THE CASE FOR ANTITRUST LAW TO POLICE THE PATENT HOLDUP PROBLEM IN STANDARD SETTING

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In 2008, one of us—George Cary—co-authored an article on the role of antitrust law when patent holders abuse a standard-setting process in order to secure inclusion of their technology in industry standards.[1] Since then much has been written on the proper role (if any) for antitrust in policing such conduct; two then-recent courts of appeal decisions that addressed the issue have been analyzed in depth; the European Union has stated its views; and numerous scholars and commentators have staked out positions. Here, we again consider the question of the proper role of antitrust in light of these opinions and recent commentary. We specifically respond to the view of those who believe that antitrust laws are not the appropriate legal tool to police such conduct for two primary reasons: because they are (or should be) "preempted" in this context by patent law or by the common law of torts or contracts, and, more generally, because other bodies of law provide a superior means to police misconduct in the standard-setting context. We conclude that those arguments are unpersuasive as a matter of law and unsound as a matter of policy.

While other areas of law may prove capable of addressing certain abuses of standard-setting processes, they are an incomplete solution, as only antitrust law can ensure that private parties and government enforcement authorities can seek redress where the underlying abuse harms competition. Although parties should be free to decide for themselves which claims to assert in any

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[1] *See* George S. Cary, Larry C. Work-Dembrowski & Paul S. Hayes, *Antitrust Implications of Abuse of Standard-Setting*, 15 Geo. Mason L. Rev. 1241 (2008) [hereinafter Cary et al. (2008)].

given case, we see no reason for disabling antitrust law as an option in appropriate cases, i.e., where the standard-setting misconduct has a substantial anticompetitive effect. The concern that application of antitrust law may lead to "false positives" that could deter innovation is greatly overstated, especially when one examines the particular cases where allegations of standard-setting abuse have arisen. These cases show not only that the requirements to establish an antitrust cause of action are quite demanding, but also that the opportunistic conduct at issue (and that might be deterred by allowing a role for antitrust) has little bearing on incentives to innovate.

I. STANDARD SETTING AND THE CRITICAL ROLE OF INTELLECTUAL PROPERTY RIGHTS POLICIES

Standard-setting organizations (SSOs) are at the heart of the modern economy.[2] They facilitate competition and innovation in many industries, especially those dependent on advanced technologies, by setting industry-wide standards to ensure interoperability among both complementary and competing products. Without industry standards, much of what we take for granted—such as being able to access the Internet from a wide array of networking devices—would not be possible.[3]

Selecting a standard ordinarily requires an SSO to choose among competing technologies, and the process frequently results in a collective selection of a patented technology to the exclusion of other patented or non-proprietary technologies.[4] Consequently, standardization necessarily entails the exclusion of alternative technologies, and can lock an industry into one method of doing things for an extended period of time, especially where there are significant network effects.[5] Patent holders whose technology is incorporated into an industry standard without full disclosure can exploit this lock-in effect by ex-

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[2] *See, e.g.*, U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 33 (2007) [hereinafter PROMOTING INNOVATION AND COMPETITION] ("Industry standards are widely acknowledged to be one of the engines driving the modern economy."), *available at* http://www.justice.gov/atr/public/hearings/ip/222655.pdf.

[3] The examples of standardized technologies are countless and the nature of the standards range widely in complexity. *See, e.g.*, Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CALIF. L. REV. 1889, 1896 (2002) ("Some standards are extremely complex and technical in nature. . . . But standards need not be so sophisticated. . . . In the United States, electrical plugs and outlet are built to a particular standard for voltage, impedance, and plug shape. Without this standardization, no one could stay in a hotel room and have any confidence that his hair dryer would work . . . .").

[4] Standards frequently incorporate multiple patented technologies. For example, a standard for wireless communications might include technology that will be used to optimize use of spectrum with technology that will be used to manage signal strength.

[5] In simple terms, "network effects" refers to the fact that certain types of economic activity become more efficient as they gain market share. For example, an ATM network is more desirable from a consumer's point of view if it connects to as many banks as possible.

tracting "excessive" royalties from those who wish to practice the standard, because of the lack of competitive alternatives once the standard is adopted.[6] This is the problem that we define as "patent holdup."

Because of the threat of standard-setting abuse and lock-in, many SSOs have adopted intellectual property rights (IPR) policies geared towards preserving the benefits of the ex ante competitive situation that standard setting supplants.[7] IPR policies seek to strike a balance between allowing patent holders to be rewarded for their innovations while protecting the standard implementer from potential abuse of the exclusionary power achieved as a result of the standardization process. When successful, these policies not only minimize the risk of patent holdup but also accelerate implementation of valuable technology, with the potential for revenue to patent holders through licensing on competitive terms and conditions.[8]

In order to be effective, IPR policies seek to preserve the benefits of the competitive conditions (i.e., the ex ante situation) that existed before the standard was set and the industry became locked-in.[9] Before a standard is adopted, a patent holder seeking to have its technology included in the standard can only charge licensees a price that reflects the incremental value of its technology over the next-best alternative technology.[10] As one of us has previously described, the following example illustrates this competitive dynamic:

> [A]ssume that an SSO is choosing essential technologies for the next-generation widget. The SSO has three options—proprietary technologies A, B, and C—each of which could be used to achieve the interoperability functionality of the new widget. If no SSO existed, then A, B, and C would compete in the marketplace for adoption by widget makers and users. The patent holders for A, B, and C would license their technologies at competitive rates and on competitive terms. In such a scenario, the competitive rate for any of the three would be one that reflects the incremental benefit of one technology over another. For example, assume a user could achieve the same level of technological performance using technology A, B, or C, but with technology A the user would incur non-licensing costs of $50, with B $45, and with C $40. The owner of technology C in a competitive environment would be able to charge a maximum royalty of $5, *i.e.*, the incremental inherent advantage of its technology over the next cheapest alternative.

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[6] *See, e.g.*, PROMOTING INNOVATION AND COMPETITION, *supra* note 2, at 36.

[7] *See* Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 309 (3d Cir. 2007) ("[P]rivate standard-setting—which might otherwise be viewed as a naked agreement among competitors not to manufacture, distribute, or purchase certain types of products—need not, in fact, violate antitrust law.").

[8] *Id.* at 309 n.4; *see also id.* at 312 ("Private standard-setting occurs in a consensus-oriented environment, where participants rely on structural protections, such as rules requiring the disclosure of IPRs, to facilitate competition and constrain the exercise of monopoly power.").

[9] *See id.* at 309 n.4.

[10] *See* Joseph Farrell et al., *Standard Setting, Patents, and Hold-Up*, 74 ANTITRUST L.J. 603, 611–15 (2007).

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> With standard-setting, the patent holders of A, B, and C (together with the rest of the industry) agree that only one technology will remain in the marketplace. The constraints of competition among the technologies are removed. Without some other constraint, the owner of the 'winning' technology will now be licenseed at monopoly rates and on monopolistic terms, allowing one technology holder to reap the full benefits of the standard's exclusion of its erstwhile competitors. If the owner of the winning technology is also a manufacturer of components or products that implement the standard, the winning owner will be able to impair competition in downstream markets by discriminating against licensees that purchase components from its rivals.[11]

To prevent the potential harm to competition that could result from collective standard setting, many SSOs have adopted rules requiring members to disclose any essential or potentially essential patents that are under consideration for inclusion in the standard.[12] They also may require that holders of these patents commit to license them either on a royalty-free basis or on fair, reasonable, and non-discriminatory (FRAND) terms.[13] If they refuse to do so, the SSO may bypass their technology and require that an alternative technology (either non-proprietary, or proprietary subject to a FRAND commitment) be chosen for the standard, or that no standard be adopted at all.[14]

As has been described elsewhere, the obligations imposed by SSOs are intended to protect the same interest: guarding against the anticompetitive appropriation and misuse of the ex post monopoly power that may result from selecting a standard.[15] Disclosure requirements, for example, ensure that members of an SSO are informed of the competing technologies when selecting among alternatives, which may also enable parties to more readily negotiate ex ante licenses if they choose.[16] Likewise, FRAND obligations preserve

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[11] Cary et al. (2008), *supra* note 1, at 1258–59.

[12] *See* Lemley, *supra* note 3, at 1904.

[13] *See id.* at 1905–06.

[14] *See, e.g.*, Eur. Telecomms. Standards Inst. (ETSI), *Intellectual Property Rights Policy*, ¶¶ 8.1.1–8.1.2 (2008), *available at* http://www.etsi.org/WebSite/document/Legal/ETSI_IPR-Policy.pdf.

[15] *See* Lemley, *supra* note 3, at 1901–03.

[16] In business review letters, the Department of Justice has indicated that it would not challenge SSO policies that require or encourage the disclosure by SSO participants of specific licensing terms (including royalty rates) for technology that may become essential to a standard, prior to the adoption of the standard. *See* Business Review Letter from Thomas O. Barnett, Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., to Michael A. Lindsay, Esq., Dorsey & Whitney LLP (Apr. 30, 2007) (stating that DOJ would not oppose a proposal by the Institute of Electrical and Electronics Engineers Inc. (IEEE) to implement a policy allowing patent holders to commit publicly during the standard-setting process to specific restrictions on their future licensing terms and conditions for the use of patents that are essential to IEEE standards), *available at* http://www.justice.gov/atr/public/busreview/222978.pdf; Business Review Letter from Thomas O. Barnett, Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., to Robert A.

the ex ante condition (where the technology faced competition from alternatives) by requiring an essential patent holder to offer ex post licensing terms and royalties that are commensurate with the competitive terms that would have applied ex ante.[17] FRAND obligations also seek to ensure the technology at issue is disseminated even-handedly so that the patentee cannot unilaterally exclude others from the markets for downstream products, thereby capturing the market power created by the standard through the sale of standard-compliant products.[18]

FRAND obligations are also a means of addressing the problem of "royalty stacking." Our discussion to this point has assumed that a standard reflects whichever single technology the SSO selects. In practice, however, standards (especially in high-technology industries) incorporate a large number of patented technologies. If an SSO wishes to adopt a particular standard which reads on multiple patents, a practitioner of the standard would in principle need to obtain a license from each owner of patents essential to that standard. This need raises the "royalty stacking" problem, which Lemley and Shapiro describe:

> The term "royalty stacking" reflects the fact that, from the perspective of the firm making the product in question, all of the different claims for royalties must be added or "stacked" together to determine the total royalty burden borne by the product if the firm is to sell that product free of patent litigation.[19]

If each patent holder demands a royalty that exceeds the competitive value of its particular technology, then the standard may never realize its potential because the cumulative royalty rate could exceed even the profit-maximizing monopoly price if all essential technology were owned by a single firm.

Royalty stacking is an example of the "Cournot complements" effect. More than a century ago, Augustin Cournot recognized that if a single producer controlled all of the complements of a product, the cost of that product would be less than if the complements were independently owned.[20] "The theory of

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Skitol, Esq., Drinker, Biddle & Reath (Oct. 30, 2006) (stating that DOJ would not challenge, unless it proved anticompetitive in practice, the VMEbus International Trade Association's (VITA) proposal requiring upfront disclosure of patents and patent licensing terms in connection with VMEbus standard-setting activities), *available at* http://www.justice.gov/atr/public/busreview/219380.pdf.

[17] *See* Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 ANTITRUST L.J. 1, 10–11 (2005).

[18] *See id.*

[19] Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1993 (2007).

[20] *See, e.g.*, *id.* at 2013; Damien Geradin et al., *The Complements Problem Within Standard Setting: Assessing the Evidence on Royalty Stacking*, 14 B.U. J. SCI. & TECH. L. 144, 146 (2008).

Cournot complements teaches us that the royalty stacking problem is likely to be worse the greater the number of independent owners of patents that read on a product."[21] The problem can be exacerbated in complex standards, where the value of each patent holder's essential patents is often dependent on the availability of other essential patents.

To overcome the Cournot complements problem, patent owners have an incentive to coordinate to reduce their royalties. As Lemley and Shapiro observe, this can be achieved "by engaging in cross licenses or by licensing their patents in a pool at an agreed-upon rate."[22] SSOs may also institute ex ante licensing rules as a mechanism to prevent royalty stacking.[23] A FRAND obligation is the classic example of an ex ante licensing rule that is designed to minimize royalty stacking by effectively placing a "cap" on the aggregate royalty rate for practicing a standard, thereby ensuring that the efficiency gains from the standard-setting process are not lost through the inefficiency created by royalty stacking.

In practice, it is common for owners of patents essential to a standard to pool their patents for licensing purposes and to divide the royalties received based on the proportion of essential patents held by each patent owner. Although such pooling may not necessarily be required by the FRAND obligation of any particular SSO, it is a practical example of how patent holders have sought not only to eliminate the Cournot complements effect, but also to provide a method of sharing royalties that avoids complications around the interdependent value of essential patents.

Thus, the precise terms of a patentee's FRAND obligation should be determined in light of its goals to preserve the benefits of ex ante competition, mitigate the inefficiencies of "royalty stacking," and avoid ex post exploitation of monopoly power. A "fair" royalty is one that properly rewards the patentee for its technological innovation. This means that a "reasonable" royalty should properly reflect the competitive environment before the creation of the standard locked an industry into a technology, which is equivalent to the incremental value of a technology (or bundle of technologies) relative to the next-best alternative. And a "non-discriminatory" royalty is one that prevents the patent holder from exploiting its monopoly position in downstream product markets that incorporate the standard (i.e., refusing to license the technology to firms that compete with the patent holder in products that incorporate its technology via the standard). Importantly, FRAND obligations attempt to address the fact that if the total royalties charged are too high this would

[21] Lemley & Shapiro, *supra* note 19, at 2013.

[22] *Id.* at 2014.

[23] *See, e.g.*, Geradin et al., *supra* note 20, at 170–73.

render the adoption of the standard inefficient and discourage the relevant industry from making the investments necessary to implement the standard.

Some commentators have questioned this paradigm, that is, whether FRAND commitments should limit a licensor's ability to charge ex post what the market will bear, unconstrained by the competitive conditions that existed prior to the adoption of the standard.[24] Damien Geradin questions whether the antitrust laws should "in any circumstances" condemn a company that changes the rate at which it licenses its technology ex post after acquiring more information and a better understanding of how valuable the technology is to the marketplace.[25]

This view misses the fundamental point that private standard setting is a vehicle for potential collusion that portends all of the consumer welfare harm that may come from collusion. Allowing SSO participants to charge whatever monopoly rate the market will bear would impose the very economic harm that the FRAND commitment was intended to avoid. In effect, it would legitimize efforts by SSO participants to exploit monopoly power resulting from their coordinated decision—albeit in the interests of setting a common standard—to eliminate technology competition.

The argument that post-standard adoption developments should inure to the benefit of the essential technology holder is inconsistent with the goals of requiring FRAND licensing. First, a typical technology standard-setting effort is a major undertaking that can involve input from dozens of firms and take years of meetings and proposals before a consensus is reached. Each technological proposal is studied and vetted before a choice is made to support a single standard. As a result of these protracted efforts, it seems unlikely that the fundamental value of a particular technology relative to alternatives will come to light only after the standard has been adopted. Moreover, since alternative technology choices will have been eliminated, it seems even less likely that one would be able to evaluate the technology chosen as a standard *relative to* those technologies that were rejected. Without this critical piece of information, it would be impossible to measure the unanticipated incremental value that Geradin hypothesizes may come to light only ex post.[26]

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[24] *See FRAND Roundtable*, GLOBAL COMPETITION REV., Apr. 2008, at 25, 26–27 (comments of Damien Geradin) ("But the more complicated question is whether, when a license has been given ex ante, it is necessarily opportunistic to charge different rates ex post?").

[25] *See id.* at 27 (comments of Damien Geradin) ("There might be reasons why you want to charge higher rates ex post. . . . The more open issue is whether you should be prevented in any circumstances from adopting different terms ex post than ex ante simply because you have better information on the practical applications of the technology.").

[26] *See id.*

Second, accepting this view would undermine a critical function of imposing FRAND commitments: to provide some certainty as to the cost of the technology to inform and facilitate the substantial investments required to implement the standard. Third, if essential patent owners are permitted to charge whatever the market will bear ex post, it is unrealistic to expect that they will be willing (or even able) to limit themselves to charging only the "newly discovered" incremental value of their technology rather than the full value that can be extracted from customers as a result of their being locked into the technology. Separating "legitimate" value for which compensation is in Geradin's view appropriate from exploitation of lock-in would be an intractable process even for the best-intentioned of licensors. For those of lesser scruples, it creates a huge loophole allowing holdup of other industry participants.

Finally, measuring FRAND based on the ex ante value of a technology is unlikely to have any negative impact on incentives to innovate. Geradin's hypothesized discovery of incremental ex post value was unanticipated, by definition, and would generally come to light only after investments in innovation were made. Under these circumstances, we doubt that the inability to capture such windfall gains later would deter a company from investing in innovation. Indeed, the existing practice of many essential patent holders to negotiate royalty rates early on, and in many cases before a standard is adopted, belies the concern about inadequate incentives to innovate. If firms believed it was important to be able to capture unanticipated future benefits of a technology, they would not so readily enter into long-term licensing agreements that locked them into established royalty rates. Indeed, in our experience firms typically consider the trade-off between the FRAND rate at which they license their technology (even assuming this rate is lower than some hypothetical ex post rate) and the additional sales volume they are likely to achieve by having their technology incorporated into a standard. Moreover, our experience with industry practice suggests that royalty rates for a particular technology do not increase, and often decrease, over time, suggesting that the concern that ex ante royalties will be too low is more theoretical than real.[27]

II. SHOULD ANTITRUST ADDRESS PATENT HOLDUP?

Antitrust law directly addresses anticompetitive conduct. It is a well-developed body of law, with relatively clear doctrines and standards. Almost from the time of its inception in the late 19th century, it has received significant attention from the Supreme Court, and this attention has, if anything, in-

[27] We also note that where there is some uncertainty around the future value of a technology and the price at which downstream products and services will be sold, firms are able to address this by structuring royalty rates as a percentage of the cost of the downstream product or services, rather than as a fixed sum.

creased in recent years. It is recognized to be a common law doctrine, which provides all of the flexibility and adaptability that the common law affords.[28]

Moreover, in major economies, governments employ significant resources to enforce their antitrust laws. In the United States, this includes substantial enforcement regimes at two agencies, the Department of Justice and the Federal Trade Commission. No comparable enforcement regime exists in any other area that might police standard-setting abuse. Even where the government is not involved, the antitrust law provides relatively broad standing to parties that are directly harmed by the anticompetitive conduct at issue, including consumers.

Therefore, it is unsurprising that antitrust has long been applied to the conduct of standard-setting organizations. As one of us recently described in depth, there is little debate that the activity of SSOs (and their members) can raise serious anticompetitive issues, which may—in certain cases—violate Sections 1 and/or 2 of the Sherman Act.[29] Indeed, because the opportunistic conduct resulting in patent holdup specifically "concerns the inefficient acquisition of market power,"[30] many commentators have "generally assumed that [such] opportunism in the standard-setting process is an antitrust problem."[31]

Despite the seeming consensus that holdup causes serious economic inefficiencies,[32] whether antitrust remedies should be available to redress the harm from the standard-setting patent holdup problem has become the subject of some debate.[33] Several commentators question as an empirical matter just how pervasive the patent holdup problem is for SSOs.[34] Indeed, in the wake of the D.C. Circuit's decision in *Rambus, Inc. v. FTC*,[35] and subsequent denial of

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[28] *See, e.g.*, Associated Gen. Contractors of Cal., Inc. v. Cal. State Council of Carpenters, 459 U.S. 519, 531 (1983) ("Congress intended the [Sherman] Act to be construed in the light of its common-law background.").

[29] *See* Cary et al. (2008), *supra* note 1, at 1242–54.

[30] Farrell et al., *supra* note 10, at 609.

[31] Bruce H. Kobayashi & Joshua D. Wright, *Federalism, Substantive Preemption, and Limits on Antitrust*: *An Application to Patent Holdup*, 5 J. COMPETITION L. & ECON. 469, 471 (2009).

[32] *See* Farrell et al., *supra* note 10, at 604 ("Hold-up generally leads to economic inefficiency that contracting parties, and courts interpreting contracts, often try to avoid.") (citation omitted). *But see* Einer Elhauge, *Do Patent Holdup and Royalty Stacking Lead to Systematically Excessive Royalties?*, 4 J. COMPETITION L. & ECON. 535 (2008) (arguing that Professors Lemley and Shapiro overstate potential patent holdup and royalty stacking problems).

[33] *See, e.g.*, Kobayashi & Wright, *supra* note 31, at 470 ("The patent holdup problem has become one of the most controversial issues in antitrust policy.").

[34] *Compare* Lemley & Shapiro, *supra* note 19, at 1992–93 (arguing that patent holdup is a serious problem), *with* Damien Geradin & Miguel Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-up, Royalty Stacking and the Meaning of FRAND*, 3 EUR. COMPETITION J. 101, 107 (2007) (arguing that the patent holdup problem has been overstated).

[35] 522 F.3d 456 (D.C. Cir. 2008).

certiorari by the Supreme Court,[36] some have questioned whether antitrust will continue to play any significant role in addressing the patent holdup problem.[37]

Rambus can be criticized on several fronts. First, the D.C. Circuit failed to recognize the distinction between conduct of a lawful monopolist like NYNEX and a monopoly achieved through deception as in *Rambus*.[38] Second, the court did not address the possibility that the SSO could have chosen a different proprietary technology (presumably with a FRAND commitment), or delayed adopting a standard, or declined to adopt a standard at all, all of which would have resulted in Rambus not obtaining the market power it obtained through its deceptive nondisclosure.[39] Third, the court failed to recognize that Rambus's participation in the SSO "amplified" any monopoly position conferred by the patent alone because of the lock-in that resulted from its adoption by the SSO. Fourth, the D.C. Circuit's heavy reliance on *NYNEX* seems misplaced because that decision only addressed whether the monopolist's conduct was per se illegal, not whether it was actionable at all under the antitrust laws.[40] Finally, commentators have also questioned whether the D.C. Circuit imposed an impermissibly stringent causation standard in *Rambus*—one that is arguably inconsistent with the causation standard the same court employed in *Microsoft*.[41]

Regardless of whether *Rambus* was correctly decided, or whether courts will read it to limit antitrust remedies for patent holdup in the standard-setting context, a more fundamental question is this: *Should* other legal regimes displace antitrust in addressing patent holdup? While some have argued that antitrust should play a limited role in addressing holdup, others go further, contending that antitrust is unnecessary for policing holdup, and should play no role at all.

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[36] Rambus Inc. v. FTC, 555 U.S. 1171 (2009).

[37] *See, e.g.*, Stanley M. Besen & Robert J. Levinson, *Standards, Intellectual Property Disclosure, and Patent Royalties After* Rambus, 10 N.C. J.L. & TECH. 233 (2009); Christopher Hardee, *Single-Firm Opportunism and the FTC's* Rambus *Defeat*: *Implications for Section 2 of The Sherman Act*, 18 TEX. INTELL. PROP. L.J. 97 (2009); Robert A. Skitol & Kenneth M. Vorrasi, *Patent Holdup in Standards Development*: *Life After* Rambus v. FTC*?*, ANTITRUST, Summer 2009, at 26.

[38] For a more detailed critique of *Rambus*, see Cary et al. (2008), *supra* note 1, at 1252–54.

[39] *See, e.g.*, *id*. at 1253–54; Thomas F. Cotter, *Patent Holdup, Patent Remedies, and Antitrust Responses*, 34 J. CORP. L. 1151, 143–48 (2009); Hardee, *supra* note 37, at 103–04 (2009).

[40] *See* NYNEX Corp. v. Discon, Inc., 525 U.S. 128, 133 (1998).

[41] *See, e.g.*, Ankur Kapoor, *What Is the Standard of Causation of Monopoly?*, ANTITRUST, Summer 2009, at 38, 39 ("[T]he D.C. Circuit's but-for causation analysis in *Rambus* appears at odds with its analysis in *Microsoft*, where the court rejected Microsoft's but-for causation argument and upheld liability for acts that 'reasonably appear capable of making a significant contribution' to monopoly.") (citation omitted).

Geradin, for example, contends that "informal constraints" prevent ex post exploitation that could harm consumers.[42] He argues principally that patent holders will not be able to charge unreasonable royalty rates because doing so would inhibit downstream implementation of their technology. He also argues that, because SSO participants are often repeat players, they are constrained by pre-existing commercial relationships from exploiting their position when their particular technology is selected for the standard.[43]

The argument that monopoly royalty rates will be avoided simply by the desire not to inhibit the adoption of a standard is unpersuasive. That incentive would apply in any monopoly situation, where a rational monopolist in a particular essential technology will charge up to the point that its profits are maximized, in full consideration of the implications of the royalty on downstream sales volumes, and no more. "Informal constraints"—presumably an SSO participant's desire to develop or maintain a positive reputation—likewise cannot be expected to prevent such exploitation and consumer harm any more than reputational constraints can be expected to police any monopolist's behavior. While it is conceivable that in some circumstances a standard-setting participant would, on its own, limit itself to charging only the ex ante rate for its patents, the critical point is that there is no guarantee that these considerations will prevent holdup in any particular standard-setting context. The potential for such constraints therefore does not obviate the need for antitrust enforcement.

Other commentators believe that there are strong policy arguments against employing antitrust law to police the conduct of SSOs because it will undermine the incentives of SSO participants to innovate. For example, David Teece and Edward Sherry have argued that "antitrust intervention" could "reduce the clarity of [SSO] rules thereby making participation in SSOs more risky and reducing the willingness of firms with valuable IP (and which therefore presumably have much to contribute to selecting the appropriate standard) to participate."[44] As a result, they contend that there is a "significant risk of slowing down the standards-setting process, thus delaying the adoption of new standards and new products made in accordance with those standards, to the detriment of consumers and of society generally."[45] In effect, Teece and Sherry's concern is one of delay—antitrust enforcement could delay innova-

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[42] *See FRAND Roundtable*, *supra* note 24, at 29 (comments of Damien Geradin) ("Also, even without FRAND, licensors are subject to other restraints.").

[43] *See id.* at 29 (comments of Damien Geradin) ("[M]ost players active in SSOs have a long-term view of their licensing policy. If you decide to be unreasonable, it will affect your ability to have your technology adopted in future standards.").

[44] David J. Teece & Edward F. Sherry, *Standards Setting and Antitrust*, 87 MINN. L. REV. 1913, 1986 (2003).

[45] *Id.*

tion. In a commentary accompanying Teece and Sherry's article, Michael Carrier found their claims to be overstated because they failed to engage in any serious antitrust analysis.[46] We agree. But more importantly, Teece and Sherry make empirical claims without any evidence. In particular, they do not even offer anecdotal evidence that firms are discouraged from participating in SSOs because of the prospect of antitrust enforcement. Indeed, the opposite could be equally argued: participation in SSOs would be discouraged to the extent that participants could not rely on the commitments of their fellow participants to disclose and abide by other commitments intended to preclude opportunism. Teece and Sherry's argument sounds a familiar refrain against antitrust: antitrust enforcement discourages procompetitive behavior and therefore should be limited. The conclusion rings hollow without facts.

Finally, some commentators suggest that other legal doctrines are superior to antitrust in addressing SSO-patent holdup. As will be seen, their arguments echo the theme that antitrust law should not apply to patent holdup in the standard-setting context because it will discourage procompetitive behavior. These arguments, however, suffer from several serious flaws and ultimately do not persuade.

A. The Supreme Court Has Not Signaled a Preference for Regulatory Regimes over Antitrust Enforcement

Among the arguments advanced is that recent Supreme Court antitrust decisions demonstrate that the Court considers regulation by other legal regimes as superior to antitrust, and that this purported preference argues in favor of narrow application of the antitrust laws where other legal regimes address the same conduct. Bruce Kobayashi and Joshua Wright thus argue that the "marginal benefit of antitrust enforcement in the patent holdup context is slight, and . . . a strong case can be made for limiting antitrust enforcement of patent holdup on the basis of the comparative advantages offered by . . . alternative institutions relative to antitrust."[47]

As an initial matter, whether one legal enforcement regime provides a "marginal benefit" to another is generally for the plaintiff to decide. In other words, if one legal regime provides a cheaper or easier path to the desired result from the perspective of potential plaintiffs, plaintiffs will use that regime. The "marginal benefit" argument is therefore flawed at its core, unless it can be shown that antitrust would condemn or even deter conduct that the

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[46] Michael A. Carrier, *Why Antitrust Should Defer to the Intellectual Property Rules of Standard-Setting Organizations: A Commentary on Teece & Sherry*, 87 Minn. L. Rev. 2019, 2027 (2003) ("[T]hey do not sufficiently engage the antitrust statutes and case law, which inform the determination of the proper role for antitrust.").

[47] Kobayashi & Wright, *supra* note 31, at 472.

other regimes would not *and* that the marginally condemned or deterred conduct would be welfare enhancing.

Moreover, central to the thesis is the view—incorrect, as we shall demonstrate—that "the Supreme Court's antitrust jurisprudence is consistent with the proposition that the extension of antitrust liability to conduct that is adequately regulated by alternative legal rules and institutions is appropriately limited when the marginal benefit of antitrust enforcement is low or negative."[48] This premise relies primarily on the Court's decisions in *Credit Suisse v. Billing*[49] and *NYNEX v. Discon*,[50] as well as the state-action immunity and *Noerr-Pennington* doctrines.[51]

[48] *Id.* at 475.

[49] Credit Suisse Sec. (USA) LLC v. Billing, 551 U.S. 264 (2007).

[50] NYNEX Corp. v. Discon, Inc., 525 U.S. 128 (1998).

[51] United Mine Workers v. Pennington, 381 U.S. 657, 670 (1965); E. R.R. Presidents Conference v. Noerr Motor Freight, Inc., 365 U.S. 127, 135 (1961). Kobayashi and Wright mention several other recent cases but do not appear to rely on them for their principal thesis. *See* Kobayashi & Wright, *supra* note 31, at 474 (citing Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877 (2007)); Bell Atl. Corp. v. Twombly, 550 U.S. 544 (2007); Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 549 U.S. 312 (2007); Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398 (2004); Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209 (1993)). Rather, Kobayashi and Wright appear to cite these cases for the proposition that the Court is aware of the "high social costs" associated with false positives in antitrust enforcement and that this concern influenced its decisions in each of these cases. That proposition is highly debatable, and they do little to support it beyond cursory references. For example, the reaffirmation in *Trinko* that competitors have no antitrust duty to deal did not turn on concerns about false positives, unless false positive is defined in a legally irrelevant way as behavior that is not illegal under the antitrust laws but that has anticompetitive effects. *See* 540 U.S. at 411 ("We conclude that Verizon's alleged insufficient assistance in the provision of service to rivals is not a recognized antitrust claim under this Court's existing refusal-to-deal precedents."). Likewise, to the extent that *Leegin* concerned "false positives," it was in the context of false positives due to the application of the per se rule to vertical conduct, not the antitrust laws in general. *See* 551 U.S. at 894–95. *Brooke Group* and *Weyerhaeuser* did address false positives in concluding that above-cost pricing (or its equivalent) does not violate the antitrust laws, but the Court's holdings were grounded in the basic economic conclusion that such pricing in fact does not cause competitive harm. *See Weyerhaeuser*, 549 U.S. at 325 ("The general theoretical similarities of monopoly and monopsony combined with the theoretical and practical similarities of predatory pricing and predatory bidding convince us that our two-pronged *Brooke Group* test should apply to predatory-bidding claims."); *Brooke Group*, 509 U.S. at 223 ("'To hold that the antitrust laws protect competitors from the loss of profits due to such price competition would, in effect, render illegal any decision by a firm to cut prices in order to increase market share. The antitrust laws require no such perverse result.'") (citation omitted). *Twombly* is a case about pleading standards. *See* 550 U.S. at 554–55 ("This case presents the antecedent question of what a plaintiff must plead in order to state a claim under § 1 of the Sherman Act."). To the extent it deals with "false positives," it is in the sense of the false positive of allowing thinly pled cases into discovery, not the sense that Kobayashi and Wright use the term. In any event, Kobayashi and Wright do not argue that these cases support their thesis that antitrust law should give way to other legal remedies where there are "alternative legal rules and institutions." Kobayashi & Wright, *supra* note 31, at 475.

1. *Credit Suisse and NYNEX*

Underlying the jurisprudential argument that antitrust law is unnecessary to police standard-setting patent holdup is the view that the Supreme Court's recent decisions addressing the interplay of antitrust and alternative remedies signal the Court's clear policy preference that antitrust remedies should be preempted by non-antitrust ones (assuming they are "adequate"). The authorities advanced for this purpose are not equal to the task, however. At the outset, we think it a tall order to read general policy concerns (arising in varied and distinguishable contexts) as amounting to a holding of "implied" preemption. The Supreme Court has emphasized that implied preemption is a disfavored doctrine, invoked sparingly and then only to the extent necessary.[52] Arguing that antitrust law should be ousted from remedying anticompetitive conduct in private standard setting simply because an alternative remedy (whether statutory or common law) may exist is therefore a daunting task. Indeed, the Court has never made such a pronouncement.

In *Credit Suisse*, the Court held that federal securities law impliedly repealed the antitrust laws as they related to antitrust claims brought by investors who alleged that underwriter banks participating in a syndicate for an initial public offering (IPO) had conspired to manipulate the IPO process by forcing the investors to buy additional shares at a higher price, pay unusually high commissions on subsequent security purchases, or purchase less desirable securities in exchange for an opportunity to participate in the IPO.[53] In so holding, the Court applied well-settled law[54] that the federal securities laws impliedly repealed the antitrust laws in circumstances where the "securities laws are 'clearly incompatible' with the application of the antitrust laws . . . ."[55] As it had in previous cases, the Court considered the following four factors:

> (1) the existence of regulatory authority under the securities law to supervise the activities in question; (2) evidence that the responsible regulatory entities exercise that authority; and (3) a resulting risk that the securities and anti-

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[52] *See, e.g.*, Altria Group, Inc. v. Good, 555 U.S. 70, 77 (2008) ("When addressing questions of express or implied pre-emption, we begin our analysis 'with the assumption that the historic police powers of the States [are] not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress.'" (quoting Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947))).

[53] *See* 551 U.S. at 267.

[54] *See id.* at 267, 271–75 (citing and discussing United States v. Nat'l Ass'n of Sec. Dealers, Inc. (NASD), 422 U.S. 694 (1975); Gordon v. N.Y. Stock Exch., Inc., 422 U.S. 659 (1975); Silver v. N.Y. Stock Exch., 373 U.S. 341 (1963)).

[55] *Id.* at 285. The Court is not entirely consistent with its terminology in the opinion—in some places it describes the test as whether application of the antitrust laws is "clearly incompatible" with the securities laws; in others it describes the test as whether there is a "clear repugnancy" or "plain repugnancy" between the securities and antitrust laws. Regardless, it does not appear that the different phrasings have any practical effect.

> trust laws, if both applicable, would produce conflicting guidance, requirements, duties, privileges, or standards of conduct[; and] (4) that . . . the possible conflict affected practices that lie squarely within an area of financial market activity that the securities law seeks to regulate.[56]

The Court readily concluded that factors (1), (2), and (4) were all present.[57] The issue in dispute was whether permitting an antitrust suit to go forward was "likely to prove practically incompatible with the SEC's administration of the Nation's securities laws."[58] On this issue, the Supreme Court held that Congress's intent in enacting the securities laws—as evidenced by the comprehensive regulatory scheme—was to displace the application of antitrust law to the underwriting activity in question essentially entirely.[59] As such, it did not matter whether the specific conduct at issue violated the securities laws and regulations or whether the specific conduct was anticompetitive.[60]

Credit Suisse's discussion of "errors" and "mistakes"[61] has been read as a sign that the Court was departing from its "prior holdings in this area [that] focused on the conflicting goals of the antitrust laws and securities laws."[62] For example, Kobayashi and Wright contend the Court's analysis "focused . . . on the actual operation of the antitrust law" and was "heavily motivated by the concern that the benefits of antitrust enforcement may not outweigh its costs in this setting."[63] Thus, they conclude that *Credit Suisse* "recognize[d] the value of limiting antitrust enforcement under circumstances where an alternative and competent regulatory apparatus is available *and* antitrust enforcement is likely to produce little additional social value because of the potential for welfare-reducing errors."[64]

The conclusion is misplaced. Although *Credit Suisse* perhaps was a looser reading of the "clearly incompatible" requirement than had previously been seen, it had nothing to do with the Court's assessment of whether regulation of the securities industry would lead to a more competitive industry in the sense that the antitrust laws promote. Although the Court noted that regulating the conduct of dealers in the context of an IPO under the guise of the antitrust law may result in "serious mistakes," the mistakes at issue were not condemn-

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[56] *Id.* at 275–76.

[57] *Id.* at 277 ("The preceding considerations show that the first condition (legal regulatory authority), the second condition (exercise of that authority), and the fourth condition (heartland securities activity) . . . are satisfied in this case . . . .").

[58] *Id.*

[59] *Id.* at 278, 279–83.

[60] *Id.* at 280–81 (The conflict between the statutes makes it unnecessary "to distinguish between what is forbidden from what is allowed . . . .").

[61] *See id.* at 282–83.

[62] Kobayashi & Wright, *supra* note 31, at 476.

[63] *Id.*

[64] *Id.* at 474.

ing procompetitive behavior, they were condemning any behavior—procompetitive or otherwise—that was specifically permitted under the securities laws:

> We believe it fair to conclude that, where conduct at the core of the marketing of new securities is at issue; where securities regulators proceed with great care to distinguish the encouraged and permissible from the forbidden; where the threat of antitrust lawsuits, through error and disincentive, could seriously alter underwriter conduct in undesirable ways, to allow an antitrust lawsuit would threaten serious harm to the efficient functioning of the securities markets.[65]

Such a concern—that antitrust enforcement would undermine the securities laws—is the only "message" that can be drawn from the Court's decision. The alternative message, that because of antitrust enforcement's tendency to deter procompetitive conduct, "caution and modesty are warranted in considering an expansion of antitrust liability where there is a *competent alternative regulatory structure* in place and the risks of false positives is significant,"[66] is not in the decision at all. Indeed, if the Court were worried about false positives in the antitrust sense, its quibbling about evidentiary troubles and inconsistent juries and SEC oversight would not matter because *all* of the conduct under consideration would be potentially procompetitive. In other words, if cabining the "blunt instrument of antitrust enforcement"[67] were truly the driving force behind *Credit Suisse*, then it ought not matter whether the conduct in question were lawful under the securities laws. But the Court took the opposite approach, basing its decision on the principle that the securities laws displace—in the Court's vernacular, "impliedly repeal"—the antitrust laws, irrespective of the competitive effects of the underlying conduct.[68]

Nor did *Credit Suisse* indicate some general preference for regulatory regimes as substitute enforcement mechanisms for the concerns that the antitrust laws have traditionally addressed. *Credit Suisse* did indeed recognize, as the Court had previously, that the availability of antitrust remedies is less important under circumstances where the SEC (the so-called alternative and competent regulatory apparatus) may potentially sanction or otherwise regulate the conduct that was said to violate the antitrust laws. But the Court did not suggest that the availability of *any* alternative regulatory scheme, much less a

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[65] Credit Suisse Sec. (USA) LLC v. Billing, 551 U.S. 264, 283 (2007).

[66] Kobayashi & Wright, *supra* note 31, at 477 (emphasis added).

[67] *Id.*

[68] *See, e.g.*, 551 U.S. at 281 ("For another thing, evidence tending to show unlawful antitrust activity and evidence tending to show lawful securities marketing activity may overlap, or prove identical."); *id.* at 284 ("[A]n antitrust action in this context is accompanied by substantial risk to the securities market . . . ."). Kobayashi and Wright are not alone, however, in their reading of *Credit Suisse*. *See* Stacey L. Dogan & Mark A. Lemley, *Antitrust Law and Regulatory Gaming*, 87 TEX. L. REV. 685, 694–95, 703 (2009).

common law legal regime, would raise the specter of displacing the antitrust laws. Indeed, there is nothing in the decision to suggest that the Court was concerned with anything but the interaction between the securities and antitrust laws and the conclusion that, where they overlap, Congress *mandated* that the securities law would prevail.[69]

NYNEX likewise provides no support for the regulatory preference thesis. *NYNEX* involved claims against the local telephone monopolist that it had illegally switched suppliers for "removal services" from the plaintiff to a rival.[70] "Regulation" in *NYNEX* played quite a different role than it did in *Credit Suisse*. In *NYNEX*, regulation was part of the scenery, with the plaintiff alleging that NYNEX's motivation for the switch was to facilitate deception of the local regulators and that, as such, the switching violated Section 2.[71] In essence, the plaintiff sought to convert a regulatory violation by a monopolist into an antitrust violation, and the Court rejected that attempt.

The few lines from the Court's decision relating to "other remedies" that might be available to the plaintiff, when put in context, do not support the implied preemption argument.[72] Indeed, those lines cannot fairly be read as suggesting that, *had* the Court concluded there was a potential antitrust claim, the availability of other remedies would have somehow required antitrust to step aside in favor of those other legal regimes. Rather, the Court's point was (as it often is) that the antitrust laws are not a general remedy for all business

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[69] While the Court did not discuss the possibility of implied preemption of the antitrust law by other regulatory institutions, it did note that Congress has sometimes chosen to either expressly preempt or "save" the antitrust laws. *See Credit Suisse*, 551 U.S. at 270–71 (contrasting the express antitrust preemption clause in the Webb-Pomerene Act with the express antitrust savings clause in the Telecommunication Act of 1996).

[70] NYNEX Corp. v. Discon, Inc., 525 U.S. 128, 130–31 (1998).

[71] *Id.* at 131–32.

[72] Kobayashi and Wright argue that Justice Breyer, in dicta, "recognize[d] the role of alternative regulatory structures, including state law, in defining the appropriate limits to antitrust liability, noting the availability of remedies from 'unfair competition laws, business tort laws, or regulatory laws.'" Kobayashi & Wright, *supra* note 31, at 478. Justice Breyer did no such thing. Rather, he observed:

> The freedom to switch suppliers lies close to the heart of the competitive process that the antitrust laws seek to encourage. . . . At the same time, other laws, for example, "unfair competition" laws, business tort laws, or regulatory laws, provide remedies for various "competitive practices thought to be offensive to proper standards of business morality." Thus, this Court has *refused to apply per se reasoning* in cases involving *that kind of activity*.

NYNEX, 525 U.S. at 137 (emphasis added, internal citations omitted). Justice Breyer did not make a normative claim about the limits of antitrust. He simply observed that certain business activities should not give rise to per se liability under the antitrust laws. That is a far cry from suggesting that state law delimits the reach of antitrust law. Indeed, the Court remanded *NYNEX* to determine whether Discon's allegations stated a Section 2 claim under the rule of reason. *See id.* at 140.

torts.[73] Citing what appropriate remedies might exist for the conduct at issue does not mean that those remedies would displace antitrust remedies in appropriate cases. The Court did not conclude that "[r]ather than rely on antitrust enforcement . . . it [was] appropriate to rely on the alternative regulatory structure that may include other federal laws and regulations."[74] Rather, it simply concluded that there was no antitrust problem to remedy.[75]

2. *State Action and* Noerr *Immunity*

Reliance on state-action immunity and the *Noerr-Pennington* doctrine is likewise misplaced. Under the state-action doctrine, a state does not violate the Sherman Act when it exercises its police power in a manner that restricts competition within its borders.[76] State-action immunity is not a doctrine created by the Court's desire to defer to regulatory regimes. In the state-action decisions, the Court did not conclude that state regulatory regimes were superior to antitrust remedies but rather held that, due to principles of dual-sovereignty in our federalist system, Congress did not intend to interfere with those regimes when it enacted the antitrust laws. Hardly evidencing a preference for state regulation in general, the doctrine is limited in scope. In general, private conduct pursuant to the state scheme is immunized only where there is a clear articulation of state policy to displace competition with regulation and the state actively supervises that conduct. Similarly, the *Noerr-Pennington* doctrine is not an example of the Court's "cho[osing] to limit the application of the antitrust law."[77] Rather, the doctrine is a recognition that the antitrust laws do not attempt to proscribe genuine petitioning activity, because to do so would put them into potential conflict with the First Amendment.[78]

In short, the effort to glean from the Court's antitrust jurisprudence a preference for regulation over antitrust enforcement fails. For the argument by its

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[73] *NYNEX*, 525 U.S. at 137.

[74] Kobayashi & Wright, *supra* note 31, at 479.

[75] The basis for the Court's conclusion that there was no antitrust violation was the finding that NYNEX's raising prices "flowed . . . from the exercise of market power that [was] *lawfully* in the hand of the monopolist . . . ." *NYNEX*, 525 U.S. at 136.

[76] *See* Parker v. Brown, 317 U.S. 341, 350–51 (1943) ("[N]othing in the language of the Sherman Act or in its history . . . suggests that its purpose was to restrain a state or its officers or agents from activities directed by [the state] legislature."); *see also* S. Motor Carriers Rate Conference, Inc. v. United States, 471 U.S. 48, 56 (1985); Cal. Retail Liquor Dealers Ass'n v. Midcal Aluminum, Inc., 445 U.S. 97, 100 (1980). The FTC has likewise misunderstood the state-action doctrine, seeking to regulate mergers and other activity in state-regulated industries, with little success. *See, e.g.*, FTC v. Equitable Res., Inc., 512 F. Supp. 2d 361, 364 (W.D. Pa. 2007), *remanded by* 2008 U.S. App. LEXIS 27971 (3d Cir. Feb. 22, 2008*), vacated on other grounds*, 2008 U.S. Dist. LEXIS 111849 (W.D. Pa. June 25, 2008). The authors represented Equitable in that matter.

[77] Kobayashi & Wright, *supra* note 31, 479.

[78] E. R.R. Presidents Conference v. Noerr Motor Freight, Inc., 365 U.S. 127, 137 (1961).

terms requires a conclusion that other regulatory regimes provide better *competitive* outcomes than does applying the antitrust law as written. But the examples cited are, at best, instances where the Court has cited the presence of regulatory structures as the reason why antitrust law *cannot* apply as a matter of statutory or even constitutional construction, no matter what the competitive consequences. They are not normative judgments as to whether antitrust laws *should* apply as a matter of *competition* policy and, indeed, offer little insight to the question that interests us here––the proper role of antitrust in addressing the patent holdup problem.

B. Implied Preemption Doctrine Does Not Apply to Patent Holdup

Even accepting the idea of implied preemption in the face of substantial regulatory regimes, the case for preempting the antitrust laws in the SSO-patent holdup context has not been made. Put simply, there is no regulatory oversight in the case of SSO-patent holdup. Although the Patent and Trademark Office (PTO) regulates patents in the sense of deciding what patents to issue, there is no connection between that role and the patent holdup issue. Indeed, almost every dispute involving a patent—whether patent abuse, infringement, or licensing quarrels—is ordinarily resolved through some form of private litigation or dispute resolution.[79]

It is of course true that there is a specialized patent court (the Federal Circuit), and that certain doctrines (laches, equitable estoppel, and misuse) have been developed to address "opportunistic behavior" by patentees. But this simply means that there is an independent body of patent law that certain *private* parties may enforce. The *government* does not actively police the behavior of patent holders in the way the SEC enforces the securities laws or the states enforce their laws in the state-action context.[80] Although the PTO imposes certain duties upon patent applicants,[81] it lacks the authority to impose any such similar duties upon patentees participating in a standard-setting process. SSOs impose their own disclosure obligations without any interference or oversight by the PTO. In sum, we think it is a stretch to argue that a competing regulatory scheme governs all of patent law. Many patent law defenses, such as those recognized under 35 U.S.C. § 282, are borrowed from the common law.

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[79] We note, however, that there has been a recent uptick in the number of ex parte patent reexamination filings in the past five years. *See* U.S. PTO, *Reexamination Operational Statistics Through FY2011 Q3*, *available at* http://www.uspto.gov/patents/Reexamination_operational_statistic_through_FY2011Q3.pdf.

[80] Although the PTO cannot bring claims in federal court, prospective patentees may bring interference proceedings in the PTO before an administrative law judge to determine which party *invented* the technology first and thus is entitled to patent protection. *See* 35 U.S.C. § 135.

[81] *See* 37 C.F.R. § 1.56 (2010).

Without a regulatory regime to fall back on, the argument that antitrust should be preempted in the patent holdup context necessarily devolves to the assertion that the marginal risk of errors (i.e., false positives) justifies abandoning antitrust altogether. But it has not been demonstrated that antitrust is more likely to lead to false positives than other doctrines. Indeed, given the focus on anticompetitive conduct (as opposed to just bad business behavior) and the relatively well-developed antitrust doctrines that exist, the concern would seem to be less in the case of antitrust than in the case of other doctrines, which are seemingly more susceptible to turn on the whim of the trier-of-fact or the trial court. Moreover, concerns with antitrust false positives generally arise with the application of per se rules of liability,[82] an issue absent in SSO-patent holdup cases, which feature rule of reason monopolization claims.

It is also unclear what would constitute a false positive in the context of SSO-patent holdup. Presumably, an antitrust false positive is not different in this context than any other—wrongfully condemning procompetitive conduct. Although that may be a considerable concern in antitrust litigation in general, here, where the conduct (deception to obtain market power) is unlikely to be defended as efficient, the concern about false positives is lower than in other instances of alleged anticompetitive conduct.

As Thomas Cotter observes, the argument

> that antitrust liability will generate many false positives, also may not be compelling in the [ ] context of [SSO-patent holdup] . . . [because] false positives are always *a* risk; . . . for example, there may be some risk that courts or juries will interpret ambiguous disclosure policies as imposing nonexistent obligations upon the patentee. . . . Even so, the frequency and magnitude of false positives may be lower [in this context] than in the *NYNEX* context, in which a rule of *per se* liability risked penalizing buyers merely for switching suppliers (a rather commonplace phenomenon!). In the [patent holdup] context, moreover, the risk of false positives might be diminished by requiring clear proof that the SSO required the disclosure at issue.[83]

While we recognize that, when a court is asked to determine a FRAND royalty, one form of "false positive" is that the court could require a patent owner to license its technology at less than a FRAND rate (if it incorrectly finds that the patent owner failed to offer a license on FRAND terms), we

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[82] *See* Atl. Richfield Corp. v. USA Petroleum Co., 495 U.S. 326, 344 (1990) (recognizing that "the per se rule permits the prohibition of efficient practices in the name of simplicity"); PolyGram Holding, Inc. v. FTC, 416 F.3d 29, 34 (D.C. Cir. 2005) ("*Per se* analysis, which requires courts to generalize about the utility of a challenged practice, reduces the cost of decision-making but correspondingly raises the total cost of error by making it more likely some practices will be held unlawful in circumstances where they are harmless or even procompetitive.") (citation omitted).

[83] Cotter, *supra* note 39, at 1197.

believe this risk is limited. Courts are routinely asked to calculate royalty rates in a variety of disputes. They are also routinely asked to calculate the "but for" world competitive price in assessing damages in most antitrust litigation. There is no reason to believe that evaluating such rates in the context of a FRAND commitment would be any more difficult.[84] We also note that patent owners can (and do) mitigate their risk in this regard if, prior to the adoption of a standard, they provide transparency into the rates that they consider FRAND. With such ex ante disclosures, patent owners can reduce the risk of being accused of deception, which is generally at the core of antitrust claims arising out of abuses of the standard-setting process.

There is also the old chestnut that the antitrust and patent laws are in conflict. Although critics concede that this conflict may be "illusory,"[85] they nevertheless insist that "the cases involving SSO patent holdup illustrate the existence of real conflicts between patent and antitrust law."[86] The only "conflict" identified in support of this rather strong assertion is that antitrust may impose upon patent holders a duty to disclose in the SSO context that the patent laws supposedly do not.[87] But that is no conflict at all—the patent laws do not privilege a possessor of intellectual property to refrain from disclosing it when the possessor voluntarily agreed to do so; indeed, as discussed below, the Federal Circuit has held that a failure to disclose may constitute waiver under the patent law.[88] There is, therefore, no conflict.

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[84] Determining an appropriate FRAND rate is not conceptually different than determining a reasonable royalty in patent damages actions or appropriate damages by reference to the but-for "competitive" price in other kinds of antitrust actions. *See, e.g.*, *In re* Mahurkar Patent Litig., 831 F. Supp. 1354 (N.D. Ill. 1993); Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116 (S.D.N.Y. 1970). In the FRAND context, these would include: (a) the availability of alternative technologies in the standard-setting process; (b) industry benchmarks; (c) natural experiments, i.e., what rates are charged in a competitive environment; (d) comparison to royalties charged for other standards; and (e) comparison to the royalty rate where there is no FRAND commitment.

[85] Kobayashi & Wright, *supra* note 31, at 502 n.105 (citing HERBERT HOVENKAMP, MARK D. JANIS & MARK A. LEMLEY, IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW 1–10 (2007) (noting apparent conflict, and also noting that conflict is illusory once simplifying assumptions are dropped)).

[86] *Id.* at 503.

[87] *Id.*

[88] *See* Qualcomm Inc. v. Broadcom Corp., 548 F.3d 1004, 1021–22 (Fed. Cir. 2008); *see also* Rambus Inc. v. Infineon Techs. AG, 318 F.3d 1081, 1100–01 (Fed. Cir. 2003) (finding Rambus had a duty to disclose patents and patent applications that "reasonably might be necessary to practice the standard"). Indeed, the argument that an antitrust duty to disclose in the context of monopoly-creating standard setting is repugnant to patent law, which requires public disclosure to obtain the patent in the first place, seems illogical. *See* 35 U.S.C. § 112 ¶ 1 (requiring that patent applications include "a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention").

Moreover, if this conception of "conflict" were to prevail, any body of law that does not require something could be said to conflict with any other body of law that does require it. Indeed, as discussed above, SSOs themselves may, and often do, impose their own disclosure obligations on patent holders. It does not follow that doing so somehow results in a "conflict" between contract law (which underlies the SSOs disclosure obligations) and patent law.

Applying the antitrust laws to the SSO-patent holdup problem also does not interfere with any area that "patent law seeks to regulate," including "enforcement, licensing, and disclosure obligations of the patentee."[89] No court need confront questions about a patent's validity or whether a patent holder made the proper disclosures to the PTO in order to determine whether the patent holdup in question caused competitive harm.[90] While a court might consider matters that could be relevant to claims under both the antitrust and patent laws—such as disclosure obligations to the SSO or licensing agreements—those analyses operate independently of one another. It is not the case in SSO-patent holdup that the antitrust laws would condemn lawful conduct that patent law encourages or protects (the concern in *Credit Suisse*). Stated simply, the patent laws do not countenance fraudulent[91] or inequitable conduct[92] on the part of patent holders.

In any event, the notion that the patent law somehow preempts or impliedly repeals the antitrust laws cannot be squared with *Walker Process Equipment, Inc. v. Food Machinery and Chemical Corp.*,[93] where the Supreme Court held that enforcement of a patent procured by fraud on the PTO may violate Section 2 of the Sherman Act. In doing so, the Court overturned the decisions of the lower courts—and anticipatorily rejected the implied preemption argument—that the application of antitrust law was inappropriate in the patent context, holding that the "far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope."[94] As Justice Harlan stated in his concurring opinion, the *Walker Process* decision sought to achieve a "suitable accommodation . . . between the differing poli-

[89] Kobayashi & Wright, *supra* note 31, at 502.

[90] A court may, of course, also have to consider issues of both validity and competitive harm in a particular suit. The alleged infringer could both challenge the validity of the patent and raise antitrust claims, but the presence of antitrust claims does not affect the validity analysis.

[91] For example, patent applicants have a duty to disclose to the PTO "all information known to that individual to be material to patentability." 37 C.F.R. § 1.56 (2010).

[92] *See, e.g.*, Therasense, Inc. v. Becton, Dickinson & Co., No. 2008-1511, 2011 U.S. App. LEXIS 10590 (Fed. Cir. May 25, 2011) (en banc).

[93] 382 U.S. 172 (1965).

[94] *Id.* at 177 (internal citation omitted).

cies of patent and antitrust laws."[95] Accordingly, he emphasized the distinction between cases involving the enforcement of fraudulently obtained patents, in which "antitrust remedies should be allowed room for full play," and cases involving patents that were invalid for "technical," non-fraudulent reasons.[96]

Subsequently, the Federal Circuit applied the *Walker Process* rationale to a case in which the patent holder's fraudulent conduct was the omission of material prior art rather than affirmative misrepresentations to the PTO, and held that *Walker Process* antitrust claims may be based on either type of fraud.[97] These holdings are consistent with the *Handgards* line of cases, which hold that an antitrust claim may be based on the bad faith enforcement of a patent.[98] Thus, an argument that antitrust law is wholly preempted or impliedly repealed in matters involving patents cannot be squared with well-established Supreme Court precedent.

Outside of *Walker Process* claims, the Federal Circuit has also recently made clear that antitrust, not patent law, is the principal remedy for addressing harm to competition even where there are allegations of "patent misuse." In *Princo Corp. v. ITC*,[99] the Federal Circuit sitting *en banc* rejected a licensee's (Princo) attempt to defend against claims of patent infringement by asserting "patent misuse" on the part of a patentee-licensor (Philips), who had allegedly reached an anticompetitive agreement with its joint venture partner (Sony). Princo alleged that Philips and Sony agreed that Philips would not only license its own patents (which were necessary to practice the standard at issue) but an allegedly non-essential Sony patent as well, in exchange for Sony's agreement not to develop competing technology based on Sony's patent.

The Federal Circuit rejected Princo's effort to frame this alleged agreement as a case of "patent misuse" because there was "no connection" between the patents licensed by Philips and the alleged misconduct, i.e., the alleged anticompetitive agreement between Philips and Sony. The court explained that patent misuse is "about . . . 'patent leverage,' i.e., the use of the patent power to impose overbroad conditions on the use of the patent in suit that are 'not within the reach of the monopoly granted by the Government.' "[100] Here, Philips was not seeking to expand the "physical or temporal scope" of its

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[95] *Id.* at 179.
[96] *Id.* at 181.
[97] *See* Nobelpharma A.B. v. Implant Innovations Inc., *vacated and withdrawn*, 141 F.3d 1059 (Fed. Cir. 1998).
[98] Handgards, Inc. v. Ethicon, Inc., 743 F.2d 1282 (9th Cir. 1984); Handgards, Inc. v. Ethicon, Inc., 601 F.2d 986 (9th Cir. 1979).
[99] 616 F.3d 1318 (Fed. Cir. 2010) (en banc)
[100] *Id.* at 1331 (citing Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 136–38 (1969)).

patents through its alleged agreement with Sony. It thus observed that while the "agreement might be vulnerable to challenge under the antitrust laws . . . it could not reasonably be characterized as misuse of [Philips'] patents. Thus, it [did] not follow from the possible existence of an antitrust violation with respect to Sony's [ ] patent that Philips is guilty of patent misuse with respect to [its] patents."[101] The court not only reaffirmed the limited scope of the patent misuse doctrine, but made plain that harm to competition is the province of the antitrust laws:

> We have emphasized that the defense of patent misuse is not available to a presumptive infringer simply because a patentee engages in some kind of wrongful commercial conduct, even conduct that may have anticompetitive effects.[102]
>
> * * * * *
>
> Antitrust law . . . provides robust remedies including both public and private enforcement. An accused infringer can raise a Sherman Act claim as a counterclaim in an infringement action or as an affirmative claim, and is eligible for treble damages and attorney's fees. As to the doctrinal limitations that apply to antitrust plaintiffs generally, such as the standing requirement, there is no reason to believe those limitations are inappropriate simply because a party is seeking relief against a patentee.[103]

Finally, as a policy matter, even if patent law and antitrust law have different short-term goals,[104] that is not reason enough simply to displace antitrust law in favor of patent law.[105] Even granting for a moment that the patent law objective of promoting innovation cannot be reconciled with antitrust's objective of preserving competition, that concept would not explain why the latter must give way in cases where the SSO-patent holdup results in harm to competition. Put another way, no one would dispute that the primary legal regime for addressing harm to competition is the antitrust laws. Thus, if one regime is going to "give way" here, where anticompetitive conduct beyond the scope of the patent grant is in play, it should be patent law.

In sum, any conclusion that the role of antitrust is to be reduced or eliminated should require a demonstration that Congress considered some conflict-

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[101] *Id.* at 1332 (citations omitted).

[102] *Id.* at 1329 (citations omitted).

[103] *Id.* at 1333 n.6.

[104] That is, of course, subject to much debate. *Compare* PROMOTING INNOVATION AND COMPETITION, *supra* note 2, at 1 ("Over the past several decades, antitrust enforcers and courts have come to recognize that intellectual property laws and antitrust laws share the same fundamental goals of enhancing consumer welfare and promoting innovation."), *with* Image Technical Servs. Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1217 (9th Cir. 1997) ("At the border of intellectual property monopolies and antitrust markets lies a field of dissonance yet to be harmonized by statute or the Supreme Court.").

[105] *Walker Process* should foreclose that argument. *See supra* notes 93–97 and accompanying text.

ing goal of the patent laws to be more important than competition. But that is not the argument we have seen. Instead, the argument is that the patent law does a better *job* of promoting competition than antitrust. The argument remains as unsupported as it is implausible.

C. Non-Antitrust Remedies Cannot Adequately Replace Antitrust Remedies

Apart from preemption arguments, some have argued that patent, contract, and tort law offer a comparative advantage over antitrust law in addressing the SSO-patent holdup problem because remedies under these bodies of law are less likely to impose social welfare costs associated with misidentifying anticompetitive holdup.[106] There is no suggestion that these other bodies of law (with the exception of patent law) impliedly preempt antitrust remedies, but rather that they offer a "comparative advantage," which is based in part on the misguided view that antitrust remedies are strongly disfavored after *Credit Suisse*.[107] This argument may stem from the belief that SSO-patent holdup rarely harms competition, which if true could give rise to a concern about transforming such cases, which may involve nothing more than "bad business behavior," into treble-damages antitrust cases.[108] But the concern that antitrust law can be misused to address commercial disagreements when competition issues are not in play is hardly unique to the SSO-patent holdup cases. For the concern to have salience here, one would need to show that patent holdup in the standard-setting context typically does not harm competition. We find that conclusion counterintuitive given that standard-compliant products usually come to dominate particular industries, and that, at its core, standard-setting efforts are collective decisions by an industry to select a single technology over competing alternatives.[109] Moreover, compared to the patent law of equitable estoppel and misuse, the antitrust laws are better developed and provide more guidance for separating bad behavior cases from true antitrust cases.[110]

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[106] *See, e.g.*, Herbert J. Hovenkamp, *Standards Ownership and Competition Policy*, 48 B.C. L. REV. 87, 106 (2007); Kobayashi & Wright, *supra* note 31, at 504, 507, 515; Mark A. Lemley, *Ten Things to Do About Patent Holdup of Standards (And One Thing Not to Do)*, 48 B.C. L. REV. 149, 167–68 (2007).

[107] Kobayashi & Wright, *supra* note 31, at 505 ("[W]e argue that the principles articulated in *Credit Suisse* in the context of an implied repeal of antitrust in favor of alternative federal law also support a marginal analysis of the benefits of antitrust enforcement relative to *state law* alternatives.").

[108] *Id.* at 505–06 (citing NYNEX Corp. v. Discon, Inc., 525 U.S. 128, 136–37 (1998)).

[109] *See also* Cotter, *supra* note 39, at 1199 ("[T]he negative consequences of deploying antitrust to address deception-based holdup appear far less certain. Assuming that courts can reliably determine when deceptive conduct has occurred, the only patent owners who would be liable for patent ambush would be those who engaged in deceptive conduct that, presumably, lacks a procompetitive justification.").

[110] *Cf.* Herbert Hovenkamp, *Empire Innovation and the Domain of Competition Policy*, 60 ALA. L. REV. 103, 115 (2009) ("I believe that antitrust should not be too defensive about assert-

On a more basic level, this argument, which amounts to little more than the broad assertion that remedies under patent, contract, and/or tort law will impose lower "welfare costs," fails on the merits. Indeed, it is not clear what the specific advantages of these alternative remedies are or what desirable conduct antitrust law would deter that would not be deterred by these other remedies. Nor is there evidence that any such advantages are preferable to the established doctrines of antitrust law that have evolved over the past 120 years.

1. *Patent Law*

The argument that we should rely on patent law rather than antitrust law to address SSO-patent holdup where a patentee has deceived an SSO, stems from the belief that equitable estoppel is an "arguably superior solution."[111] Under the doctrine of equitable estoppel, a patentee may be unable to enforce its patent rights if it deceived another into believing that it would not enforce those rights. In theory, equitable estoppel might offer a defense against a patentee who seeks to enforce patents that read on a standard where the patentee somehow deceived the SSO during the standard-setting process (e.g., by failing to disclose, despite a duty to do so, that it had patents reading on the proposed standard). Under this view, because equitable estoppel is a well-established patent law doctrine, antitrust law would not have to be "extend[ed] or modif[ied] . . . beyond it[s] limits" to address SSO-patent holdup.[112] "Antitrust law, therefore, would not have to bend to cover situations where proof of actual exclusion or harm to competition is absent."[113]

This argument proceeds from the false premise that the application of antitrust law to SSO-patent holdup requires an extension or modification of the law. Indeed, *Walker Process* itself demonstrates that a party's acquisition of monopoly power through deception is and always has been a core antitrust concern under Section 2, and the doctrine of what does and does not constitute a violation of Section 2 is well developed. The specific context of standard setting does not change that. If anything, it increases the concern because standard setting inherently involves competitors in an industry choosing "win-

ing a broader role in IP competition disputes. This is so for two reasons. First, the extent of special interest capture is significantly greater in IP law than in antitrust, although today patent law is experiencing some important reforms. Second, antitrust has profited greatly from its period in the wilderness, something that the IP laws have yet to experience."); *id.* at 117 ("As a result, antitrust has the comparative advantage of well-behaved doctrine that, at least currently, is reasonably free of special interest pressure. The patent and copyright acts cannot make the same claim to well-behaved doctrine, although patent law seems to be entering its own period of self-criticism and reform.").

[111] Kobayashi & Wright, *supra* note 31, at 504.

[112] *Id.* at 505.

[113] *Id.*

ners" and "losers," not through traditional competition on the merits, but rather through negotiation and agreement, which are also core concerns of the antitrust laws.

Unless there is a significant reason why the potential availability of antitrust remedies is undesirable, eliminating them would serve no purpose. We see no support for the suggestion that courts will not be able to sort out anticompetitive patent holdup from patent holdup that does not have such consequences. If anything, the experience is the opposite. In *Rambus*, the D.C. Circuit reversed the FTC primarily because of a lack of demonstrated anticompetitive effect.[114] In *Broadcom*, by contrast, the Third Circuit required the allegation of anticompetitive effect, including specific allegations that the technology might not have been included in the standard if no FRAND commitment had been made.[115] More generally, arguments based on the premise that the courts, which are charged with enforcing the laws that Congress passes, are incompetent to do so, are particularly unsatisfying, for they lead to the conclusion that the inevitable potential for institutional error is a reason to abandon the institution itself.

In any event, the equitable estoppel doctrine does not cover all instances of anticompetitive patent holdup and therefore is an incomplete remedy. To establish equitable estoppel, an infringer must show: (1) a misrepresentation made by the patentee to the infringer; (2) substantial reliance on the patentee's misleading conduct or statements; and (3) material prejudice.[116] In the SSO-patent holdup context, however, there is often no direct communication between the patentee and infringer. And absent such a relationship, the infringer cannot establish an equitable estoppel defense.[117]

In addition, both the "reliance" and "material prejudice" elements of equitable estoppel could be difficult to establish in the standard-setting context. To establish reliance, the infringer must show "it substantially relied on the misleading conduct of the patentee in connection with taking some action."[118] For manufacturers of standard-compliant products that did not participate in the SSO process and have no direct knowledge of the patentee's conduct, it is

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[114] Rambus Inc. v. FTC, 522 F.3d 456, 466–67 (D.C. Cir. 2008).

[115] Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 314 (3d Cir. 2007).

[116] *See* A.C. Aukerman Co. v. R.L. Chaides Constr. Co., 960 F.2d 1020, 1042–43 (Fed. Cir. 1992) (en banc).

[117] *See, e.g.*, Robert P. Merges & Jeffrey M. Kuhn, *An Estoppel Doctrine for Patented Standards*, 97 CALIF. L. REV. 1, 39 (2009) ("At a minimum, then, the misrepresentation element of equitable estoppel requires some communication or relationship between the parties, since the infringer must know of the relevant patent in order to reasonably infer that the patentee acquiesced in the allegedly infringing activity." (citing *Aukerman*, 960 F.2d at 1042–43)).

[118] *Aukerman*, 960 F.2d at 1042–43.

unclear how they would ever establish this element.[119] Infringers may also have difficulty showing they suffered material prejudice, which requires proof of either evidentiary or economic prejudice.[120] An infringer will often claim that it was economically harmed by the patentee's conduct because it lost the opportunity to adopt a different technology earlier.[121] Courts generally reject this argument and require a showing that "the infringer invested and expanded production in reliance upon continued access to the infringing technology."[122] In short, equitable estoppel is at most a remedy for a limited subset of anticompetitive SSO-patent holdup.[123]

To be sure, patent law proved to be up to the task in *Qualcomm Inc. v. Broadcom Corp.*, where the Federal Circuit upheld the district court's conclusion that Qualcomm had impliedly waived its right to enforce certain patents that it failed to disclose to the Joint Video Team (JVT) SSO.[124] But *Qualcomm* also illustrates the potentially limited reach of patent remedies to address SSO-patent holdup. It is not clear that the doctrine of implied waiver necessarily addresses patent holdup outside the failure to disclose context.[125] It also may not be available to firms that did not participate in the particular standard-setting effort at issue. *Qualcomm's* holding—that "a district court may in appropriate circumstances order patents unenforceable as a result of silence in the face of an SSO disclosure duty"[126]—would support such arguments.

One final point about patent remedies concerns standing: it is not just the type of harm that matters to antitrust, but whether anyone has a remedy to address it. Antitrust fills the gap left open by patent law by providing a remedy to those "outsiders"—consumers, competitors and others—who lack standing to seek relief under the patent laws. Consider *Qualcomm*: The use of equitable estoppel there was only available as a defense asserted by the al-

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[119] *See* Merges & Kuhn, *supra* note 117, at 41 ("Reliance is different in network markets. Most standards adopters typically do not rely on promises directly from the patentee.").

[120] *Aukerman*, 960 F.2d at 1043.

[121] Evidentiary prejudice is usually not at issue. *See* Merges & Kuhn, *supra* note 117, at 45 ("Evidentiary prejudice is a kind of harm not commonly suffered by standards adopters as it typically relates to the unavailability of witnesses or documents.").

[122] *Id.* at 45–46 ("Courts generally do not view the cost of infringement as a form of economic prejudice. They tend to reject the argument that an infringer 'was prejudiced because it lost opportunities to avoid infringement at an early stage.'") (citation omitted).

[123] *Id.* at 40 ("[t]here seem to be no cases where a court has treated statements made to the industry as a whole as creating a relationship giving rise to misrepresentation for the purposes of equitable estoppel.").

[124] 548 F.3d 1004, 1019–22 (Fed. Cir. 2008). Broadcom had also raised an equitable estoppel defense before the district court, but the Federal Circuit declined to resolve whether Broadcom would have prevailed on this defense. *See id.* at 1024 ("We agree with Broadcom that it is entitled to a remand with respect to equitable estoppel. However, because of our conclusion with respect to waiver, a remand to address equitable estoppel is not necessary here.").

[125] *See id.* at 1020–22.

[126] *Id.* at 1026.

leged infringer. The elements of the defense discussed above, moreover, require that the infringer either be involved in the SSO process or have a specific basis for claiming that it was affirmatively misled by the patentee. No consumer injured by the wrongful acquisition of monopoly power in this context would meet these criteria, nor would other firms that have been excluded from the market due to the deception at issue. There is no government enforcement agency to protect such plaintiffs, because patent law has no provision for government enforcement intended to protect consumers from harm to competition.

In sum, the limitations of patent law would exclude many of the categories of potential plaintiffs suffering antitrust injury as a result of standard-setting abuse. We conclude that equitable estoppel is unequal to the task of policing monopolization through fraudulent conduct in the standard-setting process.

2. *Contract Law*

The argument that antitrust should step aside because contract law "outperform[s] antitrust when it comes to the successful identification and regulation of ex post opportunism associated with patent hold-up"[127] fails for much the same reasons. A contract can only be enforced by its parties and by others to whom the parties clearly and explicitly intended to give enforcement rights.[128] The victims of anticompetitive patent holdup, however, are also consumers and potential competitors who may not have been part of the SSO. Moreover, contracts can be modified and third parties generally have no enforcement rights as to the original contract. In implementing an industry-wide standard, the parties to the contract may actually prefer high royalty levels that hurt consumers. For example, if participants in the standard-setting process, who agreed collectively to support one technology over all others, mutually agree to license on FRAND terms but then, after the standard is adopted, each independently chooses to increase its royalty significantly, no party to the FRAND "contract" may have incentive to bring a breach of contract action, while implementers of the standard and users of standard-compliant products ultimately pay the bill. Antitrust should be available in such circumstances as a remedy for the parties harmed by the anticompetitive agreement.

Once again, the rationale in support of contract law seems to be that antitrust cases often lead to the condemnation of conduct that is not anticompetitive (or at least to the deterrence of conduct that is procompetitive).[129] The claim is that, because the promise to disclose relevant patents and the promise

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[127] Kobayashi & Wright, *supra* note 31, at 507.

[128] The ability to rely on third-party enforcement of contracts where foreign law governs the contract may create even greater uncertainty as to the availability of a contract remedy.

[129] *Id.* at 508–09.

to license on FRAND terms are, at core, promises, and because antitrust cases sometimes result in false positives, it is safer to stick with contract law to the exclusion of antitrust.[130] Although we are sure plaintiffs with standing to enforce the contract may often limit themselves to that (why bother to take on the extra elements of an antitrust claim if an available contract claim is easier?), these concerns simply have not been observed in practice.

To be sure, the FTC's action against Negotiated Data Solutions LLC (N-Data) may raise similar concerns. The FTC concluded that N-Data violated Section 5 of the FTC Act when it repudiated the commitment made by the original patent owner to license technology relating to the Ethernet standard for local area networks for a one-time fee of $1,000—a commitment that was made in order to get its technology into the standard.[131] The FTC found that N-Data's conduct violated Section 5 because it sought to extract licensing fees from standard adopters who lacked any practical alternative to using the patented technology N-Data had acquired.[132] The FTC observed that a patentee does not violate Section 5 whenever it breaches an existing licensing agreement.[133] Rather, it was critical to the legal analysis that N-Data sought to breach a commitment that was made in the standard-setting context.[134]

The concern with *N-Data* is that it does not appear to have any limiting principles (other than the supposed breach of a licensing promise made in the standard-setting context). To some, it suggests that the FTC "might be more than willing to apply a monopolization theory under Section 2 in a case with similar facts . . . involving only the renegotiation of ex-ante FRAND commitments made in good faith."[135] They worry that the decision appears to be "federalizing contract law."[136] Those may be valid concerns, but they do not say anything about the proper role of antitrust in policing anticompetitive conduct in standard setting. Indeed, the fact that the FTC did not bring a claim under Section 2 suggests, at least by negative implication, that a simple breach does not give rise to a Section 2 claim and that the FTC does not contend otherwise.

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[130] *Id.* at 509–10.

[131] *See* Analysis of Proposed Consent Order to Aid Public Comment, *In re* Negotiated Data Solutions LLC, FTC File No. 051-0094 (Jan. 23, 2008), *available at* http://www.ftc.gov/os/caselist/0510094/080122analysis.pdf.

[132] *See* Statement of the Federal Trade Commission, *In re* Negotiated Data Solutions LLC, FTC File No. 051-0094 (Jan. 23, 2008), *available at* http://www.ftc.gov/os/caselist/0510094/080122statement.pdf.

[133] *Id.*

[134] *Id.*

[135] Kobayashi & Wright, *supra* note 31, at 511.

[136] *Id.* at 512.

As Cotter has explained, *N-Data* does not speak to "the negative consequences of deploying antitrust to address deception-based holdup."[137] "Assuming that a court can reliably determine when deceptive conduct has occurred," he notes, "the only patent owners who would be liable for patent ambush would be those who engaged in deceptive conduct that, presumably, lacks a procompetitive justification."[138] And thus, even "some small risk of overdeterrence might be justified in light of the potential gain . . . [and] the likely harm to the patent incentive scheme seems remote."[139]

On the other hand, it is fair to ask why antitrust law should *not* reach opportunism, whether it was the patent holder's intent all along or whether it occurred to the patent holder only after the standard was adopted. The modern trend in antitrust jurisprudence is to evaluate effects rather than intent.[140] The potential anticompetitive consequences of raising royalty rates to monopoly levels after entrenchment of a standard is the same whether the patent owner intended to do so when making his FRAND commitment or whether it only occurred to the owner of the patent afterward. The difficulty in attacking such conduct under Section 2 is that the monopoly position was acquired legally, giving rise to a defense under *NYNEX*. The counterargument would be that avoiding the FRAND constraint is the conduct giving rise to monopoly power, and should be actionable monopolization. Such an argument would seem more availing under the EU's abuse of dominance standard, violation of which does not depend upon how the dominant position was achieved.[141]

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[137] Cotter, *supra* note 39, at 1999 (citations omitted).

[138] *Id.* (citations omitted).

[139] *Id.* (citations omitted).

[140] *See, e.g.*, United States v. Microsoft Corp., 253 F.3d 34, 59 (D.C. Cir. 2001) ("Finally, in considering whether the monopolist's conduct on balance harms competition and is therefore condemned as exclusionary for purposes of § 2, our focus is upon the effect of that conduct, not upon the intent behind it. Evidence of the intent behind the conduct of a monopolist is relevant only to the extent it helps us understand the likely effect of the monopolist's conduct.") (citations omitted); K.M.B. Warehouse Distribs., Inc. v. Walker Mfg. Co., 61 F.3d 123, 130 (2d Cir. 1995) ("[E]vidence of defendants' intent, even belief that what they were doing might be unlawful, is unavailing in the absence of evidence of anti-competitive effect."); A.A. Poultry Farms, Inc. v. Rose Acre Farms, Inc., 881 F.2d 1396, 1402 (7th Cir. 1989) ("[L]iability under § 2 for abuse of monopoly power stems from anti-competitive effects and not intent[.]") (citation omitted); *see also* 1 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW § 113, at 140 (3d ed. 2006) ("Judges and others' sometimes write as if the purpose of antitrust is to control evil or anticompetitive intent, but that is not the case.").

[141] To establish infringement of Article 102 TFEU, the European Commission must show that the undertaking is dominant in a given market; that it has abused its dominant position; that the abuse has an effect on trade between Member States; and the absence of any objective justification for the abuse. N-Data could be described as having abused its dominant position under Article 102(2)(a) by "directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions" when it attempted to extract a higher royalty after lock-in.

3. *Tort Law*

Tort remedies—which may be "a backstop . . . where contract law is not available"[142]—suffer from many of the same deficiencies as contract remedies. Standing is a significant issue in tort. As has often been observed, in the absence of a duty, there is no tort, and we are not aware of any case finding a tort duty extending to others beyond the participants in the standard-setting effort, except, of course, those duties imposed by the antitrust laws not to restrain trade. Likewise, there is no role for government enforcement of such tort claims.

The case for tort remedies therefore ultimately devolves into another round of criticism of antitrust overreach in general, and the Sixth Circuit's affirmance of antitrust liability in *Conwood Co. v. U.S. Tobacco Co.*,[143] in particular. Some believe that the Sixth Circuit let its emotional reaction to U.S. Tobacco's tortious conduct (such as destroying the advertising displays of its rivals) distract it from the other elements of a claim under Section 2, which they suggest were lacking.[144] That criticism once again is essentially that courts are institutionally incapable of properly enforcing the antitrust laws and, if accepted, would call into question enforcement in many other antitrust contexts. It is not clear, however, why this concern is directed particularly at the enforcement of antitrust laws in the standard-setting context. Courts (and juries) are equally susceptible to becoming "carried away" in fraud and other tort cases as they are in antitrust cases. Indeed, the additional elements that must be proven to establish a Section 2 claim would logically tend to lead to *fewer* false positives than are seen in fraud cases, where any ill will or hard-edged motivation may be seen as justifying liability. At the very least, antitrust requires the additional showing of anticompetitive effects, which can founder on questions of market definition and power.

Finally, Kobayashi and Wright argue that "jurisdictional competition in state contract and tort law is more likely to generate efficient rules and institutions than antitrust."[145] That argument, it seems to us, vastly overstates the degree to which there is "jurisdictional competition." We are also skeptical that such competition among jurisdictions can be expected to lead to better results. Indeed, by its nature, such competition would lead to inconsistent results, which would simply inject uncertainty and doubt into the standard-setting process, which is surely not welfare enhancing. This inconsistency is exacerbated where the law of foreign jurisdictions also comes into play, as is likely where global standards are at issue.

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[142] Kobayashi & Wright, *supra* note 31, at 513.
[143] 290 F.3d 768 (6th Cir. 2002).
[144] Kobayashi & Wright, *supra* note 31, at 513–15.
[145] *Id.* at 516.

III. CONCLUSION

Patent holdup where a patentee has deceived an SSO in order to secure a position in the standard is, at its core, an antitrust problem. In this context, patent holders harm consumers by exploiting the competition-reducing aspects of standard setting to their own private advantage. In addition to being the body of law directed toward anticompetitive conduct, antitrust provides numerous practical advantages, including the possibility of governmental enforcement, and appropriately broad standing.

Remedying the patent holdup problem exclusively through non-antitrust legal remedies would be perverse. Indeed, it would be a bit like remedying patent infringement through the doctrine of common law conversion. In some instances, it might work, but there certainly would be under-enforcement.

To be sure, there are instances where deceptive conduct by the patentee does not harm competition and, in those instances, there is no antitrust claim. Often there will be patent remedies in that situation, or contract or even tort remedies. The legal regimes can and do coexist peacefully.

Those who argue that the marginal benefit of antitrust remedies do not outweigh the cost of antitrust litigation both understate the benefits (broad standing and ready remedies where appropriate) and overstate the costs (the potential, however unknown, of "false positives," i.e., condemning behavior that is not anticompetitive). In addition to being overstated, the false positives concern is also misplaced in this context. Unlike an antitrust attack on price cutting or a securities offering, the risk of a false positive here is not the over-deterrence of desired behavior, but rather that over-deterrence of deceptive and opportunistic behavior. Fretting about *that* form of over-deterrence seems itself to be a misallocation of resources. And preventing that form of over-deterrence by reliance on the competitive outcomes under legal regimes not designed to protect competition strikes us as unwise.