On August 11, 2020, the Ninth Circuit handed down its opinion in Federal Trade Commission v. Qualcomm Inc., reversing the district court’s judgment in favor of the FTC. This essay argues that the Court of Appeals made two significant errors in its analysis. The first relates to the court’s failure to understand how Qualcomm’s conduct in the market for patent licenses affects competition in the complementary market for smartphone chips. The second concerns the court’s statement, at odds with the D.C. Circuit’s landmark decision in Microsoft, that if conduct “is not anticompetitive under § 1, the court need not separately analyze conduct under § 2.”

On August 11, 2020, the United States Court of Appeals for the Ninth Circuit handed down its opinion in one of the most closely-watched, and potentially consequential, antitrust decisions in recent years, Federal Trade Commission v. Qualcomm Inc. The opinion, authored by Judge Consuelo Callahan and joined by Judges Johnnie Rawlinson and Stephen Murphy III, reversed the district court’s judgment in favor of the Federal Trade Commission (FTC). Whether the FTC will pursue any further relief, by way of a petition for rehearing en banc or for certiorari, remains (as of this writing) uncertain. Regardless of whether it does or not, however, it is important to note two fundamental errors in the court’s analysis which, if not corrected or limited by subsequent case law, could lead to serious problems in future litigation.

But first, a brief overview of the lawsuit. Qualcomm owns an extensive
portfolio of standard-essential patents (SEPs), that is, patents that are essential to the practice of technological standards relating to smartphones and other connected devices. It also has a dominant market share in the markets for CDMA and premium LTE modem chips. Qualcomm’s long-standing business model has been to sell its chips to original equipment manufacturers (OEMs) only on condition that they agree to a license to Qualcomm’s patents (the so-called “no license, no chips” policy), and not to provide licenses to competing chipmakers such as Intel and MediaTek. During the closing days of the Obama Administration, the FTC voted 2-1 to file an antitrust action based on Qualcomm’s patent licensing practices. Following a trial in early 2019, the district court entered judgment for the FTC, concluding, among other things, that (1) Qualcomm’s refusal to license its competitors violated Qualcomm’s contractual obligation, under the intellectual property rights (IPR) policies of two standard-setting organizations (SSOs), to make such licenses available on “fair, reasonable, and nondiscriminatory” (FRAND) terms; and (2) Qualcomm maintained a monopoly in the markets for CDMA and premium LTE modem chips, in violation of Sherman Act § 2, by means of (a) its “no license, no chips” policy, and (b) its imposition of de facto exclusive dealing requirements on Apple and other OEMs. Judge Koh also entered an injunction requiring Qualcomm to renegotiate its existing licenses and to make licenses available to its competitors on FRAND terms.

What followed was an unprecedented discord between the FTC and its counterpart federal antitrust enforcement agency, the Antitrust Division of the U.S. Department of Justice (DOJ). Following the entry of judgment, the DOJ

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5 See id. at *2–3.
6 See id. at *3. CDMA stands for “code division multiple access,” and is a third-generation cellular standard. LTE for “long-term evolution” and is a fourth-generation technology. See id. at *2.
7 See id. at *3–4.
8 See FTC Charges Qualcomm With Monopolizing Key Semiconductor Device Used in Cell Phones, FED. TRADE COMM’N (Jan. 17, 2017), https://www.ftc.gov/news-events/press-releases/2017/01/ftc-charges-qualcomm-monopolizing-key-semiconductor-device-used [https://perma.cc/Y6RL-LGRF]. Normally there are five FTC commissioners, three from one party and two from the other, who serve staggered terms, see 15 U.S.C. § 41 (2018); but as of January 2017 there were two vacancies.
9 See FTC v. Qualcomm Inc., No. 17-CV-00220-LHK, 2018 WL 5848999 (N.D. Cal. Nov. 6, 2018) (granting summary judgment that Qualcomm breached its FRAND commitments to the Telecommunications Industry Association (TIA) and the Alliance for Telecommunications Industry Solutions (ATIS), by refusing to license rival chipmakers). The Ninth Circuit vacated this finding as moot, in light of its resolution of the antitrust issues. See Qualcomm, 2020 WL 4591476, at *6.
11 See id. at 818–24.
filed a Statement of Interest urging the U.S. Court of Appeals for the Ninth Circuit to stay the injunction pending appeal\(^{12}\) (which it did);\(^{13}\) filed an amicus brief on behalf of Qualcomm;\(^{14}\) and participated in oral argument (arguing for reversal).\(^{15}\) Meanwhile the FTC had recovered its full complement of five commissioners, but with its chairman temporarily recused and the other four members evenly divided along party lines, the agency defended the judgment on appeal—though this didn’t stop one of its dissenting commissioners from publicly rebuking her own agency for its victory.\(^{16}\)

In any event, in August 2020 the Ninth Circuit reversed the district court’s finding of liability under the Sherman Act and vacated the injunction.\(^{17}\) Some aspects of the court’s opinion—in particular, its conclusions that Qualcomm had no antitrust duty to deal with its competitors,\(^{18}\) and that it is not an offense under U.S. antitrust law merely to charge a high price\(^{19}\)—were not altogether unexpected.\(^{20}\) In large part, however, the court reversed based on its perception that the district court’s

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\(^{12}\) See United States’ Statement of Interest Concerning Qualcomm’s Motion for Partial Stay of Injunction Pending Appeal, FTC v. Qualcomm Inc., No. 19-16122 (9th Cir. July 16, 2019), available at https://drive.google.com/file/d/1cd04xPNjb1BuTcSweWHK4fnPasQMMCWC/view?usp=sharing [https://perma.cc/E4AV-CC22].


\(^{17}\) See FTC v. Qualcomm Inc., No. 19-16122, 2020 WL 4591476 (9th Cir. Aug. 11, 2020).

\(^{18}\) See id. at *11–13.

\(^{19}\) See id. at *19.

analysis of Qualcomm's business practices and their anticompetitive impact looked beyond these markets to the much larger market of cellular services generally. Thus, a substantial portion of the district court's ruling considered alleged economic harms to OEMs—who are Qualcomm's customers, not its competitors—resulting in higher prices to consumers. These harms, even if real, are not “anticompetitive” in the antitrust sense—at least not directly—because they do not involve restraints on trade or exclusionary conduct in “the area of effective competition.”

Aside from the rather obvious point that antitrust ultimately is about consumer welfare, notwithstanding the suggestion in the above passage that it isn’t, this passage reflects a profound misunderstanding of the relationship between Qualcomm’s licensing practices and competition in the chipset markets. In addition, though probably not dispositive to its holding in the case, the court also departed from settled case law in other circuits regarding

21 Qualcomm, 2020 WL 4591476, at *10 (quoting Ohio v. Am. Express Co., 138 S. Ct. 2274, 2285 (2018)); see also id. at *11 (stating that “the district court failed to distinguish between Qualcomm’s licensing practices (which primarily impacted OEMs) and its practices relating to modem chip sales (the relevant antitrust market),” and that “even if Qualcomm’s practices are interrelated, actual or alleged harms to customers and consumers outside the relevant markets are beyond the scope of antitrust law”); id. at *13 (stating that “[e]ven if the district court is correct that Qualcomm is contractually obligated via its SSO commitments to license rival chip suppliers . . . the FTC still does not satisfactorily explain how Qualcomm’s alleged breach of this contractual commitment itself impairs the opportunities of rivals. It argues the breach ‘facilitat[es] Qualcomm’s collection of a surcharge from rivals’ customers.’ . . . But this refers to a distinct business practice, licensing royalties, and alleged harm to OEMs, not rival chipmakers.”); id. at *15 (stating that the district court “improperly consider[ed] ‘anticompetitive harms to OEMs’ that fall outside the relevant antitrust markets”); id. at *17 (stating that “the primary harms the district court identified here were to the OEMs who agreed to pay Qualcomm’s royalty rates—that is, Qualcomm’s customers, not its competitors. These harms were thus located outside the ‘areas of effective competition’—the markets for CDMA and premium LTE modem chips—and had no direct impact on competition in those markets.”).

22 See, e.g., NCAA v. Bd. of Regents, 468 U.S. 85, 107 (1984) (stating that “Congress designed the Sherman Act as a ‘consumer welfare prescription’” (quoting Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979)). The point the court probably was intending to make is that the FTC’s theory was premised on Qualcomm’s actions harming competition in the market for chips—which would, however, ultimately harm consumers by eliminating competitive constraints on Qualcomm’s behavior in that market—and not on Qualcomm’s exploitation of its monopoly power to charge high prices to the OEMs. See supra note 21. Taken at face value, however, the passage seems to turn the law on its head by suggesting that the focus of antitrust’s solicitude is competitors, as such, and not consumers. See, e.g., Atlantic Richfield Co. v. USA Petroleum Co., 495 U.S. 328, 331 (1990).

23 See infra notes 25-38 and accompanying text.
the relationship between §§ 1 and 2 of the Sherman Act.\textsuperscript{24}

To understand why the court’s reasoning on the first of these two issues is problematic, it’s helpful to understand a bit more about “no license, no chips.” Imagine that you are an OEM, and that you need a reliable supply of chips for the phones you’re assembling.\textsuperscript{25} As far as price is concerned, all you really care about (in the short term, at least) is the “all-in” price—that is, the price you would pay to obtain a chip and the right to use and sell the patented technology the chip incorporates. Suppose further that you can buy chips from either the dominant seller or from the dominant seller’s competitor; that the dominant seller, like Qualcomm, also owns SEPs (for which there are, almost by definition, no substitutes), and that a FRAND royalty for its SEP portfolio would be $10; and that the competitor incurs a cost of $5 to make a chip, exclusive of patent royalties. Normally, when a seller sells a patented product, this sale “exhausts” the seller’s right to control the use and sale of the product.\textsuperscript{26} Suppose, however, that the dominant seller requires its chip customers to purchase a separate license to those patents—no license, no chips—and that it charges them a nominal above-FRAND royalty of $20 (some of which it may rebate back to the customers, if they purchase all or most of their chips from the dominant seller). Under the dominant seller’s business model, the lowest “all-in” price that an OEM customer could pay for the chip-SEP bundle, including the competitor’s chip, is $25 ($20 for the license, $5 for the chip). By charging a nominal chip price of $4—for an all-in price of $24—the dominant seller could exclude a more efficient rival and earn more profit than it would in a market where chips and SEPs were unbundled, with the latter licensed at a FRAND rate. Put another way, the effect of the business model is to reduce the gains from trade if the buyer does business with the rival, thus putting the competitor at a disadvantage and potentially further entrenching the patent owner’s dominance.

\textsuperscript{24} See infra notes 39-52 and accompanying text.


\textsuperscript{26} See Qualcomm, 2020 WL 4591476, at *3.
The district court concluded that Qualcomm followed a policy similar to the one described above, and that this policy contributed to the rivals' failure to gain a foothold in the modem chip markets. Further—and key to the issue of monopoly maintenance—she expressly found that Qualcomm's royalty surcharge "prevents rivals from underbidding Qualcomm, so that Qualcomm can maintain its modem chip market power."  

Notwithstanding this relationship between the licensing and chip markets, the Ninth Circuit, as noted above, concluded that Judge Koh incorrectly emphasized the impact of Qualcomm’s practices on the former, rather than the latter, market. But because chips and licenses are perfect complements—an OEM that wants to purchase modem chips must also purchase a Qualcomm portfolio license, and vice versa—Qualcomm’s actions in one market necessarily impact the other. Imagine, for example, that a footwear consortium bestows upon Company A a monopoly in left shoes (think: licenses), and that Company A also sells right shoes (think: chips). In return for its monopoly, Company A promised the consortium that it would make left shoes widely available and at a reasonable price, but in practice it sells left shoes only at retail. Moreover, it now charges very high prices for left shoes, and it (1) refuses to provide its most fashionable right shoes to retailers who won’t sign a left shoe contract, and (2) provides large volume discounts to retailers who purchase a left/right bundle. As a result, most of Company A’s competitors have exited the right shoe market. Now imagine that a court, for purposes of determining whether Company A’s practices violate § 2, reviews the entirety of Company A’s conduct and concludes that Company A is distorting competition in the market for right shoes. The court of appeals

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27 See FTC v. Qualcomm Inc., 411 F. Supp. 3d 658, 790–92 (N.D. Cal. 2019). In this regard, although Judge Koh did not determine precisely what a FRAND royalty would have been for the patents at issue at any particular point in time, she noted (among other things) that Qualcomm earned $7.7 billion in licensing revenue in 2016, which "exceeded the combined licensing revenue of twelve other licensors, including Ericsson, Nokia, and Interdigital," id. at 785, even though other firms’ patents contribute more value to the standards by which end devices operate. See id. at 778-86.

28 See id. at 792.

29 See supra note 21 and accompanying text.

30 See Hovenkamp & Simcoe, supra note 25, at 4. To say that two goods are complementary means that as the price for one increases, the demand for the other diminishes. See Jeffrey L. Harrison & Thomas F. Cotter, Law and Economics: Positive, Normative and Behavioral Perspectives 9 (3d ed. 2013).

31 I thank Tim Simcoe for suggesting this analogy. And yes, I know that, for purposes of antitrust law, left and right shoes would be considered part of one single market, because in the real world there is no separate demand for either. The example in the text above is simply meant to illustrate a situation in which there is a perfect, one-to-one correspondence between two complementary goods. See Roger D. Blair & Thomas F. Cotter, Rethinking Patent Damages, 10 Tex. Intell. Prop. L.J. 1, 86 (2001) (also using right and left shoes as an example of perfect complements).
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nonetheless reverses, on the basis that the district court should have focused only on right shoes, without taking account of how left-shoe retailers make their purchasing decisions. This conclusion wouldn’t make any economic sense, and yet for all intents and purposes it is precisely what the Ninth Circuit did in the Qualcomm case.

What makes the Ninth Circuit’s discussion of this issue all the more perplexing is its repeated citation to the Supreme Court’s 2018 decision in Ohio v. American Express Co.32 In particular, the court relied on American Express as support for its conclusion that, under the standard three-step rule of reason analysis,33 an antitrust plaintiff must initially come forward with evidence that the defendant’s conduct harms competition in some “area of effective competition,” and that by focusing on harm to Qualcomm’s customers, the FTC failed to satisfy this burden.34 As the court observes, the Supreme Court in American Express concluded that the plaintiffs in that case failed to meet their initial burden of showing “that antisteering provisions in American Express’s merchant agreements—which prohibit merchants from encouraging customers at the point of sale to use other credit cards, like Visa, with lower transaction fees—have anticompetitive effects that harm consumers.”35 Although American Express has been widely (and justifiably) critiqued for a variety of reasons,36 the point here is simply to note that the Court’s analysis rested on the premise that, in antitrust cases involving interrelated markets,37 it can be erroneous to analyze the effects of conduct on

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33 See id. at *9 (citing American Express and other authorities for the propositions that, under § 1 of the Sherman Act, “the plaintiff has the initial burden to prove that the challenged restraint has a substantial anticompetitive effect that harms consumers in the relevant market”; that “[i]f the plaintiff carries its burden, then the burden shifts to the defendant to show a procompetitive rationale for the restraint”; and that “[i]f the defendant makes this showing, then the burden shifts back to the plaintiff to demonstrate that the procompetitive efficiencies could be reasonably achieved through less anticompetitive means”).
34 See id. at *10, *18.
35 Id. at *8.
37 Specifically, the Court viewed the market for credit-card transactions as involving a “two-sided” platform that “offers different products or services to two different groups who both depend on the platform to intermediate between them,” and indirect network effects in which “the value of the two-sided platform to one group of participants depends on how many members of a different group participate.” Am. Express, 138 S. Ct. at 2280–81. In such a market, the Court concluded, the fact
one market in isolation from the effects of that conduct in the other, related market.\textsuperscript{38} It is therefore, to say the least, ironic for the Ninth Circuit to invoke American Express as justification for ignoring the harm to the chipset market occasioned by Qualcomm’s practices in the interrelated market for chipset licenses.

The court’s other principal error is in its understanding of the relationship between Sherman Act §§ 1 and 2. As noted above, the FTC’s principal theory was that Qualcomm’s practices enabled it to maintain its monopoly, in violation of § 2.\textsuperscript{39} Normally in such a case, the plaintiff must prove that the defendant “willfully” maintained its monopoly power, “as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.”\textsuperscript{40} In practice this means that, in a manner that to some degree parallels the structure of a § 1 rule of reason case, the plaintiff has an initial burden of coming forward with evidence that the defendant’s conduct is exclusionary, which (if satisfied) shifts the burden to the defendant to demonstrate a procompetitive justification, which in turn if satisfied results in the burden shifting back to the plaintiff to show that the conduct is on balance anticompetitive.\textsuperscript{41} Perhaps with this parallel structure in mind, early in the opinion the Ninth Circuit states that “If, in reviewing an alleged Sherman Act violation, a court finds that the conduct in question is not anticompetitive under § 1, the court need not separately analyze conduct under § 2.”\textsuperscript{42} The problem is that this is not standard antitrust law, as the landmark Microsoft case (and others) clearly show.

In Microsoft, the government claimed (among other things) that agreements between Microsoft and providers such as AOL, under which the latter promised not to promote rival browsers such as Netscape Navigator,

that a defendant’s practices may cause prices to rise on one side of the platform is not necessarily indicative of anticompetitive harm, since this increase may be offset by procompetitive benefits on the other side. Thus, because “[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,” a court must consider “both sides of the platform.” \textit{Id.} at 2286. Again, this is not to defend the outcome in American Express, in which the defendant’s antisteering provisions clearly did raise costs on one side of the platform without any demonstrable procompetitive benefit on the other. See Hovenkamp & Scott Morton, \textit{supra} note 36, at 31–32. Nor am I suggesting that the markets in which Qualcomm operates are in any meaningful sense two-sided. Rather, I simply note the irony of the Ninth Circuit’s use of American Express to justify overlooking the potential harm to the markets for chips occasioned by Qualcomm’s practices in the market for licenses.

\textsuperscript{38} See \textit{supra} note 37.
\textsuperscript{39} See \textit{supra} text accompanying note 10.
\textsuperscript{41} See, e.g., United States v. Microsoft Corp., 253 F.3d 34, 59 (D.C. Cir. 2001).
\textsuperscript{42} FTC v. Qualcomm Inc., No. 19-16122, 2020 WL 4591476, at *10 (9th Cir. Aug. 11, 2020).
violated both § 1 and § 2.\textsuperscript{43} The district court entered judgment for Microsoft on the § 1 claim but for the government on the § 2 claim.\textsuperscript{44} On appeal, Microsoft argued that “courts have applied the same standard to alleged exclusive dealing agreements under both Section 1 and Section 2,”\textsuperscript{45} and that a finding of “no liability under § 1 necessarily precludes holding it liable under § 2.”\textsuperscript{46} The Court of Appeals nevertheless affirmed, noting that while “[t]he basic prudential concerns relevant to §§ 1 and 2 are admittedly the same,” “a monopolist’s use of exclusive contracts, in certain circumstances, may give rise to a § 2 violation even though the contracts foreclose less than the roughly 40% or 50% share usually required in order to establish a § 1 violation.”\textsuperscript{47} In particular:

In this case, plaintiffs allege that, by closing to rivals a substantial percentage of the available opportunities for browser distribution, Microsoft managed to preserve its monopoly in the market for operating systems. The IAPs constitute one of the two major channels by which browsers can be distributed. . . . Microsoft has exclusive deals with “fourteen of the top fifteen access providers in North America[,] which] account for a large majority of all Internet access subscriptions in this part of the world.” . . . By ensuring that the “majority” of all IAP subscribers are offered IE either as the default browser or as the only browser, Microsoft’s deals with the IAPs clearly have a significant effect in preserving its monopoly; they help keep usage of Navigator below the critical level necessary for Navigator or any other rival to pose a real threat to Microsoft’s monopoly. . . .\textsuperscript{48}

Other courts, similarly, have held that a monopolist may be liable under § 2 even though its conduct falls short of the normal requirements for liability under § 1, when the facts so warrant.\textsuperscript{49} In this regard, Herb Hovenkamp has argued that, at least as applied to vertical restraints, this difference makes sense because, first, such restraints usually aren’t anticompetitive unless they are imposed by sellers who possess substantial market power and can profit by employing such restraints to exclude competitors; and second, because “Section 2 is much less categorical about specifying the behavior it condemns,”

\textsuperscript{43} See Microsoft, 253 F.3d at 68, 70.
\textsuperscript{44} See id. at 70.
\textsuperscript{45} Id.
\textsuperscript{46} Id.
\textsuperscript{47} Id.
\textsuperscript{48} Id. at 70–71
\textsuperscript{49} See, e.g., United States v. Dentsply Int’l, 399 F.3d 181 (3d Cir. 2005).
whereas claims litigated under other provisions of the Sherman or Clayton Act, such as tying, over time have "developed technical thresholds . . . that have served to limit the reach of overly aggressive substantive rules."\textsuperscript{50}

Given this context, the Ninth Circuit’s statement that if conduct “is not anticompetitive under § 1, the court need not separately analyze conduct under § 2,"\textsuperscript{51} would appear, if taken literally, to create a circuit split. That said, it may be that very little hangs on this point, in the context of the \textit{Qualcomm} decision itself. The court makes quite clear, after all, that it views Qualcomm’s conduct as “hypercompetitive,” not anticompetitive,\textsuperscript{52} and the court may well have reached the same conclusion even if it hadn’t conflated the standards under §§ 1 and 2. The broader point remains, however, that this error, coupled with the other discussed above, at best risks generating confusion in future cases, and at worst actively subverting settled law. It’s too bad that in such an important case the court didn’t take more care to avoid these problems.

\textsuperscript{50} Herbert Hovenkamp, \textit{The Obama Administration and Section 2 of the Sherman Act}, 90 B.U. L. REV. 1611, 1619-20 (2010).

\textsuperscript{51} \textit{Qualcomm}, 2020 WL 4591476, at *10. The case the court cites in support of this statement, \textit{Williams v. I.B. Fischer Nev.}, 999 F.2d 445, 448 (9th Cir. 1993) (per curiam), involved a claim brought by a former employee of a Jack-in-the-Box franchisee, that a noncompete enforced against him pursuant to the terms of the franchisee’s agreement with the franchisor violated §§ 1 and 2. The court affirmed a judgment that the agreement did not violate § 1, and thus also could not “form the basis of a section 2 claim.” \textit{Id}. The facts of \textit{Williams} (and of the cases it in turn cited) seem rather far afield, both from \textit{Qualcomm} and from the considerations noted by Professor Hovenkamp.

\textsuperscript{52} \textit{Qualcomm}, 2020 WL 4591476, at *2, *21.