strategy. For example, having achieved the equilibrium level of adoption and usage with its pricing, Amex "cannot raise price on one side without risking a feedback loop of declining demand."[149] That is, when deliberating whether to implement a price increase, Amex cares less about what substitute networks are charging and cares more about the impact of such increase on the current level of participation in its network. Thus, because indirect network effects constrain a platform's pricing more than substitute platforms, an antitrust analysis of a restraint in a two-sided platform would be unreliable without considering indirect network effects. Ultimately, it is necessary to define a single market encompassing both sides of the platform to accurately identify indirect network effects as a competitive constraint.

2. Demand-Substitutability Principle

Many legal commentators have criticized the single-market approach for breaking the demand-side substitutability principle—the traditional touchstone" for market definition—by grouping complementary products into a relevant antitrust market.[150] To understand demand-side substitutability, it is helpful to keep in mind the context in which market definition is most often performed: the initial screening for anticompetitive effects of a proposed merger based on market

[149] 138 S. Ct. 2274 at 2277.
[150] *See e.g.,* Salop et al., *supra* note 114; Michael L. Katz, *Platform economics and antitrust enforcement: A little knowledge is a dangerous thing*, 28 J. ECON. AND MGMT. STRATEGY 138 (2019); Nancy L. Rose & Jonathan Sallet, *Ohio v. American Express: The exception that should not become a rule*, 36 ANTITRUST L.J. 76 (2022).

concentration.[151] Since any competitive harm resulting from a merger is prospective, market share analysis is only informative if the market is defined in such a way that market power will be created or its exercise facilitated is a possibility.[152] If there is no market definition in which market power can be created, then the merger does not pose any competitive concerns. Creation of market power—i.e., ability to profit from conducts that would make competitive firms suffer—is possible only when a firm is the exclusive supplier of products which are reasonably interchangeable for consumers.[153] Accordingly, grouping complementary products into a candidate market does not inform whether a supplier would find it profitable to monopolize this product grouping.

The assumption underlying this criticism is that a transaction-based market "takes the concept of two-sidedness too far,"[154] and that there are only card-acceptance services and card-issuance services. Because these services are complements, they cannot be included in the same market definition. However, this criticism seems to miss the fact that Amex operates in three product segments, not all of which are relevant to an antitrust analysis of a restraint. As discussed in Part V.A, in the specific context of *American Express*, the product whose substitutes need to be identified for market definition is credit card transactions, or more abstractly, usage of the Amex network. In this context, card-acceptance and card-issuance services are complementary to the extent that left shoe and right shoe are complementary.[155] To be sure, this is not to say that

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[151] *See* ERIC EMCH & SCOTT T. THOMPSON, MARKET DEFINITION AND MARKET POWER IN PAYMENT CARD NETWORKS 14 (2006) ("[T]he purpose of market definition is to facilitate an initial screen of proposed mergers based on measures of market concentration.").
[152] *Id.* ("Market share analysis is unlikely to be informative unless the market is defined in such a way that a creation of market power within the market is at least a theoretical possibility.")
[153] *See Brown Shoe Co. v. United States*, 82 S. Ct. 1502 (1962) ("The outer boundaries of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it.").
[154] 88 F. Supp. 3d at 184.
[155] Sanchez-Cartas & Gonzalo, *supra* note 121, at 476.

it's never appropriate to define separate markets in terms of card-acceptance services or card-issuance services; in this case, however, doing so would be akin to defining two separate markets for engines and airbags when assessing competition between car sellers.

3. Brown Shoe and Hypothetical Monopolist Test

Antitrust courts and practitioners have relied primarily on two analytical tools when identifying the relevant product market: the *Brown Shoe* factors and the hypothetical monopolist test ("HMT").[156] The application of *Brown Shoe* requires identifying a set of "practical indicia" that, if present, would indicate the existence and boundaries of a product market.[157] Because *Brown Shoe* is a qualitative assessment, it can be extended to the two-sided platform context without much difficulty. On the other hand, rote application of the standard HMT to analyze two-sided platforms creates issues that are resolvable only by modifying the test to account for the two-sided nature of the platform.[158]

The HMT deems a product grouping ("candidate market") as a relevant market if a hypothetical monopolist of all products in the product group could profitably raise the prices in the product grouping by a small but significant non-transitory price ("SSNIP"), usually taken to be 5% for a period of one year.[159] Right away, the issue with applying the standard SSNIP test to analyze two-sided platforms becomes apparent: Given that the profits of two-sided platforms are

[156] *See Brown Shoe Co.*, 82 S. Ct. at 1502; U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES ¶ 4.1.1 (Aug. 2010).
[157] *Brown Shoe Co.*, 82 S. Ct. at 1524 ("The boundaries of such a submarket may be determined by examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.")
[158] EMCH & THOMPSON, *supra* note 153, at 17 ("[I]f, for some reason, we were to apply the SSNIP test to the net price on each side of the market separately, then we would be faced with a logical conundrum.")
[159] HORIZONTAL MERGER GUIDELINES ¶ 4.1.1.

determined by both price level and price structure, which price should a hypothetical monopolist impose a SSNIP on?[160]

The only reasonable candidate for application of the SSNIP test is the platform's net price or total price of transactions, since it represents "the most direct analog to the single price charged by a conventional monopolist in one-sided market."[161] Because a transaction platform cross-subsidizes between the sides, applying the SSNIP only to merchant price or cardholder price does not yield insights into whether a hypothetical monopolist is increasing margin—and profits—on each transaction. To illustrate, consider a two-sided platform with sides A and B linked by reciprocal indirect network effects. The application of a SSNIP on side A would only capture the immediate impact of the SSNIP on side A's demand and profits; it would not account for the additional loss of demand and profit on side B as a result of falling demand on side A.[162] Thus, while raising the price on one side creates a "feedback loop of declining demand,"[163] the standard SSNIP test only measures the declining demand on one side of the platform. Thus, imposing the SSNIP on one price while holding the other constant might lead to a market definition that is too narrow.[164] A one-sided product grouping might pass the HMT only because the profit loss on one side is small enough that the SSNIP seems profitable for a hypothetical monopolist.[165] Applying the SSNIP to the total price, which is the sum of merchant and

[160] Sanchez-Cartas & Gonzalo, *supra* note 121, at 474 ("In a two-sided market, the profits of the hypothetical monopolist are determined by both the price level and the price structure. It is not a priori clear whether the hypothetical monopolist should be thought of as raising: (1) the price level while optimally adjusting the price structure; (2) both prices together keeping fixed the price structure; (3) each of the two prices separately allowing the other price to be adjusted optimally; (4) each of the two prices while keeping the other price fixed.").
[161] EMCH & THOMPSON, *supra* note 153, at 17.
[162] Filistrucchi et al., *supra* note 119, at 317.
[163] 138 S. Ct. 2274 at 2277.
[164] Filistrucchi et al., *supra* note 119, at 318.
[165] *Id.*

cardholder prices, solves this issue: any increase in the total price of transactions raises the monopolist's variable margin on each unit of facilitation services.[166]

There is another analytical difficulty with applying the SSNIP to only one side of the platform: the *Cellophane* fallacy illustrated by *United States v. E.I du Pont de Nemours & Co.*[167] Generally, the HMT is useful for determining whether two products are close substitutes when both are sold at the *competitive* price.[168] What happens when the SSNIP is applied to prices that are already priced at supracompetitive levels? Rational profit-maximizing sellers, whether monopolist or competitive, set as high a price as it can without losing so many customers that the price increase is unprofitable.[169] If the seller is indeed a monopoly, the prevailing price is already the monopoly-efficient price; and the application of a SSNIP on this price would result in a loss of profit.[170] In *American Express*, because each platform calibrates pricing to achieve the most efficient number of participants on both sides, the price structure currently in place has already achieved the profit-maximizing level of adoption and usage. As such, applying the SSNIP to one side of the platform (without optimally adjusting the price structure) disturbs this calibration and initiates a feedback loop of declining demand. In this scenario, regardless of the commercial realities in the market, the product grouping would not pass the HMT because the SSNIP is not profitable. Thus, the candidate market would fail the HMT, which would lead to the addition of more products to the grouping – leading to a market definition that is too broad. An overbroad market definition, in turn, dilutes market power.

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[166] EMCH & THOMPSON, *supra* note 153, at 17.
[167] 76 S. Ct. 994 at 994.
[168] HERBERT HOVENKAMP, PRINCIPLES OF ANTITRUST 88 (2nd ed. 2020).
[169] *Id.*
[170] *Id.* at 86-7.

Indeed, indirect network effects can enlarge the overall profit loss following a price increase,[171] and a proper application of the HMT to a two-sided platform must consider the change in profits of each side. The separate-markets approach—which logically requires the application of the SSNIP on one side of the platform—risks defining a market that is either too broad or too narrow.

C. Market Participants

Since transaction platforms primarily compete for usage of the platform, it follows that they compete with entities that offer the same function or facilitating service as the platform. Payment networks facilitate the exchange of goods for money, and hence they also compete with other products used for the same purpose such as cash or personal checks. To be sure, whether any of these alternatives are included in the same relevant antitrust market depends on the specific facts of the case, as well as the application of the "reasonable interchangeability" standard and the HMT.[172]

When the relevant product market is the market for usage, it is insignificant whether a rival supplier operates only on one side or both sides of the platform. As long as they offer substitutes for the platform's function, they are participants in the market for usage. For example, Visa and MasterCard do not issue cards directly to cardholders like Amex and thus, do not operate on the card-issuance side of the Amex platform.[173] On the other hand, Discover operates on both sides of the platform because it sells card-acceptance and card-issuance services directly to merchants and cardholders.[174] It would be a mistake to include Discover in the same market as Amex while

[171] Filistrucchi et al., *supra* note 119, at 318.
[172] See 344 F. 3d at 239 (The *Visa* court found that cash, checks, and debit cards are not considered by most consumers to be reasonable substitutes for credit cards.)
[173] 88 F. Supp. 3d at 159.
[174] *Id.*

excluding Visa and MasterCard: All four networks earn revenue for their facilitation services—Amex and Discover collect merchant fees on each transaction, Visa and MasterCard collect interests on the total value of transactions—and they compete to process a bigger percentage of the total transaction volume.

D. Market Power

When analyzing whether a two-sided transaction platform has market power, a single two-sided market definition is necessary to account for the unique interrelationship between the sides that is absent from one-sided markets. Market power is the power to raise prices above competitive levels without losing so many sales that the price increase is unprofitable.[175] Accordingly, in one-sided markets, a high markup over cost is an indication that a firm has market power because it shows that a firm is making supracompetitive profits.[176] However, a transaction platform's profits are determined by: 1) the cost of subsidizing one side with zero or negative prices, and 2) the revenue earned from charging relatively high prices to the non-subsidized side.[177] Thus, the high prices charged to the non-subsidized side, in isolation, does not communicate anything about the extent of the platform's profits. As such, a high markup over cost on one side of the platform is not sufficient evidence to prove that the platform has market power.[178] On the flip side, the subsidized side of the platform often pays low or even negative prices – that is, below marginal cost. In one-sided markets, price-below-cost is an indication of predatory pricing:[179] a firm sets prices that are below marginal cost to drive competitors out of

[175] HOVENKAMP, *supra* note 170, at 63.
[176] Filistrucchi et al., *supra* note 119, at 474 ("In the traditional analysis of oligopoly, market power is identified by a large markup over cost.")
[177] *Id.*
[178] *Id.* ("[O]bserving a high markup on one side […] need not reflect strong market power.").
[179] *See e.g., A. A. Poultry Farms, Inc. v. Rose Acre Farms, Inc.*, 110 S. Ct. 1326, 1326 (1990); Brooke Group Ltd. v. Brown & Williamson Tobacco Corp, 113 S. Ct. 2578, 2578 (1993).

the market, then raises the price above the competitive level and recoups all the profit it lost during the first stage of predation. However, the platform is not actually sustaining any profit loss from charging the subsidized side below marginal cost: the loss on one side is recovered on the other side within the same period.[180] As such, in two-sided markets the prices can be disconnected from marginal costs.[181] Indeed, standard intuition about how prices should respond to cost does not hold for two-sided transaction platforms; and applying these intuitions to two-sided markets can lead to false inferences about market power.[182]

To understand what the exercise of market power looks like for a two-sided platform monopoly, it is necessary to understand the pricing strategy of a monopolist. Absent competition, consumers who don't want to substitute the platform for another product would have no choice but to "singlehome" in adoption—i.e., cardholders carry and merchants accept only one brand of credit card. In this scenario, membership and usage goes hand in hand – which relaxes the need for the platform to dole out incentives to induce usage. In the context of payment cards, a dominant network would find that it no longer needs to subsidize cardholders to bring them on board; thus, to maximize profits, the platform can start charging cardholders a positive price to use the network. Canceling the subsidy does not necessarily lead to a decrease in merchant price, however. Because of indirect network effects, merchants will continue to participate as long as there are cardholders, and the network would have no reason to reduce the merchant price. In the process, the dominant network pockets the difference between the low or negative price previously charged to cardholders and the new positive price. Thus, the lack of competition would allow the network to cancel the subsidy and raise the total platform price. As such, total

[180] Jullien et al., *supra* note 118, at 508.
[181] *See* David S. Evans, *Some Empirical Aspects of Multi-Sided Platform Industries*, 2 REV. NETWORK ECON. 191 (2003).
[182] Jullien et al., *supra* note 118, at 488.

price or net price is the vehicle for the exercise of market power – it is necessary to pinpoint the total price and total cost of the platform's service to determine whether a platform is making supracompetitive profits.[183] The fact that Amex subsidizes cardholders heavily with merchant fees indicates that Amex does not have market power to increase the total price of Amex transactions. The district court held that Amex possesses market power because of "cardholder insistence," but that insistence resulted from Amex fiercely competing for cardholders with robust rewards. When Amex increases cardholder benefits, it decreases the cardholder price and "brings down the net price across the entire platform."[184] "A firm that can attract customer loyalty only by reducing its prices does not have the power to unilaterally increase prices."

Furthermore, it is somewhat inconsistent to consider the effects of the NDPs on the cardholder side (i.e., merchant fees fostering cardholder insistence) to find market power but exclude those same effects from a discussion of procompetitive justifications for the restraint. Ultimately, the single-market approach is necessary to achieve the goal of market definition—the identification of market power—when performing antitrust analyses of two-sided transaction platforms.

VI. Conclusion

As technology firms continue to find innovative ways to connect multiple groups of economic actors, antitrust enforcement authorities will continue to be called upon to evaluate business practices of multisided platforms. The Supreme Court's attempt to devise a new analytical framework for two-sided transaction platform raised concern that its market definition is too broad to adequately protect consumer welfare. However, considering the specific

[183] *See* EMCH & THOMPSON, *supra* note 153, at 18.
[184] 838 F.3d at 203.

economic characteristics of the Amex network and other two-sided platforms facing similar constraints, the Court's single two-sided market definition is necessary to accurately portray the commercial realities in these complex two-sided markets. This paper discusses those economic characteristics in more detail to limit instances of antitrust defendants shoehorning the facts into Court's definition, "forcing courts and litigants into expensive and difficult analysis."[185]

[185] Rose & Sallet, *supra* note 152, at 76.