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Patents, Antitrust, and the Rule of Reason

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Antitrust's per se rule is applied only to “naked” restraints of trade -- mainly price fixing, market division, and some boycotts, all of which are addressed under section 1 of the Sherman Act. Some antitrust challenges to patent practices involve unilateral exclusionary conduct. Most others are complaints about the competitive effects of various licensing agreements. Many of these are simply contracts negotiated in the technology transfer marketplace, while others are the outcome of patent infringement litigation.

The existence of a license plus the licensee's actual production indicates that the firms are sharing technology and, absent other restraints, are very likely increasing output above that which would occur without licensing. This should indicate that a restraint is not naked but rather ancillary to joint provision of some kind. For example, cross licensing in a large patent pool is typically an effort to compete within a common technology, which is often essential for achieving both competition and interoperability. Other types of patent licenses, such as those given to several local producers to make the patentee's product, are a form of vertical integration. They serve to establish a dealership network for a common product, give dealers incentives to promote the supplier's product, eliminate double marginalization, or simply take advantage of complementarities that

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1 A per se rule may survive for tying. See 9 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 1720 (3d ed. 2011).
3 A few involve outright transfers. A patent is an asset and is thus subject to § 7 of the Clayton Act, which forbids anticompetitive asset acquisitions. See 5 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 1202f (3d ed. 2010).
4 Double marginalization (“royalty stacking,” in the case of IP licenses) occurs when two firms supply complementary inputs to some good, each has some market power, and they do not coordinate their pricing. In that case the sum of the prices charged by each will exceed their combined price if they were a single entity or could coordinate. See 3B AREEDA & HOVENKAMP, supra note 2, ¶ 758.
technologies often provide. Such practices are properly treated under the rule of reason, which requires proof of market power and some kind of competitive harm.

A few agreements, such as the one at issue in the Supreme Court's 2013 *Actavis* decision, are not ancillary to any kind of joint production activity or technology sharing. They are simply naked restraints on trade. In *Actavis* a firm with a patent essential to manufacturing a product paid a rival to stay out of that market for a specified period of time. There was no integration of production or sharing of technology. Outside the patent law context such an agreement would be unlawful per se and could even be a criminal violation. As a result, the Supreme Court's decision to apply the rule of reason must have been driven exclusively by considerations of patent law.

Applying antitrust law to agreements involving patents raises several issues. One is whether the practice falls completely within an express authorization of the Patent Act. If so, then antitrust has no place and neither the per se rule nor the rule of reason applies. The rather general language of the antitrust laws yields to specific provisions of the Patent Act. For example, the Patent Act authorizes a patentee, acting unilaterally, to refuse to license its patent to others. As a result, a simple refusal to license is not an antitrust violation.

In one situation the antitrust laws are more specific than the Patent Act. Section 3 of the Clayton Act forbids anticompetitive exclusive dealing or tying of goods, “whether patented or unpatented.” While Section 261 of the Patent Act authorizes exclusive licenses, an exclusive license is not the same thing as exclusive dealing. An exclusive license operates in favor of the licensee, giving it the right to exclude other licensees of the same patent. For example, a licensee who has an exclusive license for the state of

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5 On these and other advantage of organized networks of independent dealers, see 8 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶¶ 1601, 1608, 1611–19 (3d ed. 2012).


10 See 35 U.S.C. § 261 (patentee may “grant and convey an exclusive right. . .”).
Nebraska can exclude any other licensee who attempts to practice the patent in Nebraska. By contrast, exclusive dealing operates against the licensee, forbidding it from purchasing and reselling competing goods. For example, a dealer in Alpha's patented product in Nebraska may be forbidden from selling the product of Beta, a rival supplier. Because the Patent Act is silent on exclusive dealing, the Clayton Act provision controls.

When a practice is not authorized by the Patent Act, then general antitrust provisions such as those contained in the Sherman Act should have relatively free rein. This does not mean that practices that are not authorized by the Patent Act are unlawful under the antitrust laws, but only that antitrust is free to impose the analysis it would ordinarily impose. There are good reasons for this presumptive rule. First, the Patent Act reflects a long history of producer capture. When a statutory provision that reflects special interest capture is ambiguous, a sound interpretative approach is to construe the statute against the interest group that has shown its ability to control the process. If the courts get it wrong the interest groups involved are in a position to have it changed. If the statute is construed the other way, however, it will very likely never be changed. Historically, whenever courts imposed either antitrust rules or rules about patent scope that were regarded by patenting entities as overly restrictive, Congress amended the Patent Act so as to counter them. For example, the 1952 Patent Act limited what had come to be regarded as overly aggressive claims of patent “misuse.” Then again in 1988 Congress made clear that unilateral refusals to license were not unlawful misuse, and that tying arrangements were unlawful only if the defendant had market power in the tying product.

Second, virtually all of the practices at issue occur after a patent has been issued. This includes both restricted and unrestricted licensing, pooling, and price fixing. The patent process is characterized by intense

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11 See infra text accompanying notes 56–60.
15 Id. at § 271(d)(4–5).
government supervision during the patent application and prosecution process, but almost no supervision at all once a patent has been issued. Here we can apply the same set of rules that generally govern antitrust analysis in regulated markets. When markets are intensely regulated and the practice under consideration has been reviewed and supervised by a government official, then there is very little room for antitrust.\textsuperscript{16} As a result, antitrust has virtually no role to play in the patent issuance process, not even for the fraudulent or inequitable conduct of a patent applicant in obtaining a patent. The patent system has ample legal authority and resources for policing such conduct.\textsuperscript{17} Even antitrust's \emph{Walker Process} doctrine, which recognizes antitrust liability for some improper infringement actions, pertains entirely to post-issuance conduct. The gravamen of a \emph{Walker Process} violation is not “obtaining” a patent fraudulently. Rather, it lies in later enforcing or threatening to enforce a patent that was obtained fraudulently, by inequitable conduct, or where a reasonable person in the patentee's position should have known that the patent was not enforceable under the circumstances.\textsuperscript{18} Once a patent has issued it is a personal property asset,\textsuperscript{19} and its use is largely in the discretion of the patent owner. This makes antitrust an important instrument for dealing with allegedly anticompetitive conduct involving issued patents.

\textit{Third}, antitrust policy has a relatively robust although certainly imperfect tradition of examining the economic effects of practices in the industry where they occur, at least when they are analyzed under the rule of reason. For example, in a challenge to exclusive dealing a court may consider market structure, the height and nature of entry barriers, the duration of exclusive contracts, the availability of alternative distribution mechanisms, and the like.\textsuperscript{20} In sharp contrast, patent law is almost completely indifferent to market specific factors that pertain to patent value and the effects of patent practices. As a general proposition it treats all markets alike and has never developed useable tools for considering how or when a particular practice furthers or restrains competition or -- for that matter -- even when it furthers or restrains innovation.\textsuperscript{21} As a result, the

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\item \textsuperscript{16} See \textsc{1A Phillip E. Areeda \& Herbert Hovenkamp, Antitrust Law} ¶¶ 244b, 244c (4th ed. 2013).
\item \textsuperscript{17} See \textsc{3 Areeda \& Hovenkamp, supra} note 2, ¶ 706.
\item \textsuperscript{18} Ibid.
\item \textsuperscript{19} 35 U.S.C. § 261 (2012).
\item \textsuperscript{20} \textsc{11 Phillip E. Areeda \& Herbert Hovenkamp, Antitrust Law} ¶1820 (3d ed. 2012).
\item \textsuperscript{21} See Herbert Hovenkamp, \textit{Antitrust and the Patent System: A
only real tool we have for assessing the effects of a practice insofar as patent law is concerned is the explicit language of the Patent Act.

To be sure, factors such as high fixed costs, restricted entry, nonrivalrousness, product differentiation and other things that are characteristic of patent licenses may play an important role in assessing the effects of a patent practice on innovation, which is the appropriate concern of patent law. For example, knowing the market share of pool members or something about the availability of alternative technologies or the way information flows in a certain industry may be important tools for assessing innovation effects. The need for interconnectivity or product complementarity may also serve to explain the value of joint innovation or information sharing. But these are antitrust tools, derived from industrial organization economics. Patent law has no equivalent tool set for assessing either the competitive effects or the innovation effects of specific post-issuance patent practices.

The balance of this essay evaluates practices that are not expressly authorized by the Patent Act and might be made subject to antitrust scrutiny. It considers (1) the significance of adversity among the parties to patent settlements; (2) the “scope of the patent” test for patent/antitrust practices that was favored by the dissenters in the Actavis pay-for-delay patent settlement case, but rejected by the majority; (3) the relevance of pre-vs. post-issuance patent conduct in determining antitrust immunity; and (4) proper application of the rule of reason, considering burdens of proof as well as whether the antitrust tribunal must address questions of patent validity or scope (infringement) or, relatedly, patent quality; and the relevance of less restrictive alternatives.

**Patent Settlements and Adversity Between the Parties**

In most lawsuits parties settle when each has some prospect of winning or losing. The settlement discounts these probabilities into a certain agreement immediately rather than an uncertain outcome later. The classic patent infringement lawsuit settled by a production license is a good example. Under the settlement agreement the infringement defendant becomes a producing licensee. The relative strength of the infringement claim appears mainly in the size of the agreed upon royalty, although it can also show up in other provisions such as the extent of geographical or other

output limitations. In general, the more likely the patent was valid and infringed, the higher the royalty payment will be or the more restrictive the license terms.\textsuperscript{22}

One problem with pay-for-delay pharmaceutical patent infringement suits that originate under the Hatch-Waxman Act is that the statutory structure serves to limit adversity between the patentee and the generic infringer. Under the Act a generic firm commits patent infringement when it files an abbreviated new drug application (ANDA) for a biological equivalent to a pioneer drug and the relevant patent has not yet expired. The significance of the “abbreviated” application is that, because the drug is bioequivalent to a drug that has already undergone comprehensive FDA testing, most of that testing need not be repeated. At the time the generic files its ANDA, the pioneer patent holder can either acquiesce and permit the generic to produce or else file a patent infringement action. The Act provides that once the generic begins producing under this ANDA, it will have a 180 day period of exclusivity, during which time no other generics can enter the market.\textsuperscript{23}

The Hatch-Waxman statutory mechanism contemplated that the generic would begin production after pioneer acquiescence, or upon winning the infringement lawsuit or settling with a production license. However, If the parties settle by agreeing that the generic will delay entry for a specified period in exchange for a payment from the patentee, production may not begin for several years. As a result the clock does not run on the generic exclusivity provision. Under a pay for delay settlement both parties will be better off than they would be under generic entry and


production. Further, the less certain the quality of the patent the less adversity there will be on this issue. True adversity would exist, however, if the pioneer believes the patent is strong and will thus litigate the infringement case to a conclusion or else pay a relatively small sum reflecting avoided litigation costs.

Prescription drug prices drop when generic entry occurs, often quickly and dramatically. Significantly, the joint profits available to the pioneer plus the generic in this setting will almost always be much less than the profits that the pioneer alone was earning when it was the only firm in the market. In many cases the price of the pioneer alone actually increases, while the price of the generic is much lower, but this is generally accompanied by a significant loss of market share by the pioneer. That is, generic entry sometimes creates segmented markets in which a relatively small group of people continue to pay a high price for the pioneer version, while the larger balance of the market moves to the generic at a much lower price.

Prior to generic entry the pioneer was setting its profit-maximizing output and price. The parties could attain similar profits after generic entry occurs only by fixing prices. The price and output set by a perfect cartel of an undifferentiated product (such as bioequivalent drugs) is the same as the monopoly price and output. But that would be unlawful per se. If the generic and competitor do not fix prices output will increase and prices will


\[25\] See Henry Grabowski et al., Recent Trends in Brand-name and Generic Drug Competition, 2013 J. MEDICAL ECONOMICS 1-B, available at http://fds.duke.edu/db/attachment/2575 (for drugs in studied sample, pioneer retained only 16% of the market one year after generic entry).

drop. The extent of the price reduction is magnified by the fact that, while development costs for drugs are high, manufacturing costs are relatively low. As a result, price-cost margins are typically very high just prior to generic entry, leaving a great deal of room for the parties operating under competitive constraints to cut the price.

Congress did not foresee that this situation creates an opportunity that is well known in the history of collusion: sharing the monopoly profit is a better outcome for the cartel players, no matter how little or how much each of them produces. The only trick is to make the cartel legal. For example, suppose that under the pioneer's original monopoly its profits are 100, while under generic entry the price will drop and the aggregate profits of the two firms will go down to 60 -- say, 40 to the pioneer and 20 to the generic. Any output allocation that tends to preserve the 100 in profits can be profitable for both parties, including one in which the generic firm produces nothing at all. For example, the pioneer might pay the generic 30 to stay out of the market, retaining 70 to itself. The payment that the generic receives is more profitable than anything it could reasonably expect to earn by producing, and the pioneer is better off as well.27 This outcome is no different than what would happen if a dominant firm bought out its only rival and shut it down, except that in this case the duration of the shutdown is limited. The history of cartels has seen instances when cartel members have compensated one of those among them for a complete shutdown.28

27 See Ruben Jacobo-Rubio et al., Generic Entry, Pay-for-Delay Settlements, and the Distribution of Surplus in the US Pharmaceutical Industry (SSRN Working Paper, Aug. 13, 2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2481908 (measuring high value of pay-for-delay settlements). One important finding is that brands value entry deterrence by roughly $4.6 billion, while generics value the right to enter at about $236.8 million. This provides enormous bargaining room for an exclusion payment once the parties have come fairly close to an understanding about patent value.
28 This is true because the cartel needs to reduce output, and the most profitable output reduction gets rid of the highest cost output. As a result, it may be more profitable to compensate a high cost member for shutting down than to retain part of its production. For example, see JEFFREY R. FEAR, ORGANIZING CONTROL: AUGUST THYSSEN AND THE CONSTRUCTION OF GERMAN CORPORATE MANAGEMENT 255 (2005) (describing similar shutdowns within German steel cartels); Henry Carter Adams, Relation of the State to Industrial Action, 1 PUB. AM. ECON. ASSN. 472 (1887)
The cartel is especially profitable in this case because government regulation provides the entry barrier that virtually guarantees its success. Under the Hatch-Waxman Act no one else can challenge the patent in question until 180 days after the generic begins producing, which will not occur until after the agreement terminates. To the extent that the pioneer drug defines a market, the parties will have achieved a cartel protected from entry for the duration of the settlement agreement.

One reason adversity is missing in this institutional setting is that the parties can trade the size of the payment and the generic’s entry date against each other -- a larger payment to the generic in exchange for a later entry date. As noted below, under the Actavis’ dissenters’ “scope of the patent” test, if any date prior to patent expiration is within the scope of the patent, the equilibrium entry point for the generic will be just prior to the patent's expiration. That will maximize the value of the monopoly period, and give the participants the largest amount to share. By contrast, fixing the entry date without any payments to the generic preserves adversity and creates a “less restrictive alternative” that can serve to validate the license agreement under the antitrust laws.

**The “Scope of the Patent” Test, Offensive and Defensive**

Historically the courts used the "scope of the patent" formulation as a limiting device for activities thought to reach beyond the statutory authorization granted to the patentee. For example, nineteenth century decisions placed limits on retroactive statutory term extensions as creating rights beyond the monopoly granted by an issued patent. Patent law's "first sale," or exhaustion, doctrine used the same concept. Adams v. Burke described a patentee's attempt to control the use of a patented good after it had been sold as asserting rights "no longer within the limits of the (describing one such incident in a grain elevator cartel). See Hovenkamp, Federal Antitrust Policy supra note 26, § 4.1c.


30 See infra text accompanying notes 83.

31 E.g., Bloomer v. McQuewan, 55 U.S. 539, 548 (1852) ("...when the machine passes to the hands of the purchaser, it is no longer within the limits of the monopoly").
monopoly." The concept was later used to refer to overly broad patent claim constructions as attempts to "enlarge a patent beyond the scope of its claim." In the first half of the twentieth century the Supreme Court used similar language repeatedly when discussing patent tying arrangements or similar practices that were thought to extend the patentee's rights beyond the patent's intended scope. The Court wrote at some length on the "beyond the scope" formulation in its 1940 Ethyl decision, holding that the patentee of a gasoline antiknock additive could not use its sales agreements to specify the price at which the gasoline was to be sold. Finally, in Brulotte (1964) the Supreme Court condemned a patentee's agreement requiring royalty payments after the patent expired as an "effort to enlarge the monopoly of the patent."

Beginning in the early twentieth century the "scope of the patent" doctrine found a different, defensive use -- mainly, that a patent settlement or other licensing provision is lawful, even if facially anticompetitive, provided that the agreement did not serve to extend the patent monopoly beyond its lawful scope. For example, in its 1902 Bement decision the

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34 Motion Pictures Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 517 (1917) (tying of patented projector to unpatented films was an attempt to extend power "wholly without the scope of the patent monopoly"); Carbice Corp. of Am. v. Am. Patents Dev. Corp., 283 U.S. 27, 32 (1931) (tying of patented ice box to unpatentable dry ice: "[c]ontrol over the supply of such unpatented material is beyond the scope of the patentee's monopoly"); Mercoid Corp. v. Mid-Continent Inv. Co., 320 U.S. 661, 665–66 (1944) ("acquire a monopoly which is not plainly within the terms of the grant"). See also Henry v. A.B. Dick Co., 224 U.S. 1, 70 (1912) (Chief Justice White, dissenting, that tying of patented and unpatented goods represented an attempt by the patentee "to increase the scope of the monopoly granted by a patent").

35 Ethyl Gasoline corp. v. United States, 309 U.S. 436, 455–59 (1940) (price setting clause expanded the defendant's power beyond the "scope of the patent monopoly").

Supreme Court held that product price fixing contained in a license agreement is lawful if it does no more than "keep up the monopoly" granted by the patent.\(^{37}\) In approving a product price fix in the controversial 1926 \textit{General Electric} case the Court concluded that a patent licensee acts unlawfully only when "he steps out of the scope of his patent rights...."\(^{38}\) The Court divided on the issue in \textit{Line Material}. The majority condemned a product price fixing scheme contained in patent cross licenses and sublicenses. Three dissenting Justices objected that the scheme did not reach "beyond the scope of the statutory patent rights," because a single patentee would have been legally able to set the product price in any event.\(^{39}\)

The defensive "scope of the patent" test regards the patent as a black box whose contents are free from antitrust scrutiny, provided that the challenged conduct stays inside the box. A practice that reaches outside is beyond the scope of the patent, but that does not necessarily mean that it is an antitrust violation. Rather, the practice can then be subjected to antitrust analysis.\(^{40}\) In \textit{Actavis}, the dissenters would have applied the "scope of the patent" test in this defensive way. Chief Justice Roberts concluded that when a patent holder does anything, including entering a settlement agreement, the "key" is that it "must act within the scope of the patent. If its actions go beyond the monopoly powers conferred by the patent, we have held that such actions are subject to antitrust scrutiny."\(^{41}\) By contrast, the majority conceded that the competitor exclusion agreement at issue, which terminated prior to the patent's expiration date, did not go beyond the scope of the patent. Nevertheless, this fact did not "immunize the agreement from antitrust attack."\(^{42}\)

As the tying, resale price maintenance and product price fixing cases discussed above indicate, the idea of "scope of the patent" can refer to things other than patent duration. For example, patent ties were condemned, not because their duration extended beyond patent expiration but rather because they were thought to represent patentee overreaching,

\(^{42}\)\textit{Id.} at 2230.
extending the patent to things or rights that the patent did not properly include. By the same token, an agreement that purported to be a patent settlement but that excluded a firm from some market not even arguably covered by the patent would be an attempt to extend the patent beyond its scope. Some pharmaceutical settlements have involved such claims.  

The scope of the patent rule is not nearly as unambiguous as the Actavis dissenters believed. For example, when resale price maintenance was unlawful per se, the Supreme Court consistently condemned resale price maintenance agreements contained in patent licenses. RPM agreements seem to fall “within the scope” of the patent, however, because if the patentee sold the goods directly to consumers itself, it could charge any price it pleased. So why cannot it assign another the right to sell the product but retain its price setting authority? That was precisely the reasoning the Courts used to uphold product price fixing in the Bement and GE cases mentioned above.

As the RPM example suggests, the scope of the patent rule becomes quite arbitrary when we compare patent use by vertically integrated vs. unintegrated firms. For example, a vertically integrated patentee might engage in “tying” internally and stay completely within the scope of the patent. Suppose that Edison Films made movies and then invented and patented a superior projector for showing them. Today it could lawfully refuse to license the projector to anyone else. In that case the projector would be an upstream component in Edison's process and using it to show its own films would clearly be within the scope of the patent. Section 3 of the Clayton Act tracks this outcome, condemning anticompetitive patent

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44 RPM was made unlawful per se by Dr. Miles Med. Co. v. John D. Park & Sons Co., 220 U.S. 373 (1911), but was placed under the rule of reason in Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877 (2007).
45 United States v. Univis Lens Co., 316 U.S. 241 (1942); Ethyl Gasoline Corp. v. United States, 309 U.S. 436 (1940). The exception was when the dealers were mere agents who did not take title, rather than resellers. E.g., United States v. Gen. Electric Co., 272 U.S. 476 (1926).
46 Cf. Motion Pictures Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 517 (1917), which involved a patent tie.
ties but not internal production that uses two inputs together.\textsuperscript{48} By the same
token, both \textit{Ethyl} and \textit{Line Material}, mentioned above, involved a practice -
- setting the output price -- that a patentee could lawfully have done had it
made the entire product itself, using the patent internally but refusing to
license it to anyone else. They ran afoul of the antitrust laws only because
they licensed their production to others rather than doing it themselves.

The “scope of the patent test” as the courts have interpreted it
apparently means that a patentee may lawfully do something internally,
such as using two products together or setting a retail price, but that this
same activity steps outside of the scope of the patent as soon as the
patentee attempts to transfer part of the activity to someone else, even
though the end result is precisely the same. In that case, however, it is
hardly clear that the pay-for-delay settlement is within the scope of the
patent. The patentee was not merely manufacturing under its patent but also
paying a rival to stay out of the market. There was no integration of
distribution between the parties, as there is in most tying or RPM cases, but
that would seem to cut against rather than in favor of the practice.

"Scope of the Patent" and the Pay-for-Delay Equilibrium

In \textit{Actavis} the defendant was accused of violating the antitrust laws
by paying the patent infringement defendant to stay out of the market for a
period of time that was shorter than the remaining duration of the patent.
Two things are noteworthy about this agreement. First, if the patent were
both valid and infringed, then the pay-for-delay agreement would be no
more exclusionary than a judicial decision upholding the patent for its full
term. In this sense the restraint was within the scope of the patent. Second,
however, paying a rival to stay out of one's market without any kind of
license involving production or joint integration is a naked restraint on trade
and a practice that is not authorized by any provision in the Patent Act.

For the \textit{Actavis} dissenters the “precise terms of the grant define the
limits of a patentee's monopoly and the area in which the patentee is freed
from competition.”\textsuperscript{49} The Eleventh Circuit had defined “scope” strictly in

\textsuperscript{48}15 U.S.C. § 14. The doctrine of patent “misuse” was invented in tying
cases where the premise was that the patent was otherwise in force. See 10
\textsc{Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law} ¶¶ 1781–82
(3d ed. 2011); Christina Bohannan, \textit{IP Misuse as Foreclosure}, 96 Iowa L.
\textsc{Rev.} 475 (2011).

\textsuperscript{49}FTC v. Actavis, Inc. 133 S. Ct. 2223, 2238 (2013) (quoting United
reference to patent duration, indicating that a pay-for-delay settlement that kept the generic out indefinitely, or for some period beyond the patent's expiration, would be beyond the scope of the patent. Justice Breyer's opinion for the Court also interpreted “scope of the patent” to be a reference to the patent's duration. That is apparently what Chief Justice Roberts meant as well, although he was not as explicit. Of course, the patentee in Actavis was not simply practicing the patent for its duration and refusing to license; it was also paying someone else not to challenge in a legal environment that made it impossible for anyone to challenge the patent either.

One unacceptable effect of a durational "scope of the patent" test for pay-for-delay settlements is the bargaining equilibrium it creates. Under such a test the parties will naturally agree to an entry point that falls just short of the expiration date of the patent. The figure below illustrates:

Bracket A denotes the available margins, or the vertical distance between cost and price. The horizontal lines extend from left to right to measure time. Point B marks the patent expiration date. The falling line to the right of B represents returns after generic entry begins. For the first 180 days the market contains only one generic and prices fall gradually to point C. After that other generics can enter and prices are likely to fall much

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States v. Line Material Co., 333 U.S. 287, 300 (1948)).


See Actavis, 133 S. Ct. at 2227 (“since the alleged infringer's promise not to enter the patentee's market expired before the patent's term ended, the Circuit found the agreement legal and dismissed the FTC complaint”).

See id. at 2240 (Roberts, J., dissenting). The European Commission recently fined Lundbeck, Inc., for a pay-for-delay settlement that extended beyond the expiration date of the patent. See the press release at http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_39226. At this writing a public version of the decision is not yet available.
further, depending on the extent of generic competition and often to 20% of pre-entry prices.\textsuperscript{53} This is so because these drugs are by definition bioequivalent, meaning that they are undifferentiated. Competition then drives the price to marginal cost.

The pioneer's unilateral maximizing position is to assert its patent rights all the way to B, the expiration date. However, this is also the joint maximizing position of the patentee plus the first generic.\textsuperscript{54} Further, maintaining monopoly markups all the way to point B is typically worth significantly more to the pioneer than is early entry to the generic, who will earn only its share of the post-entry duopoly returns.\textsuperscript{55} The joint maximizing arrangement for the two parties is to delay the generic's entry until point B. Any settlement that permitted generic entry to occur earlier would not be Pareto efficient: the two parties could reach an alternative bargain that would give both of them more. This is simply an application of the Coase Theorem, under which the firms will reach a settlement that maximizes joint profits, although the size of the transfer payment between them is indeterminate.

In sum, if the Court had adopted a "scope of the patent" rule that exonerated all pay-for-delay agreements that did not extend beyond the patent's term a robust equilibrium for future agreements would extend them right up to the expiration date of the patent. The only indeterminate question would be the size of the payment, which would be a function of the parties' evaluation of the patent. If they perceived that the patent was strong and infringed, the payment to the generic would be relatively small. By contrast, if they perceived the patent was weak the payment would be large. Even for a very weak patent, however, the parties would have no incentive


\textsuperscript{54}A perfect cartel has the same price and output as a monopolist. \textit{See Hovenkamp, Federal Antitrust Policy}, supra note 26, §§ 4.1-4.2.

\textsuperscript{55}On this point, \textit{see} Rubio, \textit{et. al., supra} note 27, which finds that the value to the pioneer of maintaining its exclusion over the life of the patent runs about sixteen to twenty times higher than the value to the generic of being able to enter.
to shorten the duration of the pay-for-delay agreement.

Statutorily Authorized Practices and the Scope of the Patent

An alternative and more useful meaning of the “beyond the scope” formulation considers whether the practice in question was or was not authorized by the Patent Act. In Line Material the Supreme Court defined the “limits of the patent monopoly” by observing that “[n]othing in the patent statute specifically gives a right to fix the price at which a licensee may vend the patented article.” 56 The Actavis majority adopted this formulation. Justice Breyer noted that nothing in the Patent Act authorized the pay-for-delay scheme in question. 57 Later, he observed that “[t]he dissent does not identify any patent statute that it understands to grant such a right to a patentee, whether expressly or by fair implication.” 58

This meaning of “beyond the scope” is much more consistent with the ordinary usage of that term. For example, while the scope of legal rights flowing from real property ownership is substantial, it does not permit murder or theft that occurs within the property's boundaries. Rather, the proper scope of property rights is determined by looking at a large body of law in addition to the metes and bounds of a deed as determining what the owner can and cannot do. The courts have also frequently spoken of things not expressly covered by a statute as being beyond its scope. 59

Patentees are not explicitly authorized to fix product prices, divide territories with respect to products (as opposed to licenses themselves), engage in exclusive dealing, or charge discriminatory royalties. On the one hand, if a patentee refuses to license to others, then it is free to set the product price in its own sales, produce wherever it wants, use only its own complementary products, and so on. As a result, the “scope of the patent: test immunizes a great deal if our meaning is that the patentee is free to

58 Id. at 2233.
59 E.g., FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120 (2000) (cigarette coverage beyond the scope of Food and Drug Act); In re Placid Oil co., 753 F.3d 151 (5th Cir. 2014) (bankrupt's claims extended beyond the scope of statute); City of Brighton v. Rodriguez, 318 P.3d 496 (Colo. 2014) (divided court debating whether decision on entitlement to receive worker's compensation extended beyond the scope of the statute).
achieve through concerted activity whatever the Patent Act permits it to achieve alone. This concept of immunity stretches far beyond anything the courts have actually recognized. It immunizes far less, however, if it reaches only those activities that are authorized by the patent.

Finally, an often debilitating problem with the “scope of the patent” test formulated as the Actavis dissenters did is that it makes questions about patent validity or scope essential to the analysis of the challenged practice. In the context of patent settlements this entails that the very questions that the parties were seeking to avoid come right back in. For example, a pay-for-delay settlement that terminates prior to expiration of the patent is no more restrictive than a court finding of validity and infringement, which will exclude the generic from the market in any event. The parties to a patent infringement dispute settle in order to avoid answering these difficult questions. Serious judicial consideration of the settlement agreement, however, requires that they be assessed in any event. Or to say it differently, we cannot seriously evaluate the settlement without determining the very issues that the parties sought to avoid litigating about in the first place. Recognizing that this is absurd, the courts typically resort to something far less—holding, for example, that the settlement will be approved unless the patent is “obviously” invalid or very weak. With that, close review becomes unnecessary.  

The Actavis majority quite properly observed that courts should be able to evaluate settlements in at least some cases without addressing issues of patent validity or infringement. This is particularly true when the settlement includes a practice that is not authorized by the Patent Act. Most patent infringement disputes are settled by license agreements, sometimes accompanied by territorial or field-of-use restrictions. Most are thus either explicitly authorized by the Patent Act and exempt from antitrust scrutiny, or else they are treated under the rule of reason. Product price fixing and market division in the product market as opposed to the licensing market are not authorized and should be assessed under ordinary antitrust rules that do not require an assessment of patent validity or infringement. The fact that these agreements were negotiated in settlement of a legal dispute should be irrelevant.

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61 See 12 Hovenkamp, note 23, ¶ 2046.
Antitrust Immunity: Pre- vs. Post-Issuance Conduct

The “scope of the patent” test for determining antitrust immunity reflects an approach to antitrust in regulated industries that is no longer used. It comes out of a period when regulatory law immunized everything that was “pervasively” controlled by a regulatory authority. Once a court concluded that an area was pervasively regulated, then nearly everything within that particular regulatory enterprise was regarded as immune from antitrust scrutiny. The patent system is a form of regulation and must be treated accordingly.

Today we take a more finessed approach to antitrust problems in regulated markets, querying whether the regulator actually authorized the specific practice that is under antitrust scrutiny. This approach looks at the particular conduct being challenged under the antitrust laws, rather than providing a blanket exemption for everything inside the box. As the Supreme Court has observed:

To be sure, where Congress did intend to repeal the antitrust laws, that intent governs…but this intent must be clear. Even when an industry is regulated substantially, this does not necessarily evidence an intent to repeal the antitrust laws with respect to every action taken within the industry….Intent to repeal the antitrust laws is much clearer when a regulatory agency has been empowered to authorize or require the type of conduct under antitrust challenge.

Or as the Court restated the issue in Trinko, the question is whether the government's oversight of the particular challenged practice made it an “effective steward of the antitrust function.”

In this respect, the patent law system divides the territory rather cleanly, providing a great deal of government supervision during the patent application and prosecution process, but almost no supervision at all after the patent has been issued. One important limitation under this approach is that practices that are explicitly required or authorized by the government

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are immune whether or not they are supervised. For example, a federal statute requires all new cars manufactured in America to be equipped with seatbelts prior to sale.\(^\text{65}\) As a result, an automobile manufacturer cannot be convicted of unlawful tying under the antitrust laws when it refuses to sell an automobile without a seatbelt. This conduct does not require supervision, but only prosecution of violators.

The Patent Act itself contains several express authorizations that free the authorized practices from antitrust scrutiny. It authorizes the patentee to license its patent, including the issuance of exclusive licenses, and even those that are restricted to a territory within the United States.\(^\text{66}\) As a result, a domestic territorial restriction is not reachable under the antitrust laws. The Patent Act also explicitly authorizes a patentee, acting unilaterally, to refuse to license its patent to others.\(^\text{67}\) so unilateral refusals to license are not antitrust violations. The Act permits tying, provided that the patentee does not have market power in the tying product.\(^\text{68}\)

But when a patentee makes use of a patent in a way that the Patent Act does not authorize, then antitrust can be brought to bear. This does not mean that the presence of a patent issue is irrelevant. Antitrust law is properly quite sensitive to questions about how patents function in the market, and what the purpose or effects of a particular practice are likely to be. In fact, here antitrust law has a distinct advantage over patent law, which is largely indifferent to such questions and has not developed useable litigation tools for addressing them.\(^\text{69}\)

In this respect antitrust law can be a serious aide to patent law, providing analysis of patent function and diverse effect that is completely absent from patent law. The fact is that antitrust law has always tried hard to accommodate patent law -- indeed, over history it has been fairly obsessed with the issue of making patents fit into its rules about competition. It is precisely because antitrust has rules about how markets


\(^{68}\) 35 U.S.C. § 271(d)(5).

should perform that it does so.

By contrast, patent law has never accommodated antitrust concerns or, for the most part, even considered them to be relevant. A good recent example is the Federal Circuit's decision in Trebro Mfg., Inc. v. FireFly Equipment.\(^{70}\) The patentee was a dominant firm in a market with a small number of sellers. It acquired from an outside inventor a patent on a technology that was an alternative to the technology it was actually using. However, it continued to use its established technology, so the acquired patent was unused. When a competitor entered the market with a machine that infringed on the dominant firm's unused patent, the Federal Circuit allowed an injunction. Subsequent to the Supreme Court's eBay decision injunctions for patent infringement are not a matter of right, and the courts have been generally disinclined to grant injunctions on unused patents.\(^{71}\) The Federal Circuit made a distinction in this case, however. While the patentee was not using the infringed patent, it was an actual participant in the product market and thus was injured by the infringement defendant's entry into the market.

In this case the Federal Circuit made patent law in complete disregard of competition policy. Indeed, the amount of harm to competition brought about by the injunction was substantial. Further, the court's rule did nothing to further innovation because the acquired patent was already invented before the patentee acquired it, and was not even valuable enough to the acquirer that it actually used the technology it controlled.\(^{72}\) The only effect of the patent in this case was to remove technology from the market rather than permit its deployment. Nearly four decades ago the Supreme Court held in Brunswick that one cannot use antitrust law to complain about more, rather than less, competition in the market.\(^{73}\) That decision fostered a revolution in antitrust that required plaintiffs to link their theory of harm to

\(^{70}\) Trebro Mfg., Inc. v. FireFly Equipment, 748 F.3d 1159 (Fed. Cir. 2014).


\(^{72}\) Elaborating this point very forcefully is Hovenkamp & Cotter, id.

the underlying goals of antitrust law. For patent law, that road is as yet untaken.\textsuperscript{74} 

**Applying Antitrust's Rule of Reason to Patent Practices**

When a post-issuance patent practice is neither compelled nor expressly permitted by the patent laws it should be subject to antitrust scrutiny. This hardly means that the presence of patents is irrelevant, but it does mean that antitrust's more empirical, market-focused tools are required. In addition, the loss of any kind of patent "immunity" hardly entails that the antitrust laws have been violated, but only that antitrust analysis can be brought to bear.

Under antitrust's rule of reason the plaintiff must initially show that the defendant has sufficient market power to affect market competition and that the challenged practice threatens competition by facilitating either collusion or anticompetitive exclusion. At this point the burden shifts to the defendant to provide evidence of a justification, or legitimate objective.\textsuperscript{75} Then the plaintiff has an opportunity to answer that the same objective could be achieved by a less restrictive alternative.\textsuperscript{76}

This section addresses two issues. First, when must the antitrust Court inquire into patent validity or scope? Second, does the involvement of a patent affect the ordinary antitrust rule of reason requirements of proof of market power and anticompetitive effects, or the way that presumptions or burdens of proof should be assigned?

*Inquiries into Patent Validity or Scope: Less Restrictive Alternatives*

Under the rule of reason, when market power is present and overall effects on competition and efficiency are ambiguous, less restrictive alternatives become important.\textsuperscript{77} Both competitive harm and efficiencies can be very difficult to prove and, particularly, to balance. This makes it

\textsuperscript{74} Developing this point is BOHANNAN & HOVENKAMP, CREATION WITHOUT RESTRAINT, supra note 13 at 33–59.


\textsuperscript{76} 7 AREEDA & HOVENKAMP, ANTITRUST LAW, supra note 75, ¶1505.

\textsuperscript{77} Ibid.
important for courts to inquire whether benefits could be attained by a less restrictive alternative. In patent/antitrust cases this inquiry often makes it unnecessary to determine whether a patent is invalid or infringed. If competitive harm can be avoided with a less restrictive alternative that attains the same legitimate goals, then the existing arrangement can be condemned without inquiries into patent quality.

For example, consider patent license agreements that fix product prices. Parties to a patent dispute have a strong motive to engage in price fixing, provided that market conditions permit it. The price fix can compensate the patentee with higher returns. Further, the availability of product price fixing gives the parties to an infringement dispute a highly favorable joint maximizing position that serves to limit adversity between them. If the price fix lasts no longer than the duration of the patent, then it is no more harmful to customers than a patentee's simple solo production under its patent, which will also produce the monopoly price. As a result a product price fix of limited duration survives the “scope of the patent” test previously discussed.

On the other hand, while license prices have to be determined by the parties, product prices do not. Nothing in the Patent Act authorizes product price fixing. A product price fix contained in a patent license agreement might be a cover for a dubious patent, as Judge Posner suggested in the Asahi Glass case. Firms wishing to fix product prices might identify some relatively weak or useless patent and then place the price fix into a license agreement. But assessing such an agreement would require an inquiry into patent validity or strength.

In fact, the competitive consequences of product price fixing through a patent license has less to do with patent validity than with patent value. An invalid patent certainly has no value once it has been established as invalid. But many perfectly valid patents have little value for the simple reason that they add little to a licensee's technology or there are alternative patents or technological routes that serve the same purpose.

As a general matter, patents are worth much less than the value of cartel formation. An assortment of empirical studies suggest that cartel markups in industries prone to collusion run in the range of 20% to 40%

over the pre-cartel price.\textsuperscript{79} By contrast, average royalty rates on licensed patents run in a range of 0.5\% to 6\% of the wholesale product price. One study found the median rate to be about 3\%.\textsuperscript{80} In patent rich technologies such as electronic devices they can be much less.\textsuperscript{81} Significantly, licensed patents that are subject to these royalty rates are assumed to be valid and also practiced (infringed) by the licensees. Indeed, only a small percentage of patents are licensed -- as few as 3-4\% by some estimates -- and these patents are generally regarded as more valuable than the vast majority that are not licensed.\textsuperscript{82}

In sum, a rule invalidating a product price fix only if the patent is likely to be invalid does not adequately address the problem. Even a valid patent is likely to claim a royalty that is much smaller than the typical returns to price fixing. When that is the case, then the parties are attributing to the patent the entire monopoly markup value of a cartel in the same market -- a value that is rarely conferred by even relatively strong patents.

These facts suggest, first, that the markup resulting from product price fixing can be much greater than the returns to patent licensing alone, even if we assume that the patents in question are valid. Second, in the settlement context a judicial determination of patent validity is not adequate


\textsuperscript{81} See, e.g, Virnetx, Inc. v. Cisco Sys., Inc., ___ F.3d ___, 2014 WL 4548722 (Fed. Cir. Sep. 16, 2014) (plaintiff’s testimony employed 1\% of device as reasonable royalty; court affirmed findings of validity and infringement and accepted the 1\% royalty figure but disputed the base).

for assessing this problem. The patent could be perfectly valid but worth very little to the licensee, or at least worth only a small fraction of the markup contained in the product price fix.

Realistically, in order to determine the harmfulness of the patent license price fix we would have to establish the patent's value to licensees. This means an inquiry into validity, infringement, and licensing value. We would then have to compare that value with the observed cartel markup. Answering these question is likely to be monumentally difficult. A serious antitrust assessment of a product price fix contained in a settlement agreement would be even more complex than the patent infringement suit that was settled. That lawsuit would address questions of validity and infringement, but not of patent value.

But in this case the availability of a less restrictive alternative enables the tribunal to avoid more difficult inquiries. Questions about patent validity, scope, and market value can be completely discounted into a patent license agreement that sets the terms of the license fee, without specifying anything about the product price. If the patent is likely to be invalid, or not infringed, or if it is not valuable to the licensee because reasonable alternatives exist, then the licensee will not pay very much for the license. By contrast, if the patent scores high on all these points, the outcome will be reflected in a higher license fee. With respect to the license fee itself the parties have complete adversity across all three elements of patent validity, infringement, and value. The licensee wants a lower fee and the patentee wants a higher one.

Rule of reason analysis of pay-for-delay settlements is similar. In a pay-for-delay settlement agreement such as the one the Supreme Court assessed in Actavis, the parties bargained along at least two vectors, including the generic entry date and the size of the payment from the pioneer to the generic. The entry date establishes the size of the monopoly pie, and the size of the payment represents how the pie is to be divided up. Being able to bargain along these two vectors simultaneously enables the parties to select an entry date as remote as the antitrust authorities will accept, thus maximizing the overall size of the gains. Then they can bargain over the size of the payment in order to resolve issues about patent validity, risk aversion, and anticipated litigation costs. The parties do not have significant adversity on the question of entry date: the longer the delay

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83 See discussion supra, text at note 83, on the entry date under a "scope of the patent" durational formulation.
the better, provided that they keep it short of patent expiration. They do have adversity over the size and terms of the payment, with weaker patents resulting in higher payments to the generic. Even if the two parties privately conceded that the patent is completely worthless, they would still have every incentive to bargain for the remote entry date, but the generic would insist on a very high pay-for-delay price. Under the scope of the patent formulation, the equilibrium entry date would be the patent expiration date, and consumers would be heavy losers, no matter the strength of the patent.

In this case a less restrictive alternative is available as well: we can permit the parties to bargain over the entry date, but without a side payment. Such a bargain provides all of the value that the parties are entitled to but without the additional consumer harm caused by an unnecessarily anticompetitive agreement. The parties are still able to consider patent strength, anticipated litigation costs, and degree of risk aversion. If the parties believe that the patent is strong the outcome may still be one that sets a generic entry date relatively close to the expiration of the patent, but in that case the duration of the agreement will have been determined by considerations of patent strength rather than joint maximization of a monopoly profit stream without regard to patent strength. If the parties' joint assessment is that the patent is weak, they can either bargain for an early entry date or else the generic will refuse to bargain and litigate to the end. By the same token, if the patentee believes that its patent is valid but is risk averse, it can trade away uncertainty over the litigation outcome against the certainty of an assured entry date. The parties can also take reasonably anticipated litigation costs and duration into effect, although the Actavis decision permits a payment sufficient to cover expected litigation costs in any event.

The parties to a settlement agreement without a payment for delay have complete adversity on all elements of their bargain. The pioneer wants to delay entry as long as possible, while the generic, not having a side payment as an alternative, wants to obtain entry as quickly as possible. Just as in the case of product price fixing, resolving a Hatch-Waxman suit in this fashion does not require an inquiry into patent validity.

Anticompetitive Practices as Appropriate Returns to Patenting?

Product price fixing in patent licenses and pay-for-delay settlements of pharmaceutical patent disputes both serve to increase the returns to patents. Antitrust rules limiting these practices serve to reduce those returns. One argument against antitrust rules of this sort is that by reducing the returns to patenting they also reduce the incentive to innovate. If a patent could reasonably claim a royalty of 3% but a product cartel of that patent's users could exact a 25% markup, then the returns to that patent are higher and there would be more incentive to innovate.

Patents are tradable goods, however, and the price that a buyer is willing to pay can be trusted to reflect that patent's innovation value. Product price fixing cartels obtain high royalties by giving the patent an effective value equal to the entire monopoly markup for that particular product. If a patent would command a royalty of 3% but yields a 25% product overcharge if licensed along with a product price-fix, then this particular patent is commanding much more than its market determined innovation value. Overvalued patents can cause just as much deadweight loss as undervalued ones.

Economically, the pay-for-delay settlement operates in much the same way as the product price fix, permitting the parties to obtain the full cartel value until the settlement terminates. The outcome is about the same as one in which the generic entered but the pioneer and generic then fixed product prices. The principal gains to the patentee result from the settlement's lengthening of the effective patent term. Most large pay-for-delay settlements involve extension (evergreened) patents rather than original primary molecules. The failure rate on these extension patents is far higher than on pioneer molecule patents, but Hatch-Waxman gives the


patents the same protection that would occur if the patent were ironclad.

Is a pay-for-delay patent "extension" of this sort a reasonable return to patenting? While longer patent terms are worth more than shorter ones, the difference is less than one might think. Landes and Posner conclude that, measured ex ante, the value of a 20 year patent is roughly 85% of an infinitely long patent. Once they calculate in an estimate for market depreciation the number is closer to 95%. The depreciation number is important. While the quality of a patented drug does not change over the patent's term the number and quality of its competitors is likely to increase. A blockbuster drug that has no good alternatives when first patented may have a half dozen differentiated substitutes within a few years. These alternatives are not generics, which would be patent infringers, but drugs that use different compounds to obtain substantially the same result. As a result, other things being equal the patent becomes less valuable over time even without generic entry.

Most importantly for antitrust purposes, the Patent Act itself regulates patent value by defining the length of the term and partly by metering patent scope. Beyond that there is no good reason for treating patent practices that are not authorized by the Patent Act any differently than the law treats other kinds of property. The argument that restraining price-fixing, horizontal product market division or boycotts can increase the returns to patenting proves far too much. Cartels can increase the rate of return to all types of productive property, hardly limited to intellectual property. But the law's authorization to own and transact in property does not carry by implication the right to do so anticompetitively. Nor is there Hatch-Waxman challenges).


89 The Supreme Court made this clear in FTC v. Phoebe-Putney Health

Presumptions and the Rule of Reason

*Actavis* held that the rule of reason should be applied to a pay-for-delay patent infringement settlement on the facts of that case. In so doing it rejected alternatives suggesting that pay-for-delay settlements should be legal per se if they fell within the scope of the patent, or assessed under a “quick look” analysis as the FTC had urged.

Insistence on a rule of reason reflects the Supreme Court's own antipathy toward “quick look” analysis. It also tracks the approach taken in the *Antitrust Law* treatise that prefers to think of the mode of antitrust analysis as a “sliding scale,” composed of varying presumption.\(^90\) Rather than placing antitrust analysis in three boxes dominated “per se,” “quick look,” and “rule of reason,” it is better to think of the problem as setting proof requirements that vary with the circumstances. The less factually plausible a party's case, the greater its burden should be. Proof burdens also shift with the availability of evidence. By contrast, the quick look analysis as the *Actavis* Court conceived it envisioned a strong global presumption of per se illegality, which could be defeated if the defendant could “show empirical evidence of procompetitive effects.”\(^91\)

By rejecting that global approach, as it should have, the Court was hardly eliminating the use of presumptions in antitrust litigation under the rule of reason. To the contrary, the rule of reason contains far more presumptions than the per se rule or any alternative truncated approach. They are ubiquitous and an essential part of rule of reason analysis.\(^92\) For example, courts sometimes say that a high market share creates a

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\(^91\) Actavis, 133 S. Ct. at 2237, quoting California Dental Assn. v. FTC, 526 U.S. 756, 775 n.12 (1999).

\(^92\) On the use of presumptions under the rule of reason, see 7 AREEDA & HOVENKAMP, ANTITRUST LAW, supra note 89, ¶1507. See also Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 14–17 (1984) (importance of presumptions in rule of reason cases).
presumption of market power, but this presumption can be defeated by evidence of low entry barriers or rivals who can readily expand their output. Or in exclusive dealing cases under the rule of reason the courts presume competitive harm from contracts of long duration, or presume lack of harm from shorter term contracts. Historically the courts presumed market power if a tying product was patented, but that is no longer the case.

The Actavis majority also suggested presumptions such as would apply in any rule of reason case. For example, “an unexplained large reverse payment itself would normally suggest that the patentee has serious doubts about the patent's survival.” The Court added that “the size of the unexplained reverse payment can provide a workable surrogate for a patent's weakness, all without forcing a court to conduct a detailed exploration of the validity of the patent itself.” The term “unexplained” means that the Court was creating a presumption: a large payment requires an explanation, obligating the defendant to produce something that justifies the payment insofar as it exceeds anticipated litigation costs.

The Court also indicated that the size of a reverse payment is a “strong indicator” of market power, but later suggested that a large payment might partly reflect compensation for other services that would serve to weaken that inference. The traditional presumption used in antitrust analysis relates market power to market share of a properly defined relevant market. However, that presumption can be defeated or weakened by evidence of low

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94 E.g., Omega Environmental, Inc. v. Gilbarco, 127 F.3d 1157, 1172 (9th Cir. 1997).


96 Actavis, 133 S.Ct. at 2236.

97 Id. at 2236–37, citing 12 HOVENKAMP, supra note 23, at ¶ 2046, 350–52

98 On the relevance of litigation costs, see Actavis, 133 S. Ct. at 2236.

99 Ibid., citing and quoting 7 & 12 AREEDA & HOVENKAMP, supra note 3 & 23, ¶¶ 1503, 2046.

100 Id. at 2237.
entry barriers, market instability, or rival or customer mobility.\textsuperscript{101} Market power can also be measured “directly,’ typically by technical tools that assess residual demand or price-cost margins.\textsuperscript{102}

A large payment is a rational act only if the payer has price cost margins worth protecting. More specifically, the payer’s willingness to pay will be limited by the anticipated price-cost margins of exclusive sales over the remaining life of the settlement. If price cost margins were zero, then the seller would be unwilling to pay anything. So to the extent high margins indicates power the high payment is a good presumptive signal.

One possible objection is that high price-cost margins reflect only variable costs. A firm may have high margins but still not be able to recover its fixed cost investment, making the product unprofitable over its lifecycle. While that might be factually true it is not ordinarily relevant to power assessments in antitrust cases. \textit{All} of our direct measures for assessing power focus exclusively or heavily on variable costs. For example, the Lerner Index and its variations measure market power by looking to margins between short-run marginal cost and price, and the impact of changes in demand. All of these are variable cost measures.\textsuperscript{103} Even market share measures the extent to which the firm responds to changes in demand or short-run costs. The market power question for antitrust purposes is not whether a firm is earning enough to cover its fixed costs, but whether it has the ability to profit by reducing market output and raising price. So inferring power from a large pay-for-delay settlement is not different in principle from inferring power from other types of evidence more conventionally used to estimate market power. Finally, the critique from fixed costs confuses the power issue from the liability issue. On the one hand we do not want to punish firms for having high fixed costs and the high margins that ordinarily accompany them. On the other, they are clearly relevant to a determination whether the firm is capable of pulling off an anticompetitive act.\textsuperscript{104}

\textsuperscript{101} \textit{See}, \textit{e.g.}, Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp., 475 U.S. 574, 592 n.15 (1986) (“yet without barriers to entry it would presumably be impossible to maintain supracompetitive prices for an extended time.”).

\textsuperscript{102} \textit{See} \textbf{2B PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW} ¶¶515, 521 (4th ed. 2014).

\textsuperscript{103} \textit{See} HOVENKAMP, FEDERAL ANTITRUST POLICY, \textit{supra} note 26 at §3.1a

\textsuperscript{104} \textit{See} Louis Kaplow, \textit{Why (Ever) Define Markets?}, 124 \textit{HARV. L. REV}.2
It is also important not to lose sight of the fact that the Court was not inferring power simply from high price/cost margins but from an exclusion payment. Particularly in intellectual property markets, products are sold under at least moderately competitive conditions and yet have high margins.\textsuperscript{105} For example, an “app” store that sells software for an electronic device such as an iPad or Kindle may offer many product alternatives that have very low variable costs of distribution, sometimes approaching zero. The same thing is true of electronic books and streamed movies or digital music. Any price represents a significant short-run price-cost margin, but these products may not even be able to recover fixed investment costs over their product lives.

Very high exclusion payments are a different matter. A manufacturer with large fixed costs and high margins would not agree to make a large payment if it could not anticipate being able to recoup this investment over the duration of the settlement. The issue here is similar to the one used for analyzing “recoupment” in predatory pricing cases. Namely, a firm will invest in a strategy if the reasonably anticipated payoff exceeds the reasonably anticipated investment.\textsuperscript{106} Presumably, one of a dozen manufacturers of notepad apps for an iPad would not pay large amounts to a different app manufacturer to withdraw from the market. The market is competitive and the removal of one supplier would not make much difference. In sum, it is the absence of competition from other firms that makes a payoff to one firm a rational act.

In any event, the argument from high fixed costs proves too much. A firm with high fixed costs might be able to stay profitable (or earn greater profits) if it has a monopoly, but unless constrained it will produce at the monopoly level. For example, a firm with high fixed costs might maximize its profits by producing 1000 units. The competitive market output in this industry -- that is, producing a return just large enough to maintain investment -- might be 2000 units. Permitting collusion or innovation would get us the 1000 unit outcome. That is why the Supreme Court was correct to reject “ruinous competition” defenses to collusion in industries with high fixed costs.\textsuperscript{107} Competitors with high fixed costs may have a

\textsuperscript{105} See 2B AREEDA & HOVENKAMP, supra note 101, ¶¶516g, 518e2–3.
\textsuperscript{106} On the recoupment requirement in predatory pricing, see 3A AREEDA & HOVENKAMP, supra note 2, ¶¶726–27.
\textsuperscript{107} E.g., United States v. Trans-Missouri Freight Assn., 166 U.S. 290,
motive to fix prices, but when they do so they can be expected to set prices at the cartel level, not at a level just sufficient to provide competitive returns.

Conclusion

Applying the rule of reason to antitrust claims involving patent licensing and related practices has been made unnecessarily difficult by the “scope of the patent” rule. *First,* identifying practices that fall within and without the scope of the patent yields indeterminate results. *Second,* many settlements, including both product price restraints and payment-for-delay, can be properly assessed under this rule only by judicial determination of patent validity, infringement, and in some cases market value. This makes a full scale evaluation even more difficult than the assessment made in a patent infringement lawsuit, which ordinarily inquires only into validity and infringement.

A better pair of rules divides patent practices into pre-issuance and post-issuance, generally immunizing the former from antitrust scrutiny. Post-issuance practices must then be divided into those that are authorized by the Patent Act and those that are not. A post-issuance practice that is not authorized by the Patent Act should ordinarily be subject to antitrust review. While the antitrust decision maker must be circumspect about assessing the competitive and innovation effects of challenged practices, these assessment largely involve questions of antitrust law, not of patent law. Outside of damages measurement, patent law has no tool kit for assessing either the market or even the innovation effects of a particular practice.

While that criticism may seem harsh, the reality is that patent law has developed in relative isolation from any significant inquiry into how patents function in the marketplace. The result gives antitrust policy a comparative advantage, not only for assessing competition effects but ironically, even for assessing innovation effects.

329–30 (1897).