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Joshua B. Fischman

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Keywords

FTC v. Actavis, Inc., antitrust, Patent, Hatch-Waxman Act, Settlement, Feedback Effects

THE CIRCULAR LOGIC OF ACTAVIS

JOSHUA B. FISCHMAN*

*Assessing the fairness of settlements is an inherently difficult task. Because settlements foreclose the judicial determination of litigants' entitlements, courts can only compare settlements to speculative predictions about what would have occurred in litigation. Courts can conduct full-blown inquiries into the merits after the fact, but doing so undermines the cost-saving rationale of settlement. In *FTC v. Actavis, Inc.*, a case involving an antitrust challenge to a pharmaceutical patent settlement, the United States Supreme Court adopted a novel solution to this problem. The Court held that the terms of a patent settlement do not need to be compared to a judicial assessment of the parties' underlying rights as determined by patent law. Rather, the fairness of a settlement could be inferred using economic analysis of the settlement terms themselves; the magnitude of a payment from the patentee to the challenger could serve as a surrogate for the weakness of the patent. In this Article, I argue that this inference is problematic on both jurisprudential and economic grounds. The jurisprudential critique is that Actavis implicitly relies on the prediction theory of law—the widely disparaged conception of law as consisting merely of predictions about what courts will do. To the extent that the settlement terms are probative of the merits of the patent infringement case, they reflect the parties' expectations about the outcome of the litigation. In using the settlement terms as a surrogate for a legal conclusion, Actavis displaces legal reasons with predictions about court decisions. The economic critique is that the Actavis inference fails to account for “feedback effects”*

* Horace W. Goldsmith Research Professor of Law, *University of Virginia School of Law*, jfischman@virginia.edu. I am deeply grateful for feedback from Matthew Adler, Charles Barzun, Stuart Benjamin, James Boyle, Curt Bradley, John Duffy, Aaron Edlin, Brian Galle, Scott Hemphill, Erik Hovenkamp, Andrew Koppelman, Lewis Kornhauser, Maggie Lemos, Steven Lubet, Arti Rai, Steven Salop, Max Schanzenbach, Fred Schauer, David Schwartz, Josh Teitelbaum, Jay Thomas, Steven Walt, and workshop participants at New York University, Berkeley, Duke, Georgetown, and the University of Virginia.

between the court and litigants. In settling the initial patent dispute, rational litigants will anticipate the inference that a subsequent court may draw from their settlement, which will distort the terms of their bargain. In drawing an inference from the settlement, a court must therefore account for the distorting effect of its own inference.

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INTRODUCTION

In theory, settlements of legal disputes take place “in the shadow of the law,”¹ reflecting parties’ expectations about outcomes at trial. In practice, however, settlements often deviate from the law’s shadow, especially when the litigants have unequal bargaining power or differ in their willingness to tolerate risk, delay, and adverse publicity.² Attorneys may structure settlements that prioritize their own interests over those of the litigants,³ especially in the context of class actions.⁴ When legal disputes affect third parties, litigants may also settle their disputes on collusive terms, shifting costs to the unrepresented parties.⁵

As a practical matter, it is difficult for courts to identify when such settlements are abusive. The purpose of a trial, after all, is to

1. Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L.J. 950, 950, 997 (1979) (describing how legal rules influence the private resolution of disputes).

2. See Jules Coleman & Charles Silver, *Justice in Settlements*, 4 SOC. PHIL. & POL’Y 102, 110 (1986) (observing that settlements partly reflect “the parties’ predictions of the likely outcome of a trial” but are also influenced by the “parties’ relative abilities to finance a lawsuit, to tolerate delays, to withstand adverse publicity, . . . to tolerate risk, and many other extralegal factors”); Owen M. Fiss, *Against Settlement*, 93 YALE L.J. 1073, 1076 (1984) (noting that parties with limited financial resources “may be less able to amass and analyze the information needed to predict the outcome of the litigation,” “may need the damages . . . immediately,” and may not “have the resources to finance the litigation”).

3. See Nora Freeman Engstrom, *Run-of-the-Mill Justice*, 22 GEO. J. LEGAL ETHICS 1485, 1542–45 (2009) (describing the cooperative relationship between insurance companies and settlement mills in personal injury cases, which resolves disputes quickly but sometimes shortchanges injured clients); Fiss, *Against Settlement*, *supra* note 2, at 1078 (recognizing that “[l]awyers or insurance companies might . . . agree to settlements that are in their interests but are not in the best interests of their clients”).

4. See John C. Coffee, Jr., *Class Wars: The Dilemma of the Mass Tort Class Action*, 95 COLUM. L. REV. 1343, 1367, 1370 (1995) (describing class action settlements in which attorneys prioritized their own interests over their clients’ interests); Samuel Issacharoff, *Class Action Conflicts*, 30 U.C. DAVIS L. REV. 805, 812 (1997) (discussing why attorneys might prioritize their own interests in class action settlements); Susan P. Koniak & George M. Cohen, *Under Cloak of Settlement*, 82 VA. L. REV. 1051, 1056 (1996) (arguing that “lawyer abuse in class actions is rampant and that the current system . . . is set up to shield lawyers from the consequences of their misdeeds”).

5. See Coleman & Silver, *supra* note 2, at 110 (noting that settling parties have the ability to “spread losses among others”); Douglas Laycock, *Consent Decrees Without Consent: The Rights of Nonconsenting Third Parties*, 1987 U. CHI. LEGAL F. 103, 103–04 (discussing how consent decrees may impose obligations on nonconsenting third parties); David Luban, *Settlements and the Erosion of the Public Realm*, 83 GEO. L.J. 2619, 2626 (1995) [hereinafter Luban, *Settlements*] (“[T]wo parties trying to apportion a loss are most likely to reach agreement if they can find a way to shift the burden to a third party who is not present at the bargaining table.”).

determine the parties' legal entitlements. Because settlements circumvent that process, they do not generate legal baselines against which courts can compare settlement terms.⁶ For this reason, courts rarely apply close scrutiny to the substantive terms of settlements.⁷

Recently, many economists and legal scholars have addressed the challenges of reviewing settlements in the context of litigation involving pharmaceutical patents.⁸ The Hatch-Waxman Act⁹

6. See Fiss, *Against Settlement*, *supra* note 2, at 1082 (noting that judicial approval of a class action settlement “turns on how close or far the proposed settlement is from what [the judge] imagines would be the judgment obtained after suit,” and characterizing this standard as “very odd indeed” because it is “only imagined” and “has been constructed without benefit of a full trial”).

7. See Owen M. Fiss, *The History of an Idea*, 78 *FORDHAM L. REV.* 1273, 1278 (2009) (arguing that because review of a settlement “is often made without the benefit of a truly adversarial process,” a judge determines whether the settlement is “reasonable or within the ballpark” and not “what justice requires”); Koniak & Cohen, *supra* note 4, at 1056 (criticizing courts for inadequate supervision of class action settlements); Jonathan R. Macey & Geoffrey P. Miller, *Judicial Review of Class Action Settlements*, 1 *J. LEGAL ANALYSIS* 167, 184–85 (2009) (observing that courts generally apply “lenient scrutiny” to class action settlements and that the “rare cases” in which judges reject settlements on substantive grounds combine “unmistakable indications of inadequacy” with procedural violations such as a lack of “reasoned explanation,” and “indications of unfairness” such as collusion or unequal bargaining power).

8. See, e.g., Jeremy Bulow, *The Gaming of Pharmaceutical Patents*, 4 *INNOVATION POL'Y & ECON.* 145, 165 (2004) (describing ways in which patent settlements can be anticompetitive); Michael A. Carrier, *Unsettling Drug Patent Settlements: A Framework for Presumptive Illegality*, 108 *MICH. L. REV.* 37, 39–40 (2009) [hereinafter Carrier, *Unsettling Drug Patent Settlements*] (asserting that courts should treat pharmaceutical settlements with reverse payments as presumptively illegal); Daniel A. Crane, *Exit Payments in Settlement of Patent Infringement Lawsuits: Antitrust Rules and Economic Implications*, 54 *FLA. L. REV.* 747, 750 (2002) (suggesting that courts balance various social policies when analyzing patent settlements that include exit payments); Einer Elhauge & Alex Krueger, *Solving the Patent Settlement Puzzle*, 91 *TEX. L. REV.* 283, 292 (2012) (proposing a test for determining the legality of patent settlements involving reverse payments); C. Scott Hemphill, *Paying for Delay: Pharmaceutical Patent Settlement as a Regulatory Design Problem*, 81 *N.Y.U. L. REV.* 1553, 1553 (2006) (detailing the anticompetitive effects of “pay-for-delay” settlements and arguing that they should be presumptively illegal); Herbert Hovenkamp et al., *Anticompetitive Settlement of Intellectual Property Disputes*, 87 *MINN. L. REV.* 1719, 1720 (2003) (arguing that reverse-payment settlements should be presumptively illegal); Marc G. Schildkraut, *Patent-Splitting Settlements and the Reverse Payment Fallacy*, 71 *ANTITRUST L.J.* 1033, 1034 (2004) (claiming that arguments “condemning reverse payments [are] incompatible with the way courts usually mete out justice”); Carl Shapiro, *Antitrust Limits to Patent Settlements*, 34 *RAND J. ECON.* 391, 392 (2003) (modeling the anticompetitive effects of patent settlements and proposing a legal standard for evaluating such settlements under antitrust law); Mark S. Levy, Note, *Big Pharma Monopoly: Why Consumers Keep Landing on “Park Place” and How the Game Is Rigged*, 66 *AM. U. L. REV.* 247, 263–79 (2016) (criticizing reverse-payment settlements as part of a larger framework of potentially anticompetitive

promotes pharmaceutical competition by providing incentives for the manufacturers of generic drugs to challenge the patents of branded drugs.¹⁰ However, if the generic firm prevails and eliminates the patent holder's monopoly, the firms' joint profits will decrease substantially. This feature of patent litigation gives the firms a strong incentive to settle these lawsuits on collusive terms. In a typical example of this form of settlement, the generic agrees not to compete with the patented branded drug for much of the duration of the patent. This arrangement allows the patent owner to continue earning monopoly profits even in cases in which courts are likely to find the patent invalid or not infringed. In exchange, the patent holder shares its monopoly profits with the generic by making what is known as a "reverse payment"¹¹ to the generic firm.

For many years, the Federal Trade Commission (FTC) challenged these settlements on antitrust grounds, advocating a novel approach to reviewing patent settlements. Drawing upon insights from economic models of patent settlements, the FTC urged courts to use economic analysis to infer that a settlement is anticompetitive from its terms without addressing the legal merits of the underlying patent dispute.¹² Although the FTC's argument initially had only mixed success in the circuit courts,¹³ the United States Supreme Court largely endorsed this approach in *FTC v. Actavis, Inc.*¹⁴ Relying on

actions, such as REMS manipulation and product hopping, that brand-name pharmaceutical companies commit to maintain their monopolies).

9. Drug Price Competition and Patent Term Restoration Act of 1984, Pub. L. No. 98-417, 98 Stat. 1585 (1984) (codified as amended in scattered sections of 15, 21, 28, 35, and 42 U.S.C.).

10. See Carrier, *Unsettling Drug Patent Settlements*, *supra* note 8, at 41–43 (describing how the Hatch-Waxman Act provides a 180-day period of marketing exclusivity to a generic firm that successfully challenges a pharmaceutical patent).

11. These settlements are called "reverse payments" because, unlike standard settlements of patent infringement cases, the patent holder (the plaintiff) pays the alleged infringer (the defendant). See *FTC v. Actavis, Inc.*, 133 S. Ct. 2223, 2227 (2013).

12. See, e.g., *In re Schering-Plough Corp.*, 136 F.T.C. 956, 987–99 (2003) (stating the FTC's position that an antitrust violation could be inferred from the presence of a reverse payment and disputing that a court would need to examine the merits of the underlying patent), *vacated*, 402 F.3d 1056 (11th Cir. 2005).

13. See Carrier, *Unsettling Drug Patent Settlements*, *supra* note 8, at 52–59 (discussing the holdings in four prominent antitrust cases in the circuit courts involving reverse-payment settlements); Elhauge & Krueger, *supra* note 8, at 285–87 (characterizing the courts of appeals prior to *Actavis* as being "in utter conflict on when reverse payment settlements violate[d] antitrust law").

14. 133 S. Ct. 2223, 2237 (2013) (embracing the FTC's argument that reverse-payment settlements generate an inference of an antitrust violation, but applying the rule of reason to such settlements instead of the FTC's "presumptively unlawful" standard).

this economic argument, the Court reasoned that a large payment from the patent holder to an alleged infringer “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.”¹⁵ The Court held that a court could determine the legality of such a settlement by comparing its terms to the litigants’ expectations about the outcome of the patent dispute, as inferred using economic analysis of the settlement terms themselves.¹⁶ The legality of patent settlements is not determined by a court’s assessment of the merits, but rather by the litigants’ predictions made in the law’s shadow.

Collusive patent settlements are undoubtedly a serious problem, and the majority in *Actavis* was correct to subject such settlements to antitrust scrutiny.¹⁷ The standard that the Court announced, however, has generated serious confusion in the lower courts, in part because it rests on circular reasoning. By relying on settlement terms as a surrogate for the merits, the Court essentially ruled that lower courts *should* hold that a patent is weak merely because the litigants predicted that a court *would* hold that it was weak.¹⁸

This Article unpacks the reasoning underlying the Court’s holding in *Actavis* and discusses how it is problematic on both jurisprudential and economic grounds. The jurisprudential critique is that the Court has confused the internal point of view of a judge with the external point of view of a litigant. A settlement is based on the litigants’ predictions, made from the external point of view, about what a court would do in the patent infringement action. A prediction about the behavior of judges and juries cannot provide a valid legal justification for a court, acting from the internal point of view, in determining how to resolve the patent issues relevant to the antitrust action. By conflating legal propositions with predictions about the actions of judges and juries, the Court’s reasoning in *Actavis* relies implicitly on the prediction theory of law, the long disparaged notion that law consists merely of predictions about what a court will do.¹⁹

15. *Id.* at 2236–37.

16. *Id.* at 2237; *see also id.* at 2236 (acknowledging that some reverse-payment settlements may reflect potential litigation costs and other services agreed to by the generic drug firm).

17. *See id.* at 2227.

18. To be precise, the legal standard in *Actavis* depended on whether the patent was weak in a *relative* sense—that is, relative to the exclusivity period stipulated in the settlement. The Court’s holding did not require an inference that the patent was weak in an *absolute* sense—that is, that it was likely to be held invalid or not infringed.

19. *See infra* Section II.A.

The economic critique is that *Actavis* ignores the interdependence between the litigants' settlement and the court's inference. The Court is assuming that the litigants are bargaining in the shadow of the law, but by using the reverse payment as a surrogate for the merits, the Court is adjudicating in the shadow of their settlement. If the parties have rational expectations, their settlement would not simply reflect the parties' expectations about the outcome of litigation, but also the impact of the inference that a subsequent court would draw from their settlement. Thus, a sophisticated court would have to account for the two-way influences in drawing an inference from the settlement. Drawing a correct inference would require sophisticated economic modeling, which would be outside the core competence of a court and arguably more challenging than directly assessing the merits of a patent.

Although *Actavis* has already been described as "one of the most important antitrust decisions in the modern era,"²⁰ the circularity of its logic has been overlooked, perhaps because the majority opinion was notably vague about the rationale for its holding.²¹ This circularity was further obscured because the inference originated within a sophisticated economic model of settlement bargaining. The various steps of the circular logic ultimately adopted by the Court were scattered throughout a body of scholarly literature spanning economics and law journals, and then repeated in briefs and judicial opinions, often without careful examination of the underlying assumptions. In adopting the economic conclusions in this literature, the Court overlooked the critical distinction between

20. Michael A. Carrier, *After Actavis: Seven Ways Forward*, 67 RUTGERS U. L. REV. 543, 543 (2015) [hereinafter Carrier, *After Actavis*]; see also Alan Devlin, *Antitrust Limits on Targeted Patent Aggregation*, 67 FLA. L. REV. 775, 842 (2015) ("*Actavis* fundamentally altered U.S. law governing the relationship between patents and antitrust."); Shubha Ghosh, *Convergence?*, 15 MINN. J.L. SCI. & TECH. 95, 95 (2014) (describing *Actavis* hyperbolically as "the most important pronouncement about the relationship between patent and competition policy since the Statute of Monopolies" (citing Statute of Monopolies 1623, 21 Jac. 1 c. 3 (Eng.))).

21. See Carrier, *After Actavis*, *supra* note 20, at 543 ("Despite its significance, the *Actavis* ruling was not the clearest decision ever."); Daniel A. Crane, *Actavis, the Reverse Payment Fallacy, and the Continuing Need for Regulatory Solutions*, 15 MINN. J.L. SCI. & TECH. 51, 52 (2014) (describing *Actavis* as a "frustrating opinion" that "punted more than it decided"); Joshua P. Davis & Ryan J. McEwan, *Deactivating Actavis: The Clash Between the Supreme Court and (Some) Lower Courts*, 67 RUTGERS U. L. REV. 557, 557 (2015) (noting the Court's failure to provide "clear guidance" in *Actavis*); James J. O'Connell, *Editor's Note: The Elephant Remains*, 28 A.B.A. ANTITRUST MAG., Fall 2013, at 5, 8 (noting that *Actavis* failed to resolve many issues relating to reverse-payment settlements).

economic and legal reasoning. In this sense, *Actavis* may be the product of a severe interdisciplinary misunderstanding.

Part I of this Article provides a brief background on the antitrust implications of patent settlements and discusses the Court's decision in *Actavis*. Part II then develops the jurisprudential critique of *Actavis*. In essence, the Court's reasoning relies crucially on the prediction theory of law; the inference is only valid if one disregards the distinction between what the law is and what litigants predict courts will do. Although key aspects of the Court's reasoning were ambiguous, this critique applies to any plausible interpretation of *Actavis*.

Part III then introduces the economic critique: the *Actavis* inference implicitly assumes that the litigants have irrational beliefs about the economic implications of their settlement. In inferring the parties' beliefs from the settlement terms, the *Actavis* inference fails to consider how the parties are influenced by the prospect of antitrust liability. There is a striking irony in the premises underlying the Court's holding: the inference assumes that the parties are sophisticated enough to accurately predict the outcome of patent litigation but oblivious to the possibility of antitrust liability. The parties' incentives in settlement bargaining change once they become aware that a future court may draw an inference from their settlement. They are no longer settling in the shadow of the law; they are settling in the shadow of the antitrust inference that a future court will draw from their settlement. Needless to say, the inference that a court—or any other agent—could draw from such a settlement becomes substantially more complicated.

Part IV discusses some of the implications of this Article, particularly with regard to challenges the lower courts face in crafting a coherent antitrust doctrine on patent settlements. After *Actavis*, the standard of legality for such settlements appears at times to depend on patent law, but at other times on predictions about what courts will do in patent cases. Because *Actavis* did not acknowledge this distinction, it did not provide a principle to determine which standard applies.

In some cases, courts may be able to apply *Actavis* as a rule without reexamining its rationale. Cases will likely arise, however, where courts will be forced to directly confront the reasoning underlying *Actavis*. In particular, courts may be called upon to clarify how the reverse payment is serving as a surrogate and when parties are permitted to present arguments relating to the legal merits of a patent. Finally, Part IV concludes by briefly discussing how the arguments developed in here apply to inferences that courts might

draw from other economic indicators, such as stock prices, litigation financing terms, and prediction markets.

I. REVERSE-PAYMENT SETTLEMENTS AND THE *ACTAVIS* CASE

The Supreme Court's decision in *Actavis* was the culmination of years of debate among lawyers and economists about the legality of reverse-payment settlements. This Part provides a brief overview of the legal issues raised by reverse-payment settlements and the economic rationale for restricting them. Section I.A begins with background on the regulatory framework created by the Hatch-Waxman Act, under which most reverse-payment settlements arise.²² Section I.B discusses the economic literature on reverse payments. Section I.C turns to antitrust issues raised by patent settlements. Finally, Section I.D discusses the Court's decision in *Actavis*.

A. *The Hatch-Waxman Act*

A pharmaceutical company seeking to market a new drug must submit a New Drug Application (NDA) to the FDA, which requires comprehensive clinical testing to ensure that the drug is safe and effective.²³ Once an NDA has been approved, the Hatch-Waxman Act enables firms to bring generic versions of the same drug to market through an Abbreviated New Drug Application (ANDA), which is far less arduous.²⁴ An ANDA requires showing that the generic version is "bioequivalent" to the NDA-approved drug—in other words, it is used for the same purposes and has the same active ingredients, dosage,

22. See 12 PHILIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* 338 (3d ed. 2012) (noting that reverse-payment settlements are rare "[o]utside the context of the Hatch-Waxman Act and pharmaceutical patent disputes").

23. See 21 U.S.C. § 355(a) (2012); see also *New Drug Application (NDA)*, FDA, <http://www.fda.gov/drugs/developmentapprovalprocess/howdrugsaredevelopedanapproved/approvalapplications/newdrugapplicationNDA/> (last updated Mar. 29, 2016) (claiming that one of the purposes of New Drug Applications is to provide enough information to allow the FDA to determine if a "drug is safe and effective in its proposed use(s)").

24. See § 355(j); see also *Abbreviated New Drug Application (ANDA): Generics*, FDA, <http://www.fda.gov/Drugs/DevelopmentApprovalProcess/HowDrugsareDevelopedandApproved/ApprovalApplications/AbbreviatedNewDrugApplicationANDAGenerics/default.htm> (last updated Aug. 4, 2016) ("Generic drug applications are termed 'abbreviated' because they are generally not required to include preclinical (animal) and clinical (human) data to establish safety and effectiveness. Instead, generic applicants must scientifically demonstrate that their product is bioequivalent (i.e., performs in the same manner as the innovator drug).").

labeling, and route of administration.²⁵ Because the ANDA process does not require duplicating the original, arduous testing for safety and effectiveness, the Hatch-Waxman Act accelerates the marketing of generic drugs and increases pharmaceutical competition.

An ANDA also requires the generic manufacturer to demonstrate that its proposed generic drug will not infringe any patents of the approved drug.²⁶ The Act provides four options: the generic company can (1) show that the approved drug is not covered by a patent; (2) show that the relevant patent has expired;²⁷ (3) postpone marketing the generic version until the patent expires;²⁸ or (4) claim that the relevant patent is invalid or that the generic drug would not infringe it.²⁹ The latter option, commonly known as a “Paragraph IV” certification, automatically constitutes an infringement of the patent and typically provokes the patent holder to file suit against the generic applicant.³⁰ If the patent holder files suit within forty-five days of the Paragraph IV certification, the FDA may not approve the generic for a thirty-month period, allowing time for the parties to litigate the patent.³¹

If the generic manufacturer is the first to file an ANDA with a Paragraph IV certification and it prevails in showing that the patent was invalid or not infringed, the Act provides a 180-day exclusivity period for the generic company.³² During this exclusivity period, the generic manufacturer will have the exclusive right to market its generic drug and, in effect, enjoy duopoly profits. These profits, which can be worth hundreds of millions of dollars,³³ incentivize generic firms to incur the costs of challenging patents of branded drugs.³⁴

B. *Economic Analysis of Reverse Payments*

Given the expense and unpredictability of patent litigation, it is not surprising that most infringement cases that arise within the context of the Hatch-Waxman Act end in settlements. On the one hand, such settlements may be socially efficient because they reduce

25. § 355(j) (2) (A) (iv).

26. *See* § 355(b) (2) (A) (iv).

27. *See* § 355(j) (2) (A) (vii) (I)–(II).

28. *See* § 355(j) (2) (A) (vii) (III).

29. *See* § 355(j) (2) (A) (vii) (IV).

30. *See* § 355(c) (3) (C); Hemphill, *supra* note 8, at 1566.

31. *See* § 355(j) (5) (B) (iii).

32. *See* § 355(j) (5) (B) (iv).

33. *See* Hemphill, *supra* note 8, at 1579.

34. *Id.*

litigation costs. On the other hand, the litigating firms have a strong temptation to settle their dispute on collusive terms. This arises because patent litigation is not a zero-sum game; the firms' combined profits will be larger if the patent is upheld than if the patent is invalidated. Thus, they can implicitly stipulate that the patent is likely to be upheld and structure a settlement that allows them to divide the monopoly profits.³⁵

Much of the academic literature on patent settlements draws upon an influential article by Carl Shapiro that modeled the collusive dynamic in patent settlements.³⁶ Shapiro explained his model using the language of mathematical economics,³⁷ but its intuition can be explained using a simple numerical example. Suppose that a generic firm is challenging a pharmaceutical patent. If the patent has ten years remaining in its term, and the parties agree that there is a fifty percent chance a court will deem it invalid or not infringed, then an agreement allowing the generic to enter after five years would reflect the parties' expectations. Ignoring litigation costs, discounting, and risk aversion, the patentee would expect to earn half of the monopoly profits from the full patent term from pursuing litigation; similarly, the challenger would expect half the generic profits from the full patent term. If the parties are only negotiating the date of entry, the patentee would reject any settlement that provided entry before five years, and the challenger would reject any settlement stipulating entry after five years. Under these assumptions, the only mutually agreeable settlement would allow entry exactly at the five-year mark.³⁸

The motivation for parties to include a reverse payment stems in part from the parties' asymmetric stakes in the litigation. Whenever the patented drug is not subject to competition, the patentee earns monopoly profits. Once a generic firm enters, however, competition reduces the firms' combined profits to a level below the monopoly profits that the patentee earned prior to entry. The generic

35. See *supra* note 8.

36. See generally Shapiro, *supra* note 8.

37. *Id.*

38. Incorporating litigation costs and risk aversion would widen the settlement window. If litigation will cost the patentee the equivalent of one year of monopoly profits, then its expected gain from litigation would be equivalent to four years of monopoly profits. If litigation will cost the challenger one year of generic profits, then any settlement allowing entry between four and six years should be acceptable to both. Risk aversion, similarly, will lead both parties to prefer a certain settlement to the expected outcome of a trial, so that both might be willing to accept a settlement within a somewhat wider window. How the parties would reach a settlement within that window would depend on their respective bargaining power.

manufacturer gains less from entry than the patentee loses; the remaining surplus accrues to consumers, who are not represented in the settlement. Thus, there is a strong incentive for the patentee to pay the generic to delay entry.

To illustrate this dynamic, suppose that the patentee earns ten million dollars per year when the drug is exclusive. Once the generic firm enters, the patentee earns two million per year while the generic earns one million per year. Suppose, as before, that ten years remain in the patent term, and the parties believe there is a fifty percent chance of invalidation. A settlement without a reverse payment would allow entry after five years, resulting in sixty million dollars in profit for the patentee and five million dollars for the generic.

Because the patentee gains more from delaying entry than the generic loses, the parties can increase their joint profits with a reverse payment. If entry were delayed from five years until seven years, the patentee would earn an extra 16 million dollars in profit, while the generic would forgo only two million. A reverse payment between two and sixteen million dollars would be sufficient to induce the generic to delay entry until seven years and increase profits for both firms. These increased profits, of course, are extracted from consumers, who pay monopoly prices for longer than they otherwise would under the settlement with no reverse payment.

The above example captures the motive behind reverse payments and the rationale for restricting them. If the parties can accurately predict the likelihood of success at trial, a settlement without a reverse payment would generate the same consumer surplus as they would expect from litigation. A settlement with a reverse payment, however, would enable the parties to extract more surplus from consumers than they would expect from litigation.

Shapiro's conclusion that a reverse-payment settlement is anticompetitive does not depend on the actual validity of the relevant patent or any judicial determination of the strength of that patent. The model mathematically demonstrates that a reverse payment harms consumers—relative to a settlement without a reverse payment—irrespective of the strength of the patent. Thus, as long as the assumptions of the model are satisfied, the model supports an inference that a reverse-payment settlement is anticompetitive without examining the merits of the patent.³⁹ For this reason, the FTC and the

39. In more complex settlements, however, Shapiro acknowledged that a court or regulator might have to directly assess the strength of the patent. *See* Shapiro, *supra* note 8, at 397 (“[T]here does not appear to be any way around the need to

Department of Justice (DOJ) adopted Shapiro's approach in their legal challenges against reverse-payment settlements.⁴⁰

Shapiro's model provides a convenient way to evaluate patent settlements, but it relies critically on several key assumptions. Most importantly, the model assumes that there exists a universally accepted probability that the patent would be upheld if litigated.⁴¹ This assumption has two critical implications. First, the litigants must agree about the likelihood that the patent will be upheld; they cannot be overoptimistic about their prospects in litigation. This means that there always exists a settlement without a reverse payment that would be acceptable to both parties.

Second, the litigants' subjective expectations must coincide with the court's independent assessment of the patent. By assumption, the model eliminated the distinction between the external point of view of the litigants and the internal point of view of the court. Accordingly, if the court and litigants agree about the likelihood that a patent will be upheld, then the court's perception of the law will coincide with the litigants' prediction about what the court would do.

In addition, the model assumes that such settlements should be evaluated from an *ex ante* perspective. Shapiro's proposed antitrust standard is that "a patent settlement cannot lead to lower *expected* consumer surplus than would have arisen from ongoing litigation,"⁴² where the expectations are determined at the time of settlement. The claim that the actual validity of the patent is irrelevant hinges on this assumption; the model compares the actual settlement to the expected outcome in litigation, not to a court's determination of the outcome that would have occurred at trial.

assess patent strength directly if one is trying to determine whether a settlement benefits consumers.").

40. See *In re Schering-Plough Corp.*, 136 F.T.C. 956, 988 (2003) ("[T]he quid pro quo for the payment was an agreement by the generic to defer entry beyond the date that represents an otherwise reasonable litigation compromise." (citing Shapiro, *supra* note 8)), *vacated*, 402 F.3d 1056 (11th Cir. 2005); Petition for Writ of Certiorari for Plaintiff-Appellee, *FTC v. Schering-Plough Corp.*, No. 05-273, 2005 WL 2105243, at *16 (U.S. Aug. 29, 2005) (adopting Shapiro's conception of patents as "probabilistic"); James J. O'Connell, *Second Bites and the Search for a Standard: The DOJ's Cipro Brief*, 24 A.B.A. ANTITRUST MAG., Spring 2010, at 7, 11 (describing how the Justice Department adopted Shapiro's theory of probabilistic patents when Shapiro served as Deputy Assistant Attorney General for Economics in the Antitrust Division of the DOJ).

41. See Shapiro, *supra* note 8, at 396.

42. *Id.* (emphasis added).

Finally, Shapiro assumes that the terms of a settlement are not affected by risk aversion.⁴³ If the parties were risk averse, it becomes more complex to infer the parties' beliefs from the settlement terms.⁴⁴

C. Antitrust Issues Raised by Patent Settlements

Part of the difficulty in analyzing potentially anticompetitive patent settlements arises from the tension between antitrust and patent law. Although the primary goal of antitrust law is to maximize consumer surplus,⁴⁵ antitrust doctrine recognizes an exception for patents.⁴⁶ Thus, the owner of a valid patent may legally exclude competition that infringes upon the patent⁴⁷ and may also license its patent to horizontal competitors in ways that would otherwise be considered illegal horizontal restraints.⁴⁸

In the context of settlements, the intersection of patent and antitrust law is especially complex. Although any settlement between competitors is technically a horizontal restraint, courts have long interpreted the antitrust laws to permit competitors to settle patent disputes on reasonable terms.⁴⁹ However, courts have held such settlements to be illegal when they include restraints beyond the patent issues in dispute.⁵⁰

43. See *id.* at 410.

44. Because this critique is orthogonal to the primary argument in this Article, the remaining discussion assumes that the parties are risk neutral.

45. See John B. Kirkwood & Robert H. Lande, *The Fundamental Goal of Antitrust: Protecting Consumers, Not Increasing Efficiency*, 84 NOTRE DAME L. REV. 191, 213 n.85 (2008).

46. See, e.g., *United States v. Line Material Co.*, 333 U.S. 287, 300 (1948) (holding that "the precise terms of the [patent] grant define the limits of a patentee's monopoly and the area in which the patentee is freed from competition"); *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 816 (1945) (observing that "a patent is an exception to the general rule against monopolies"). See generally Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1813 (1984) (discussing the boundary between patent and antitrust law).

47. Kaplow, *supra* note 46, at 1817.

48. See *Line Material Co.*, 333 U.S. at 308 ("During its term, a valid patent excludes all except its owner from the use of the protected process or product. This monopoly may be enjoyed exclusively by the patentee or he may assign the patent 'or any interest therein' to others." (citations omitted)).

49. See *Standard Oil Co. (Ind.) v. United States*, 283 U.S. 163, 171 (1931) ("Where there are legitimately conflicting claims or threatened interferences, a settlement by agreement, rather than litigation, is not precluded by the [Sherman] Act.").

50. See *Line Material Co.*, 333 U.S. at 308 ("It is . . . well settled that the possession of a valid patent or patents does not give the patentee any exemption from the provisions of the Sherman Act beyond the limits of the patent monopoly.").

The primary challenge in addressing reverse payments is determining the standard for antitrust scrutiny when the validity of the patent is in question. The Patent Act provides that a “patent shall be presumed valid,” and the “burden of establishing invalidity” rests with the party challenging the patent.⁵¹ Prior to *Actavis*, some circuits treated this presumption as irrefutable in the antitrust context, holding that settlements were legal as long as their terms were within the “scope of the patent.”⁵² However, this “scope of the patent” test permitted settlements that forbid entry for the entire term of the patent, effectively gutting the Hatch-Waxman Act by delaying generic market entry.⁵³ For this reason, the majority in *Actavis* ultimately rejected the “scope of the patent” test.⁵⁴

As a general matter, courts have reviewed patent settlements on an *ex ante* basis, assessing the reasonableness of the settlements at the time they were negotiated. In doing so, some courts have argued that *ex post* review would be unfair to litigants given the uncertainty of patent litigation and the possibility of treble damages, and would therefore discourage settlements.⁵⁵ Other courts have relied on the

51. 35 U.S.C. § 282 (2012).

52. See *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 544 F.3d 1323, 1333 (Fed. Cir. 2008) (holding that the district court correctly “recognized that any adverse anti-competitive effects within the scope of the . . . patent could not be redressed by antitrust law”), *abrogated by* *FTC v. Actavis, Inc.*, 133 S. Ct. 2223 (2013); *In re Tamoxifen Citrate Antitrust Litig.*, 466 F.3d 187, 211 (2d Cir. 2006) (“[T]he law allows the settlement even of suits involving weak patents with the presumption that the patent is valid and that settlement is merely an extension of the valid patent monopoly.”), *abrogated by Actavis*, 133 S. Ct. 2223. The Eleventh Circuit held similarly in the *Actavis* litigation. See *FTC v. Watson Pharm.*, 677 F.3d 1298, 1312 (11th Cir. 2012) (interpreting prior precedents to hold that “absent sham litigation or fraud in obtaining the patent, a reverse payment settlement is immune from antitrust attack so long as its anticompetitive effects fall within the scope of the exclusionary potential of the patent”), *rev’d sub nom. Actavis*, 133 S. Ct. 2223.

53. See AREEDA & HOVENKAMP, *supra* note 22, at 365 (observing that the application of the presumption of validity to patent settlements would allow a patent holder and a generic competitor to “cartelize the market” for their products); Michael A. Carrier, *Why the “Scope of the Patent” Test Cannot Solve the Drug Patent Settlement Problem*, 16 STAN. TECH. L. REV. 1, 6–7 (2012) (arguing that the presumption of validity is especially problematic in the Hatch-Waxman context).

54. *Actavis*, 133 S. Ct. at 2227.

55. See, e.g., *In re Tamoxifen*, 466 F.3d at 203–05 (“We cannot judge this post-trial, pre-appeal settlement on the basis of the likelihood *vel non* of [the patent-holder’s] success had it not settled but rather pursued its appeal. As the Supreme Court noted in another context, ‘[i]t is just not possible for a litigant to prove in advance that the judicial system will lead to any particular result in his case.’” (quoting *Whitmore v. Arkansas*, 495 U.S. 149, 159–60 (1990))); *Valley Drug Co. v. Geneva Pharm., Inc.*, 344 F.3d 1294, 1308 (11th Cir. 2003) (“Patent litigation is too complex and the results

general proposition in antitrust law that the legality of horizontal agreements should be determined at the time they are made.⁵⁶ An agreement may be permissible under the antitrust laws if it “promoted enterprise and productivity at the time it was adopted.”⁵⁷ On the other hand, if an agreement was anticompetitive at the time it was made, it is no defense that it ultimately failed to generate anticompetitive effects.⁵⁸ Indeed, it may not be possible to determine whether the effects of an agreement are anticompetitive until after litigation is concluded.⁵⁹

too uncertain for parties to accurately forecast whether enforcing the exclusionary right through settlement will expose them to treble damages if the patent immunity were destroyed by the mere invalidity of the patent. This uncertainty, coupled with a treble damages penalty, would tend to discourage settlement of any validity challenges . . .”).

56. See, e.g., *In re Tamoxifen*, 466 F.3d at 204 (holding that “the relevant time” for evaluating a settlement agreement is “when [the parties] were entering into the Settlement Agreement”); *Valley Drug*, 344 F.3d at 1306; *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 363 F. Supp. 2d 514, 529 (E.D.N.Y. 2005) (voicing concern that it “might chill patent settlements altogether” if the legality of such settlements depended on a later court’s determination of the patent’s validity), *aff’d*, 544 F.3d 1323, *abrogated by Actavis*, 133 S. Ct. 2223.

57. *Polk Bros., Inc. v. Forest City Enters., Inc.*, 776 F.2d 185, 189 (7th Cir. 1985).

58. See *In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 656 (7th Cir. 2002) (finding that “[a]n agreement to fix . . . prices is . . . a per se violation of the Sherman Act” regardless of whether the agreement led to lower prices); AREEDA & HOVENKAMP, *supra* note 22, at 219 (“As a general proposition, the per se rule against naked horizontal market division agreements applies equally to firms that were actual competitors before the division agreement took effect and to firms whose competition was merely potential.”).

59. As an aside, it is not clear that this argument should apply to *legal* uncertainty at the time the parties entered the agreement. No one has argued that antitrust law regarding patent settlements should have been applied on an *ex ante* basis to the defendants in *Actavis*. A determination that a patent is valid is also a legal conclusion. See *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966) (stating that “the ultimate question of patent validity is one of law”); ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 1003 (6th ed. 2013) (“Issues of patent *validity* are normally treated as questions of *law* with subsidiary questions of *fact*.”). Whether the patent is infringed is ultimately a question of fact but typically depends on legal determinations about the scope of the patent. See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996) (holding that patent claim construction is a question of law but that whether a particular use infringes the patent is a question of fact). Courts clearly have the capacity to resolve such legal uncertainty, and litigants are presumed to know the law as it applies to them.

D. *The Supreme Court's Decision in Actavis*

The *Actavis* case arose out of a settlement of litigation initiated under the Hatch-Waxman Act involving AndroGel, a topical testosterone gel.⁶⁰ In 2003, two generic drug companies, Actavis⁶¹ and Paddock Laboratories, filed ANDAs under the Hatch-Waxman Act to market generic versions of AndroGel, certifying under Paragraph IV that the AndroGel patent was invalid, so their generic versions would not infringe it.⁶² Solvay Pharmaceuticals, the owner of the AndroGel patent, filed an infringement action against the two generic companies under Paragraph IV.⁶³ The companies litigated the infringement action for three years.⁶⁴

Following discovery, the generic firms moved for summary judgment on the validity of the patent.⁶⁵ Before the district judge ruled on the motion, however, the firms reached a settlement in early 2006.⁶⁶ Under the terms of the settlement, the generic firms agreed not to market generic versions of AndroGel until August 2015, sixty-five months before the expiration date of the patent.⁶⁷ In exchange, the patent holder made a large payment to the generic companies, which was partly tied to future profits on AndroGel, with an expected value between \$200 million and \$350 million.⁶⁸ As part of the agreement, the generic firms also agreed to promote branded AndroGel to urologists and primary care doctors, and one of the firms agreed to serve as a backup manufacturer for AndroGel.⁶⁹

The FTC subsequently filed an antitrust action against the firms involved in the AndroGel settlement.⁷⁰ The district court granted the

60. *See Actavis*, 133 S. Ct. at 2227–29.

61. At the time of the initial application, Actavis was known as Watson Pharmaceuticals. *Id.* at 2229.

62. *Id.*

63. *Id.* A third generic company, Par Pharmaceutical, joined the litigation in partnership with Paddock, agreeing to share the litigation costs as well as the potential profits. *Id.*

64. *Id.*

65. *FTC v. Watson Pharm., Inc.*, 677 F.3d 1298, 1304 (11th Cir. 2012), *rev'd sub nom. Actavis*, 133 S. Ct. 2223.

66. *Actavis*, 133 S. Ct. at 2229.

67. *Id.*

68. *See id.* (listing the payments Solvay agreed to make: \$12 million in total to Paddock; \$60 million in total to Par; and an estimated \$19–\$30 million annually, for nine years, to Actavis).

69. *Id.*; *Watson Pharm.*, 677 F.3d at 1305.

70. *Actavis*, 133 S. Ct. at 2229.

firms' motion to dismiss, which the Eleventh Circuit affirmed.⁷¹ Backing away from its earlier scrutiny of reverse payments,⁷² the Eleventh Circuit held that any settlement within the scope of the patent was legal.⁷³ The panel emphasized the administrative difficulties of applying a "retrospective predict-the-likely-outcome-that-never-came approach," which "would . . . impose heavy burdens on the parties and courts" and "undo much of the benefit of settling patent litigation."⁷⁴

After a decade of conflicting decisions on reverse-payment settlements in the various circuits,⁷⁵ the Supreme Court granted certiorari.⁷⁶ The Court rejected the argument advanced by the defendants that the presumption of patent validity immunizes their settlement from antitrust scrutiny.⁷⁷ By a 5–3 vote,⁷⁸ the Court held that a reverse payment can trigger antitrust scrutiny if the payment exceeds a reasonable estimate of litigation costs and the fair value of any services rendered.⁷⁹ The Court further reasoned that it would not typically be necessary for a court to address the merits of the patent dispute; instead, the size of the reverse payment would serve as a surrogate for the "patent's weakness."⁸⁰ Finally, the Court ruled that such settlements should be evaluated under the "rule-of-reason," but it provided relatively little guidance regarding how this analysis would be structured.⁸¹

Justice Breyer's majority opinion was vague about how the reverse payment served as a surrogate.⁸² Although it is hardly apparent from

71. *Watson Pharm.*, 677 F.3d at 1306, 1315.

72. *See supra* note 52 and accompanying text.

73. *Watson Pharm.*, 677 F.3d at 1312 ("[A] reverse payment settlement is immune from antitrust attack so long as its anticompetitive effects fall within the scope of the exclusionary potential of the patent.").

74. *Id.* at 1314.

75. *See supra* note 13 and accompanying text.

76. *FTC v. Actavis, Inc.*, 133 S. Ct. 2223, 2230 (2013).

77. *Id.* at 2231–33.

78. Justice Alito recused himself because he had a financial interest in Actavis. *FIX THE COURT, BLIND TRUST: HOW SUPREME COURT JUSTICES ARE RULING IN FAVOR OF THE PUBLICLY TRADED COMPANIES WHOSE SECURITIES THEY OWN* 6 (May 28, 2015), http://online.wsj.com/public/resources/documents/2015_0528_fixcourt.pdf.

79. *Actavis*, 133 S. Ct. at 2226, 2236.

80. *Id.* at 2236–37.

81. *See id.* at 2238 ("We . . . leave to the lower courts the structuring of the present rule-of-reason antitrust litigation.").

82. The ambiguity in the Court's use of the reverse payment as a surrogate was compounded by its puzzling citation to a passage of the Areeda & Hovenkamp antitrust treatise. *See Actavis*, 133 S. Ct. at 2237. This passage, however, addresses

the language of the opinion, many commentators have interpreted the Court's holding as using the reverse payment as a surrogate for an objective *ex ante* assessment that the patent would be upheld.⁸³ In referring to the reverse payment as a surrogate for the "patent's weakness"⁸⁴ and stating that a reverse payment "likely seeks to prevent the *risk of competition*,"⁸⁵ the Court seemed to be referring to the *ex ante* reasonableness of the settlement, not the *ex post* validity of the patent. The reference to the "risk of competition" suggests that the payment is not a surrogate for weakness of the patent in an absolute sense, but rather the weakness of the patent relative to the profits the firms would earn under the settlement. Thus, even if the patent had a ninety percent chance of being upheld, a settlement would be deemed anticompetitive if the parties extracted ninety-five percent of the monopoly profits through the settlement. This interpretation most closely tracks Shapiro's model,⁸⁶ and several prominent antitrust scholars also have accepted this interpretation of *Actavis*.⁸⁷

whether courts can infer *market power* from a large reverse payment. See AREEDA & HOVENKAMP, *supra* note 22, at 350–52. Some passages in the broader treatise section cited by the Court suggest that the strength of the patent could be inferred from a reverse payment. Some of these passages, however, appear to endorse an *ex ante* standard for evaluating patent settlements. See *id.* at 323–24 (describing an antitrust standard for evaluating settlements based on whether "the settlement is a reasonable accommodation and is not more anticompetitive than a *likely outcome of the litigation*" (second emphasis added)); *id.* at 352 ("The antitrust 'reasonableness' of agreements is *normally determined as of the time the agreement is made*, given what the parties knew or reasonably should have known at that time. As a result, reasonableness of a patent settlement agreement cannot be made to depend on an *ex post* determination that the patent was or was not valid or that the challenger's product did or did not constitute infringement." (emphasis added)). Other passages, however, support some degree of reliance on an *ex post* determination. See *id.* at 343 (stating that "a large settlement payment is a strong signal that the patent in question is *invalid*" (emphasis added)); *id.* at 347 ("Even with the presumption [of patent validity] removed, . . . a court must still determine *whether the patent was valid and infringed . . .*" (emphasis added)); *id.* at 348 ("A full rule of reason query almost certainly means an inquiry into patent validity, scope, and infringement.").

83. See Aaron Edlin et al., *The Actavis Inference: Theory and Practice*, 67 RUTGERS U. L. REV. 585, 618 (2015) (arguing that "[t]he Supreme Court adopted an *ex ante* approach in *Actavis*, which held that settling by paying to avoid the risk of competition, i.e., the risk of losing the patent case, is an antitrust violation").

84. *Actavis*, 133 S. Ct. at 2236–37 (emphasis added).

85. *Id.* at 2236 (emphasis added).

86. See *id.*

87. See Aaron Edlin et al., *Activating Actavis*, 28 A.B.A. ANTITRUST MAG., Fall 2013, at 16–17 (arguing that a reverse payment implies patent weakness in a relative sense, not in an absolute sense); Herbert Hovenkamp, *Anticompetitive Patent Settlements and the Supreme Court's Actavis Decision*, 15 MINN. J.L. SCI. & TECH. 3, 5–6 (2014)

Although the Court held that it was unnecessary to investigate the strength of the patent, it stopped short of endorsing the position taken by some courts⁸⁸ and commentators⁸⁹ that *ex post* validity should never be relevant. Instead, it held that it “is *normally* not necessary to litigate patent validity to answer the antitrust question.”⁹⁰ However, it did not explain when a court should consider the merits of a patent or what kind of examination would be appropriate.

An alternative reading of the Court’s opinion is that it was using the reverse payment as a surrogate for the patent holder’s *subjective* beliefs about the outcome of litigation, rather than as an *objective ex ante* assessment:

An unexplained large reverse payment itself would normally suggest that *the patentee has serious doubts* about the patent’s survival. And that fact, in turn, suggests that the payment’s *objective* is to maintain supracompetitive prices to be shared among the patentee and the challenger rather than face what might have been a competitive market—the very anticompetitive consequence that underlies the claim of antitrust unlawfulness.⁹¹

In his dissenting opinion, Chief Justice Roberts would have applied the presumption of patent validity, thus permitting any settlements whose terms are within the scope of the patent.⁹² He also emphatically rejected the *ex ante* approach to evaluating patent settlements. He argued that “a patent is either valid or invalid”⁹³ and that hard legal questions have correct answers, even if they have not yet been resolved by courts.⁹⁴ Although Chief Justice Roberts did not develop these arguments further, his opinion hinted at jurisprudential issues that were not addressed by the majority. These issues will be explored in Part II.

(describing the *Actavis* standard as holding that “[a] large settlement exclusion payment *disproportionate to litigation risk* can be unlawful under antitrust’s rule of reason, without inquiry into whether the patent is actually invalid or not infringed” (emphasis added)).

88. See *supra* notes 55–59 and accompanying text.

89. See, e.g., Edlin et al., *supra* note 83, at 617 (arguing that *ex post* conclusions regarding validity are irrelevant).

90. *FTC v. Actavis, Inc.*, 133 S. Ct. 2223, 2236 (2013) (emphasis added).

91. *Id.* at 2236 (emphasis added).

92. See *id.* at 2239 (stating that the patent holder violates antitrust law only when it excludes competition beyond the scope of the patent).

93. *Id.* at 2244 (Roberts, C.J., dissenting).

94. See *id.* (“Just because people don’t know the answer [to a hard legal question] doesn’t mean there is no answer until a court declares one.”).

II. *ACTAVIS* CONFLATES PREDICTION AND JUSTIFICATION

The Court reasoned in *Actavis* that the strength of a patent can be inferred from settlement terms without any inquiry into the merits.⁹⁵ This Part criticizes the *Actavis* inference on jurisprudential grounds. The Court's inference relies critically on the prediction theory of law; it equates legal propositions with litigants' predictions about what courts will do. Although scholars debate what the Court actually held in *Actavis*, any plausible interpretation of the Court's holding relies on the prediction theory.

The Court did not consciously endorse the prediction theory;⁹⁶ rather, the Court's reliance on prediction was likely a result of interdisciplinary misunderstanding. The early economic literature on reverse payments explicitly conflated law with court decisions,⁹⁷ although it did not manifest any awareness that this was controversial. Without addressing the underlying assumptions, government lawyers repeated the conclusions from this economic literature in briefs and orders challenging patent settlements.⁹⁸ The Court ultimately adopted the same reasoning in *Actavis*, but without acknowledging its controversial foundations.⁹⁹

A. *The Prediction Theory of Law*

The prediction theory of law originated in Oliver Wendell Holmes's *The Path of the Law* speech in 1897.¹⁰⁰ In Holmes's famous formulation, "[t]he prophecies of what the courts will do in fact, and

95. See *id.* at 2237 (majority opinion).

96. See *infra* notes 105–07 and accompanying text.

97. See Keith Leffler & Cristofer Leffler, *The Probabilistic Nature of Patent Rights: In Response to Kevin McDonald*, 17 A.B.A. ANTITRUST MAG., Summer 2003, at 77, 78 (disputing that "there is something akin to 'the patent's objective validity'—regardless of what a federal court may say"); Carl Shapiro, *Antitrust Analysis of Patent Settlement Between Rivals*, 17 A.B.A. ANTITRUST MAG., Summer 2003, at 70, 76 (contending that "there is no workable notion of validity distinct from the determination of the court" and claiming that there are no meaningful distinctions between "whether the patent is valid or invalid" and "whether the patentee wins or loses the litigation").

98. See *supra* note 40.

99. *Actavis*, 133 S. Ct. at 2234–37 (detailing the Court's five sets of considerations that influenced its reasoning).

100. Oliver Wendell Holmes, *The Path of the Law*, 110 HARV. L. REV. 991 (1997). This Article cites to Holmes's speech as republished in the *Harvard Law Review* 100 years after its delivery and first publication; for the original issue in which the published speech appears, see 10 HARV. L. REV. 457 (1897).

nothing more pretentious, are what I mean by the law.”¹⁰¹ Although Holmes’s broad language could be interpreted as articulating a theory of law, the context of his statement demonstrates that he was describing the law from the perspective of a “bad man.”¹⁰² To Holmes’s bad man, law is devoid of normativity; he does not look to law to supply “reasons for [his] conduct.”¹⁰³ The bad man values knowledge about the law, but only insofar as it aids him in predicting the consequences of his actions and thereby avoiding punishment.¹⁰⁴

Holmes’s prediction theory may provide a useful perspective to litigants who are negotiating a settlement or to economists modeling the behavior of such litigants. However, as H.L.A. Hart famously pointed out in *The Concept of Law*, Holmes’s conception of law cannot possibly provide guidance to judges deciding cases.¹⁰⁵ If judges view rules as predictions, then “a judge who sets out to discover the ‘law’ . . . is really just trying to discover what she will do.”¹⁰⁶ When litigants seek to predict judicial decisions, they must recognize that “the courts regard legal rules not as predictions, but as standards to be followed in decision.”¹⁰⁷

In criticizing the prediction theory, Hart drew a key distinction between the external and internal points of view.¹⁰⁸ The internal

101. Holmes, *supra* note 100, at 994. Holmes’s prediction theory was popularized by legal realists who echoed Holmes’s language in similarly stark terms. See JEROME FRANK, *LAW AND THE MODERN MIND* 51 (1949) (describing law as “specific past *decisions*, and guesses as to actual specific future *decisions*”); KARL N. LLEWELLYN, *THE BRAMBLE BUSH: THE CLASSIC LECTURES ON THE LAW AND LAW SCHOOL* 5 (2d ed. 2008) (“What these officials do about disputes is, to my mind, the law itself.”); Felix S. Cohen, *Transcendental Nonsense and the Functional Approach*, 35 *COLUM. L. REV.* 809, 840 (1935) (“Washed in cynical acid, every legal problem can . . . be interpreted as a question concerning the positive behavior of judges.”).

102. See Holmes, *supra* note 100, at 992.

103. *Id.* at 993.

104. *Id.*

105. See H.L.A. HART, *THE CONCEPT OF LAW* 146–47 (3d ed. 2012) (arguing that the “contention that rules are the predictions of courts’ decisions . . . cannot apply to the courts’ own statements of a legal rule”).

106. BRIAN LEITER, *NATURALIZING JURISPRUDENCE: ESSAYS ON AMERICAN LEGAL REALISM AND NATURALISM IN LEGAL PHILOSOPHY* 17–18 (2007); see also David Luban, *The Bad Man and the Good Lawyer: A Centennial Essay on Holmes’s The Path of the Law*, 72 *N.Y.U. L. REV.* 1547, 1577–78 (1997) [hereinafter Luban, *The Bad Man*] (stating that judges will not answer questions about a case by predicting their own behavior, especially if the only basis for the answer is their behavior).

107. HART, *supra* note 105, at 147.

108. *Id.* at 89–91. For helpful expositions on the internal and external points of view, see generally Charles L. Barzun, *Inside-out: Beyond the Internal/External Distinction in Legal Scholarship*, 101 *VA. L. REV.* 1203 (2015), and Scott J. Shapiro, *What Is the Internal Point of View?*, 75 *FORDHAM L. REV.* 1157 (2006).

point of view is that of someone who accepts rules as guides to her conduct. The external perspective is that of the Holmesian bad man, who does not perceive rules as imposing an obligation on himself. Hart criticized the prediction theory for eliminating the internal point of view altogether.¹⁰⁹ From this perspective, it is impossible to criticize a court for being wrong; whatever decision a court reaches must be correct by virtue of the court having made it.¹¹⁰

It is fair to say that the prediction theory, as characterized by Hart, is not taken seriously as a theory of law.¹¹¹ Some contemporary commentators argue that Holmes and the realists never intended it to be a theory of law and that the theory as described by Hart was a mere caricature.¹¹² Even Holmes emphasized that the means of

109. HART, *supra* note 105, at 91.

110. *See id.* at 141–47 (discussing the failure of the prediction theory to account for judicial error); Michael Steven Green, *Legal Realism as Theory of Law*, 46 WM. & MARY L. REV. 1915, 1927 (2005) (observing that “the prediction theory cannot make sense of some judicial errors”); Luban, *The Bad Man*, *supra* note 106, at 1577–78 (1997) (“The problem is not that [judges] can’t get the prediction right, but rather that they can’t get it wrong: any answer they come up with is the right answer, just because they have come up with it.”).

111. *See* Leslie Green, *The Concept of Law Revisited*, 94 MICH. L. REV. 1687, 1694 (1996) (describing as “decisive” Hart’s arguments against “behaviorist accounts influential among legal realists, which conceived of rules as predictions of official action”); Luban, *The Bad Man*, *supra* note 106, at 1577 (arguing that the characterization of law as “prophecies of what the courts will do in fact . . . makes a certain amount of sense from an advocate’s point of view, but it makes no sense at all from the point of view of a judge”); Frederick Schauer, *Prediction and Particularity*, 78 B.U. L. REV. 773, 773 n.2 (1998) (“[I]t is nonsense to suppose that law to the judge . . . is a prediction of what that judge would decide.”). Even many of the legal realists ultimately recanted their endorsements of the prediction theory. *See* LLEWELLYN, *supra* note 101, at xxviii–xxx (recanting his prior characterization of law and denying that it ever accurately described his views); Felix S. Cohen, *The Problems of a Functional Jurisprudence*, 1 MOD. L. REV. 5, 17 (1937) (“When a judge [asks a legal question], in the course of writing his opinion, he is not attempting to predict his own behaviour.”).

112. *See* RONALD DWORKIN, *LAW’S EMPIRE* 36 (1986) (asserting that the “best version” of the prediction theory defines the lawyer’s role as predicting a judge’s decision and the judge’s role as predicting “the general course or ‘path’ the law is most likely to take”); LEITER, *supra* note 106, at 18 (arguing that “Hart misread the Realists as answering philosophical questions of conceptual analysis”); Luban, *The Bad Man*, *supra* note 106, at 1578–80 (describing how common critiques of the prediction theory mischaracterize Holmes’s views); William Twining, *Other People’s Power: The Bad Man and English Positivism, 1897–1997*, 63 BROOK. L. REV. 189, 199 (1997) (asserting that “Hart indulged in decontextualized readings of the flimsiest of texts” in criticizing Holmes and the realists); Robin West, *Three Positivisms*, 78 B.U. L. REV. 791, 808 (1998) (contending that the standard objection to the prediction theory “fails for the straightforward reason that it rests on a false, or at least a

prediction were traditional legal materials: “a body of reports, of treatises, and of statutes.”¹¹³ However, the Court in *Actavis* implicitly relied upon Hart’s caricatured version of the prediction theory rather than Holmes’s “traditional legal materials.”

Arguments about valid legal justification may seem abstract, but every court must justify its exercise of power with reasons that are derived from valid legal sources.¹¹⁴ These reasons are publicized so that the litigants and the public can scrutinize them and appellate courts can evaluate the grounds of the original decision. Legal reasons also limit courts’ future decision making and provide constraints against judicial arbitrariness.¹¹⁵ Finally, these reasons provide guidance to future litigants, which is especially important in areas of law where settlement is pervasive. If judges do not articulate their reasoning in cases that go to trial, the law will fail to cast a shadow in which parties can settle.¹¹⁶

Furthermore, a court’s legitimacy necessarily depends on its ability to justify its holdings with valid reasons. Imagine, for example, if the Supreme Court had relied on prediction markets to decide *National Federation of Independent Business v. Sebelius*.¹¹⁷ Given the complex legal

question-begging, premise—to wit, that the work of the judge is to declare the law, to decide what the law is,” whereas advocates of the prediction theory viewed judges as being “in the business of *making* the law”).

113. Holmes, *supra* note 100, at 991.

114. See Jules L. Coleman & Brian Leiter, *Determinacy, Objectivity, and Authority*, 142 U. PA. L. REV. 549, 587–89 (1993) (“In order to be justified, coercion must, at least, enforce outcomes warranted by the set of legal reasons.”); Owen M. Fiss, *Foreword: The Forms of Justice*, 93 HARV. L. REV. 1, 13–14 (1979) (discussing the requirement that judges justify their decisions); Lon L. Fuller, *The Forms and Limits of Adjudication*, 92 HARV. L. REV. 353, 364–67 (1978) (stating that “the distinguishing characteristic of adjudication lies in the fact that it confers on the affected party” the opportunity to “present[] proofs and reasoned arguments,” and that “this participation is frustrated, and the whole proceeding becomes a farce, should the decision that emerges make no pretense whatever to rationality”); Micah Schwartzman, *Judicial Sincerity*, 94 VA. L. REV. 987, 1001–05 (2008) (discussing the rationales for legal justification).

115. See Frederick Schauer, *Giving Reasons*, 47 STAN. L. REV. 633, 651 (1995) (“If a decisionmaker is *prima facie* committed in the future to the reasons she gives for a conclusion now, and if those reasons are typically more general than the conclusion they support, then she commits herself to deciding some number of cases whose full factual detail she cannot possibly now comprehend.”).

116. See Coleman & Silver, *supra* note 2, at 114 (noting that the precedential value of judge-made law benefits third parties as well as the litigants); Luban, *Settlements*, *supra* note 5, at 2626 (“[L]egal rules and precedents are valuable not only as a source of certainty, but also as a reasoned elaboration and visible expression of public values.”).

117. 132 S. Ct. 2566 (2012).

issues presented,¹¹⁸ the Court could have saved time and effort by relying on the Intrade prediction market, which indicated a seventy-five percent chance that the Affordable Care Act would be invalidated.¹¹⁹ The Court could have written: “We use the Intrade prediction market as a surrogate for the constitutionality of the Affordable Care Act. The market predicts that we will strike down the Act. Therefore, we declare the Act to be unconstitutional.”

An opinion based on the prediction markets, of course, would have been universally condemned because it would have failed to provide a valid legal justification. The prediction market was forecasting whether a majority of justices *would* vote to invalidate the Act. Any legitimate decision needed to explain whether the Court *should* invalidate the Act.¹²⁰

In this fanciful example, the Court’s reliance on prediction markets to resolve a question of law is plainly absurd. The inference that the Court endorsed in *Actavis* is equally circular, but it is less apparent because it is embedded within an economic model. The following section examines the logical foundations of the *Actavis* inference.

B. *How Actavis Relies on the Prediction Theory*

The Court’s reliance on the prediction theory in *Actavis* is partly the product of an interdisciplinary misunderstanding. Economists have examined the welfare implications of patent settlements, approaching patent law from an external point of view. The conclusions from this literature were then offered as guidance to courts. The Supreme Court ultimately adopted these same conclusions in *Actavis*, without showing any awareness of their Holmesian foundations.

118. The Court devoted six hours of oral argument to issues involving the Anti-Injunction Act, the Commerce Clause, the Necessary and Proper Clause, the Congressional taxing power, the Spending Clause, and severability. Lawrence T. Gresser & Elizabeth F. Bernhardt, *Lessons Learned from Affordable Care Act Oral Arguments*, N.Y. L.J. at *1 n.17 (Aug. 27, 2012), <https://www.cohengresser.com/assets/publications/50.pdf>.

119. See David Leonhardt, *When the Crowd Isn’t Wise*, N.Y. TIMES (July 7, 2012), <http://www.nytimes.com/2012/07/08/sunday-review/when-the-crowd-isnt-wise.html>.

120. There was likely substantial divergence between those who believed that the Court *would* invalidate the Act and those who believed that the Court *should* have invalidated the Act. See, e.g., Andrew Koppelman, *Bad News for Mail Robbers: The Obvious Constitutionality of Health Care Reform*, 121 YALE L.J. ONLINE 1, 1 (2011) (predicting that the Court might strike down the Affordable Care Act and that doing so would be a “flagrant abuse of its power”).

These Holmesian foundations are most apparent in Shapiro's original article on patent settlements, which modeled settlement from the external point of view of the litigants rather than the internal perspective of a judge.¹²¹ This is most evident in his discussion of "patent strength," a key parameter in the model.¹²² Shapiro avoided using a traditional legal understanding of patent strength by characterizing "patent validity and patent breadth" as "technical issues" that are "outside the scope of [the] economic analysis."¹²³ Instead, Shapiro defined "patent strength" purely by reference to predictions about court decisions: it represents "[t]he probability that the patentholder 'wins.'"¹²⁴ Relying on this definition, Shapiro concluded that a reverse payment provides "a clear signal that the settlement is likely to be anticompetitive."¹²⁵

Shapiro underscored this external perspective by characterizing a patent as a "*probabilistic* property right,"¹²⁶ akin to a lottery ticket whose value is determined by the likelihood that a court will uphold it.¹²⁷ Shapiro's conception entailed a redefinition of patents: a patent is not the right to prevent others from engaging in infringing activities, but rather "*the right to sue* to prevent others from infringing the patent."¹²⁸ In his economic model, there is no particularized inquiry into the actual validity of the patent—the patent is merely a lottery ticket with a stochastic payoff.

This conception of patents as probabilistic may seem natural given the highly unpredictable nature of patent litigation.¹²⁹ For an actor who only wants to predict what a court will decide, a patent may

121. Shapiro, *supra* note 8, at 407–08.

122. *See id.* at 399.

123. *Id.* at 397.

124. *Id.* at 399.

125. *Id.* at 407.

126. *Id.* at 395. Shapiro drew upon an established body of literature in treating patents as probabilistic. *See generally* F.M. Scherer, *The Innovation Lottery*, in *EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY* 3, 3 (Rochelle Cooper Dreyfuss et al. eds., 2001) (analogizing patents to lottery tickets); Ian Ayres & Paul Klemperer, *Limiting Patentees' Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies*, 97 MICH. L. REV. 985, 994 (1999) (proposing a regime of probabilistic patents); Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 J. ECON. PERSP. 75, 76 (2005) (exploring "the economics of probabilistic patents").

127. *See* Shapiro, *supra* note 8, at 395 (calibrating the "patentholder's rights according to the likelihood that the patentholder would win the patent litigation").

128. *Id.* (emphasis added).

129. *See* Lemley & Shapiro, *supra* note 126, at 75 ("When a patent holder asserts its patent against an alleged infringer, the patent holder is rolling the dice.").

indeed appear indistinguishable from a lottery ticket.¹³⁰ If Holmes's bad man were the CEO of a pharmaceutical company, he would not be interested in a doctrinal argument about the validity of a patent; he would want to know the likelihood that a court would uphold it.

Shapiro's conception of patents as probabilistic may be useful for modeling the behavior of actors who view the legal system from an external perspective such as firms considering litigation or negotiating a settlement. The theory of probabilistic patents is problematic, however, when it is used to provide guidance *to a court*, which must approach patent law from the internal point of view and provide legal justification for its decisions. For a judge to equate a patent with a lottery ticket is to say that its validity is random; a decision upholding or invalidating the patent could not be justified by legal reasons.¹³¹ If this were so, then it would be appropriate for the judge to decide each patent infringement case by spinning a roulette wheel.¹³² Needless to say, this is not how infringement cases are actually resolved, and such an approach would be rightfully condemned.¹³³

Similarly, Shapiro's claim that a patent merely "gives the patentholder . . . *the right to sue* to prevent others from infringing the patent"¹³⁴ may be useful from an external point of view, but it is pure nonsense from an internal point of view. How would a judge resolve an infringement case under such a standard? If a patent merely grants the patentee the right to sue, has the right already been vindicated once the lawsuit is filed? The problem with this standard, of course, is that it does not provide the court any guidance in deciding an infringement case once a patentee has exercised its right to sue.

The same problem arises with Shapiro's definition of "patent strength" as "[t]he probability that the patentholder wins."¹³⁵ A judge

130. See Scherer, *supra* note 126, at 16 (analogizing patents to lottery tickets).

131. See NEIL DUXBURY, *RANDOM JUSTICE: ON LOTTERIES AND LEGAL DECISION-MAKING* 13–14 (1999) (describing decision by lottery as antithetical to reasoned decision making).

132. See Jody S. Kraus, *Legal Determinacy and Moral Justification*, 48 WM. & MARY L. REV. 1773, 1780 (2007) (arguing that a random decision procedure is the only appropriate option when there is a "lack of affirmative reasons that justify a particular action" by the state).

133. See Judith Resnik, *Tiers*, 57 S. CAL. L. REV. 837, 840–41 (1984) (describing how the use of a coin flip in criminal sentencing "offended this society's commitment to rationality"); Adam M. Samaha, *Randomization in Adjudication*, 51 WM. & MARY L. REV. 1, 5 (2009) (observing that "[j]udges strongly condemn randomization for their own merits decisions").

134. See Shapiro, *supra* note 8, at 395 (emphasis added).

135. See *id.* at 399.

determining the strength of a patent cannot simply ask, “What is the probability that I will rule for the patentholder?” Instead, the judge must still consider relevant legal sources and give valid reasons that can be reviewed by an appellate court.¹³⁶ This is most clearly true when courts are called upon to approve settlements in other contexts, such as class actions; if the probabilities of various outcomes were simply inferred from the terms of the parties’ settlement, a court would never have any basis to reject a settlement.

Although Shapiro did not initially propose that courts should apply his model to determine whether settlements are anticompetitive, it did not take long for others to do so. Several influential antitrust scholars cited Shapiro’s conclusions in claiming that reverse-payment settlements are generally anticompetitive¹³⁷ and proposing that courts attach a presumption of illegality to such settlements.¹³⁸

The FTC also cited Shapiro’s model in arguing that a reverse payment constitutes a “*quid pro quo* for . . . an agreement by the generic to defer entry beyond the date that represents an otherwise reasonable litigation compromise,”¹³⁹ and should therefore support

136. See Protective Comm. for Indep. Stockholders of TMT Trailer Ferry, Inc. v. Anderson, 390 U.S. 414, 434 (1968) (holding that a trial court approving a settlement must provide “an adequate . . . consideration of the merits of the claims, the difficulties of pursuing them, the potential harm . . . caused by delay, and the fairness of the terms of settlement,” and that “a reviewing court [must] have some basis for distinguishing between well-reasoned conclusions arrived at after a comprehensive consideration of all relevant factors, and mere boilerplate approval phrased in appropriate language but unsupported by evaluation of the facts or analysis of the law”).

137. See Hemphill, *supra* note 8, at 1572–73, 1573 n.81 (“Economic modeling has shown formally that settlements that include a cash payment from the patentee to the infringer provide consumers with less welfare, on average, than seeing the litigation to completion.” (citing Shapiro, *supra* note 8, at 407–08)); Hovenkamp et al., *supra* note 8, at 1757–58, 1758 n.169 (contending that “a large exclusion payment . . . suggests some inherent uncertainty as to the validity or scope of the patent,” which “suggests that exclusion payments are anticompetitive” (citing Shapiro, *supra* note 8, at 393)).

138. See Hemphill, *supra* note 8, at 1596 (proposing a rule in which “[a] settlement that contains a cash payment [from the patentee to the generic] or permits the retention of exclusivity eligibility” establishes a “presumption of illegality”); Hovenkamp et al., *supra* note 8, at 1759 (proposing a rule that “a payment from a patentee to an infringement defendant for the latter’s exit from the market is presumptively unlawful”).

139. See *In re Schering-Plough Corp.*, 136 F.T.C. 956, 988 (2003) (“[T]he *quid pro quo* for the payment was an agreement by the generic to defer entry beyond the date that represents an otherwise reasonable litigation compromise.” (citing Shapiro, *supra* note 8, at 1757–61)), *vacated*, 402 F.3d 1056 (11th Cir. 2005).

an inference of illegality. The FTC further contended that a court need not consider the merits of an underlying patent claim.¹⁴⁰ The phrase “otherwise reasonable litigation compromise” obscured the Holmesian underpinnings of the new test; according to the FTC’s position, the parties’ entitlements were determined by their likelihood of success in court, not the strength of the patent as determined by the merits. The FTC further endorsed Shapiro’s theory of probabilistic patents, echoing the view that “a patent is not a right to exclude, but rather a right to *try* to exclude.”¹⁴¹ Subsequently, DOJ’s antitrust division also endorsed the theory of probabilistic patents in cases involving pharmaceutical settlements.¹⁴²

Nearly ten years after it first adopted Shapiro’s proposed standard, the FTC advanced the same argument before the Supreme Court in *Actavis*.¹⁴³ It argued that a settlement with a reverse payment should be presumptively illegal because “the most natural inference is that the payment has purchased an additional increment of market exclusivity.”¹⁴⁴ On the other hand, it contended that a settlement without a reverse payment should be presumptively legal because “the agreed-upon [entry] date roughly corresponds to the parties’ assessments of their likelihood of success in the litigation.”¹⁴⁵ In other words, the FTC’s position was that a party’s entitlement in settlement is determined by the relief it predicts a court would grant it in litigation.

Unlike some of the economic literature on settlements, the majority opinion in *Actavis* did not explicitly endorse the prediction theory. Although it inferred that a reverse payment is “a workable surrogate for a patent’s weakness,”¹⁴⁶ the Court at least acknowledged a conceptual distinction between patent law and the litigants’ predictions. In the end, however, the result was the same: the Court determined the firms’ entitlements by their predictions about the outcome of litigation rather than by reference to patent law.

140. *Id.* at 992–99.

141. Petition for Writ of Certiorari for Plaintiff-Appellee, *FTC v. Schering-Plough Corp.*, No. 05-273, 2005 WL 2105243, at *16 nn.9–10 (U.S. Aug. 29, 2005) (quoting Hovenkamp et al., *supra* note 8, at 1761) (citing Shapiro, *supra* note 8, at 395).

142. O’Connell, *supra* note 40, at 11.

143. *FTC v. Actavis, Inc.*, 133 S. Ct. 2223, 2229–30 (2013).

144. See Brief for Petitioner at 36, *FTC v. Watson Pharm., Inc.*, 133 S. Ct. 2223 (2013) (No. 12–416).

145. *Id.* at 28.

146. *Actavis*, 133 S. Ct. at 2236–37.

C. *Alternative Rationales for the Actavis Inference*

The economic literature on patent settlements explicitly conflates law with the actions of courts and overlooks the distinction between the internal and external points of view.¹⁴⁷ In *Actavis*, the Court appeared to accept these conclusions without examining their underlying assumptions. Nevertheless, it is possible that the Court's holding could be justified by alternative rationales. This Section considers some alternative explanations of *Actavis* and shows that they still implicitly rely on the prediction theory.

1. *A reverse payment represents the patentee's subjective beliefs about validity*

One alternative rationale maintains that a reverse payment represents a patent holder's *subjective* beliefs about the weakness of the patent rather than an *objective* measure of the patent's weakness. Indeed, the Court in *Actavis* explained that a reverse payment may "suggest that the patentee has serious doubts about the patent's survival," which may be probative of the patentee's objective in offering the payment.¹⁴⁸

This interpretation escapes the crudest form of the prediction theory by using reverse payments to infer the patentee's subjective beliefs rather than an objective determination about the strength of the patent. Nevertheless, this interpretation has four serious problems. First, it is a questionable reading of the Court's opinion in *Actavis*. The Court stated that using a reverse payment as "a workable surrogate for a patent's weakness" would avoid "conduct[ing] a detailed exploration of the validity of the patent itself."¹⁴⁹ This reasoning suggests that the payment serves as a surrogate for the objective strength, not merely the parties' subjective beliefs.

Second, a reverse payment only indicates the patentee's beliefs about what a court will do, not its beliefs about whether the patent is actually valid and infringed. For example, a criminal defendant may believe that a jury is likely to convict her, but that does not imply that she believes that she is guilty.¹⁵⁰ Similarly, a patentee may have faith

147. See *supra* notes 121–38 and accompanying text.

148. *Actavis*, 133 S. Ct. at 2236; see also Elhauge & Krueger, *supra* note 8, at 299–301 (proposing a standard for the legality of reverse payments that depends on "the patent holder's own probability estimate" regarding the outcome of litigation).

149. *Actavis*, 133 S. Ct. at 2236–37.

150. Indeed, it is widely known that many innocent defendants plead guilty. BRANDON L. GARRETT, CONVICTING THE INNOCENT: WHERE CRIMINAL PROSECUTIONS GO WRONG 152 (2011); see John H. Blume & Rebecca K. Helm, *The Unexonerated: Factually Innocent Defendants Who Plead Guilty*, 100 CORNELL L. REV. 157, 167 (2014)

that the patent is valid but less confidence that a court will actually uphold it. Thus, a reverse payment does not support an inference that the patent is weak unless one equates beliefs about the outcome of patent litigation with beliefs about the validity of a patent. Thus, the inference still relies on the prediction theory.

Third, the settlement terms demonstrate that a patent holder retains some doubts about whether the patent would be upheld. These terms, however, do not support an inference that the generic firm has similar doubts. Shapiro's model adopted, as a simplifying assumption, that the parties agreed on the probability that the settlement would be upheld.¹⁵¹ As a general matter, however, parties will have divergent beliefs about the outcome of litigation.¹⁵² Any settlement will reveal an *upper bound* on the patentee's beliefs about the probability that the patent will be upheld, but it will also reveal a *lower bound* on the generic firm's beliefs.¹⁵³

For example, suppose that the firms agreed to a settlement that allowed generic entry halfway through the patent term but with no reverse payment. The patent holder would accept such a settlement if it believed there was no more than a fifty percent chance that its patent would survive; the generic firm would similarly believe that the patent had no less than a fifty percent chance. Thus, the generic firm may well believe that the patent is likely to be upheld. If the settlement included a reverse payment, then it is possible that the generic firm would believe that the settlement benefits or harms consumers. Because the settlement only reveals a lower bound on the generic firm's beliefs about the patent, the settlement terms only yield ambiguous inferences about the generic firm's subjective intent.

Fourth, even if the patent holder believes that consumers are worse off in the settlement than in litigation, this fact does not provide a basis for distinguishing settlements with reverse payments from traditional settlements. Whenever the patent holder accepts a settlement, it believes that it can earn at least as much from the exclusivity provided by the settlement than it would in litigation.

(asserting that innocent defendants will plead guilty to accept a lenient plea bargain rather than risk a wrongful conviction and a longer sentence at trial).

151. See *supra* Section I.B (discussing Shapiro's model).

152. See George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1, 9 (1984) (observing that opposing litigants may have differing estimates of a legal standard that will determine the outcome of litigation).

153. An upper bound on the generic firm's beliefs could be inferred from the fact that it filed an ANDA in the first place. The generic firm would be unlikely to challenge the patent if it believed it was one hundred percent likely to be upheld.

Thus, it must believe that consumers will be no better off under the settlement. Although the reverse payment may further reduce consumer surplus, it does not distinguish pro-competitive settlements from anticompetitive ones, at least on the basis of the patentee's subjective beliefs.

2. *A reverse payment constitutes payment to the generic firm to delay entry*

In *Actavis*, the Court observed that a reverse payment may “provide strong evidence that the patentee seeks to induce the generic challenger to abandon its claim”¹⁵⁴ and that such a payment “likely seeks to prevent the risk of competition.”¹⁵⁵ Some courts and commentators have emphasized this language in characterizing the Court's holding.¹⁵⁶ Thus, a second interpretation of *Actavis* could be that it merely prohibits “paying for delay”¹⁵⁷ or payments that “prevent the risk of competition.”

This interpretation, however, cannot explain how the Court distinguished anticompetitive settlements from permissible ones. As Chief Justice Roberts observed in dissent, any settlement—even one without a reverse payment—eliminates some possibility that the patent will be invalidated.¹⁵⁸ Any settlement that permits generic entry before the expiration of the patent, moreover, still involves compensation to the generic firm; the generic firm will not abandon its claim unless it is offered something in return.¹⁵⁹ Yet the FTC contended that traditional settlements should be presumptively legal,¹⁶⁰ and the Court did not purport to subject such settlements to antitrust liability.¹⁶¹

154. *Actavis*, 133 S. Ct. at 2235.

155. *Id.* at 2236.

156. See, e.g., *In re Aggrenox Antitrust Litig.*, 94 F. Supp. 3d 224, 240 (D. Conn. 2015) (“The anticompetitive harm, under *Actavis*, is that the reverse-payment settlement ‘seeks to prevent the risk of competition.’”); Aaron Edlin et al., *supra* note 87, at 16 (“Reverse payments can violate the antitrust laws and they do so when they are payments to delay competition, or otherwise to limit the risk of competition.”).

157. See Hemphill, *supra* note 8.

158. *Actavis*, 133 S. Ct. at 2245 (Roberts, C.J., dissenting) (observing that the majority's logic “cannot possibly be limited to reverse-payment agreements, or those that are ‘large,’” and that any settlement “takes away some chance that the generic would have litigated until the patent was invalidated”).

159. See *Asahi Glass Co. v. Pentech Pharm., Inc.*, 289 F. Supp. 2d 986, 994 (N.D. Ill. 2003) (observing that “any settlement agreement can be characterized as involving ‘compensation’ to the [infringement] defendant, who would not settle unless he had something to show for the settlement”).

160. See *supra* note 145 and accompanying text.

161. See *Actavis*, 133 S. Ct. at 2237 (majority opinion) (stating that traditional settlements without reverse payments do not present antitrust concerns).

Thus, antitrust liability cannot rest conclusively on the fact that a settlement offers compensation to the generic firm and eliminates some risk of competition. Under *Actavis*, the problem with reverse-payment settlements must be that they cause *excessive* delay in generic entry or *unduly* eliminate the risk of competition relative to some baseline for permissible settlements. If settlements without reverse payments are permissible, and if reverse-payment settlements are anticompetitive, then the baseline is implicitly determined by the economic model; settlements are illegal if the firms derive profits in excess of what they predicted a court would provide in litigation. Thus, this interpretation of *Actavis* still relies on the prediction theory.

3. *The settlement terms are merely evidence of patent weakness*

As discussed above, some of the economic literature on patent settlements committed an ontological error, conflating law with predictions about what courts will do.¹⁶² Although the Court adopted the conclusions from this literature,¹⁶³ it does not follow that the Court necessarily committed the same errors. Perhaps the Court was merely holding that the settlement terms have epistemic value for determining the strength of the patent. In a well-functioning legal system, judicial decisions are presumably correlated with correct legal answers, and experienced lawyers are reasonably competent at predicting what courts will do. Thus, a court could view the terms of a settlement as useful information that could inform its analysis of the strength of a patent.

Such reasoning, however, cannot explain why a court should treat the settlement terms as decisive. If the standard for legality depends solely on the parties' expectations at the time of the settlement, as some commentators argue,¹⁶⁴ then the actual merits would be irrelevant and courts would be justified in excluding arguments about the merits of the patent. However, if the standard for legality is based on an objective determination of the strength of the patent and the settlement terms are merely evidence of that strength, then there is no reason for courts to exclude arguments about the merits of the patent. Thus, the Supreme Court's observation that "it is normally

162. See *supra* Section II.B.

163. *Actavis*, 133 S. Ct. at 2234–37.

164. See Edlin et al., *supra* note 83, at 617 (arguing that "the correct antitrust analysis must be based on what was reasonably known to the parties about patent validity and infringement at the time they entered into their settlement," and that subsequent findings regarding patent validity and infringement do not determine whether there was an antitrust violation).

not necessary to litigate patent validity to answer the antitrust question¹⁶⁵ is inconsistent with the view that the settlement terms are merely evidence of the patent strength. Similarly, the refusal of some lower courts to consider arguments about patent validity¹⁶⁶—even in circumstances where the validity had already been litigated in other lawsuits¹⁶⁷—is starkly at odds with the view that courts are using the settlement terms solely for their epistemic value.

Of course, a determination about actual validity and infringement would not necessarily be dispositive regarding the *ex ante* reasonableness of the settlement, although it would certainly be informative.¹⁶⁸ However, the parties' predictions about the outcome of litigation are also highly imperfect proxies for the merits. Although litigants' predictions about court rulings are likely correlated with correct decisions, the precise correlation is unknowable. Thus, if the settlement terms are merely informative of the strength of the patent, it is difficult to justify excluding arguments that directly address the merits.

D. *Legitimate Forms of Prediction in Legal Reasoning*

When discussed in its most radical form, the prediction theory clearly cannot supply adequate justifications for judicial decisions. As Hart demonstrated, “prophecies of what the courts will do in fact,”¹⁶⁹ by themselves, cannot supply adequate justifications for judicial decisions.¹⁷⁰ However, in certain narrow contexts, courts have legitimately relied upon predictions of court decisions. For example, when deciding whether to grant preliminary injunctions, courts predict the plaintiff's likelihood of success on the merits.¹⁷¹ Similarly,

165. *Actavis*, 133 S. Ct. at 2236.

166. See *In re Aggrenox Antitrust Litig.*, 94 F. Supp. 3d 224, 240 (D. Conn. 2015) (clarifying that antitrust plaintiffs “need not plead (or prove) the weakness of the . . . patent, because the patent's ultimate validity is not at issue”); *In re Cipro Cases I & II*, 348 P.3d 845, 870 (Cal. 2015) (noting that evidence of patent validity “will not automatically demonstrate [that] an agreement was procompetitive”).

167. See Edlin et al., *supra* note 83, at 617 (discussing cases where the patent validity had been litigated after the settlement but before the antitrust action).

168. If the antitrust standard depends on the merits of the patent claim, then any reasons that would justify a holding of validity and infringement *ex post* would presumably support a holding that the settlement was reasonable *ex ante*.

169. See Holmes, *supra* note 100, at 994.

170. See *supra* notes 114–16 and accompanying text.

171. See *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008) (asserting that a plaintiff must establish a likelihood of success on the merits when seeking a preliminary injunction).

when a single justice of the Supreme Court considers whether to grant a stay of a lower court's decision, the justice must predict the likelihood that the entire Court would reverse the lower court.¹⁷² Moreover, in diversity cases, federal courts applying state law predict how the highest court in the state would resolve any uncertain legal issues.¹⁷³ Judicial approval is also required for the settlement of certain types of cases—such as class actions, shareholder derivative suits, cases arising from bankruptcy proceedings, and antitrust consent decrees in cases initiated by the United States¹⁷⁴—which generally require some assessment of the plaintiffs' likelihood of success.¹⁷⁵ Finally, lower courts also have occasionally discounted precedents based on predictions that higher courts will overrule them, although this practice is controversial,¹⁷⁶ and the Supreme Court has disapproved of it.¹⁷⁷

172. See *Rostker v. Goldberg*, 448 U.S. 1306, 1308 (1980) (stating that for a single justice to stay a lower court opinion, the applicant “must . . . establish[] that there is a ‘reasonable probability’ that four Justices will consider the issue sufficiently meritorious to grant certiorari or to note probable jurisdiction” and “that there is a fair prospect that a majority of the Court will conclude that the decision below was erroneous”).

173. Bradford R. Clark, *Ascertaining the Laws of the Several States: Positivism and Judicial Federalism After Erie*, 145 U. PA. L. REV. 1459, 1461 (1997). See generally Michael C. Dorf, *Prediction and the Rule of Law*, 42 UCLA L. REV. 651, 695–715 (1995) (describing how federal courts predict how state high courts would resolve issues of state law and the justifications for this practice); Michael Steven Green, *Horizontal Erie and the Presumption of Forum Law*, 109 MICH. L. REV. 1237, 1247–51 (2011) (describing a federal court's obligations when applying state substantive law in diversity cases).

174. See Jeremy T. Grabill, *Judicial Review of Private Mass Tort Settlements*, 42 SETON HALL L. REV. 123, 130–31 (2012) (identifying “well-known examples of settlements” that require judicial approval, including shareholder settlements, bankruptcy claims, and consent decrees in civil antitrust suits, as well as “less prominent examples,” such as environmental consent decrees, employment claim settlements, and settlements involving minors).

175. See *Carson v. Am. Brands, Inc.*, 450 U.S. 79, 88 n.14 (1981) (“Courts judge the fairness of a proposed compromise by weighing the plaintiff's likelihood of success on the merits against the amount and form of the relief offered in the settlement.”); *Weinberger v. Kendrick*, 698 F.2d 61, 73 (2d Cir. 1982) (holding that approval of a class action settlement is partially dependent on a comparison of “the terms of the compromise with the likely rewards of litigation” (quoting Protective Comm. for Indep. Stockholders of TMT Trailer Ferry, Inc. v. Anderson, 390 U.S. 414, 424–25 (1968))).

176. Compare C. Steven Bradford, *Following Dead Precedent: The Supreme Court's Ill-Advised Rejection of Anticipatory Overruling*, 59 FORDHAM L. REV. 39, 39–42 (1990) (outlining the concept of “anticipatory overruling” and concluding that it “makes the law more responsive to change”), and Evan H. Caminker, *Precedent and Prediction: The Forward-Looking Aspects of Inferior Court Decisionmaking*, 73 TEX. L. REV. 1, 1–8, 16–22 (1994) (developing and defending a “proxy model” of predictive decision making in

As these examples show, predictions about how courts will decide future cases are sometimes viewed as compatible with traditional legal reasoning, although the contours of this exception are not crisply delineated. Nevertheless, these exceptions have several common features that distinguish them from the inference in *Actavis*. First, legitimate forms of prediction involve one adjudicator predicting the decisions of another: the first typically has the authority to decide the case at hand, while the second has ultimate authority to resolve a particular legal issue that is relevant to the dispute. Second, the court must still justify the prediction in a written opinion using legitimate legal reasons. Third, the predictions do not have precedential force outside the context of the dispute. Finally, the prediction only occurs in circumstances where it is impossible or infeasible for the adjudicator with ultimate authority to address the issue.

1. Authority

In legitimate uses of legal prediction, the agent engaging in prediction has formal authority to resolve the dispute at hand. The agent is either predicting how it would resolve the issue itself if time permitted full consideration, or it is predicting the action of an agent that possesses superior authority to resolve the particular issue.¹⁷⁸ Moreover, both the predicting and the predicted agents must be unbiased adjudicators and may not have a pecuniary interest in the outcome.¹⁷⁹ For instance, a trial judge has authority to grant a preliminary injunction in circumstances where the judge does not have adequate time to fully examine the merits. Similarly, a single justice has authority to grant a stay of a lower court's decision, but the justice does not speak for the entire Court.¹⁸⁰ A judge approving a settlement is authorized by statutory or procedural rules to compare the settlement terms with a prediction of the likely outcome of litigation, but the approving judge cannot conclusively determine the

lower courts), *with* Dorf, *supra* note 173, at 679–89 (criticizing the prediction approach because it undermines “the rule of law” and the ideal of “impersonal justice”).

177. See *State Oil Co. v. Khan*, 522 U.S. 3, 20 (1997) (“The Court of Appeals was correct in applying [stare decisis] despite disagreement with [prior precedent], for it is this Court’s prerogative alone to overrule one of its precedents.”); *Rodriguez de Quijas v. Shearson/Am. Express, Inc.*, 490 U.S. 477, 484 (1989) (criticizing the court of appeals for predicting that the Supreme Court would overturn prior precedent).

178. See Caminker, *supra* note 176, at 7.

179. *Gibson v. Berryhill*, 411 U.S. 564, 579 (1973) (citing *Tumey v. Ohio*, 273 U.S. 510, 523 (1927)).

180. 28 U.S.C. § 2101(f) (2012); *Barnes v. E-Systems, Inc. Grp. Hosp. Med. & Surgical Ins. Plan*, 501 U.S. 1301, 1302 (1991).

merits.¹⁸¹ Lastly, federal courts have jurisdiction to hear diversity cases, but they may not authoritatively interpret state law.¹⁸² By contrast, in patent settlements, the litigants themselves clearly do not possess the authority to determine the validity of the patent at issue. Indeed, delegating authority to the litigants would violate due process because they have a direct and substantial economic stake in the outcome.¹⁸³

2. *Articulated reasons*

When one court or judge predicts the actions of a court with higher authority, the prediction is based on legitimate legal reasons, which are articulated in an opinion. When one court acts as a proxy for another, it still employs traditional methods of legal reasoning, although from the imagined perspective of the other court. A judge issuing a stay or a preliminary injunction need not provide a full-fledged opinion but must still articulate reasons for granting or denying the injunction. Similarly, a judge approving a class action settlement must hold a hearing and find that the settlement is “fair, reasonable, and adequate.”¹⁸⁴ A federal judge predicting the evolution of state law would discuss the reasons given in recent state court opinions and how they bear on the case at hand. The federal judge would not merely predict *how* the state court would rule, but also explain *why* the state court would rule that way. The federal judge need not personally agree with the reasons she believes the state court would give, but she must view these reasons as legitimate and articulate them in a written opinion.

Occasionally, and more controversially, federal courts have examined the views expressed by individual judges to predict whether a particular view would command a majority in a multimember court.¹⁸⁵ In such instances, however, federal courts still restrict their

181. See *Cotton v. Hinton*, 559 F.2d 1326, 1330 (5th Cir. 1977) (holding that “settlement terms should be compared with the likely rewards the class would have received following a successful trial of the case”).

182. See *Green*, *supra* note 173, at 1249–50 (observing that in diversity cases, a federal court may be called upon to “decide [an] unsettled issue” of state law, even though “it lacks the lawmaking power to do so”).

183. See *supra* note 179 and accompanying text.

184. FED. R. CIV. P. 23(e)(2).

185. See *State Farm Mut. Auto. Ins. Co. v. Armstrong*, 949 F.2d 99, 102 (3d Cir. 1991) (observing the views of individual justices of the Pennsylvania Supreme Court and concluding that under Pennsylvania law, “a majority . . . have expressed their belief, albeit in dictum, that the benefits afforded to innocent third-parties under the Financial Responsibility law may not be rescinded”); *Barnette v. W. Va. State Bd. of Educ.*, 47 F. Supp. 251, 252–53 (S.D. W. Va. 1942) (declining to treat *Minersville School*

consideration to legitimate legal reasons expressed by individual judges.¹⁸⁶ It would be illegitimate, for example, for a federal court to predict how a state supreme court would rule by examining the political affiliations of the justices or the contributors to their election campaigns. An all-Republican state supreme court may well be a valid predictor of its sympathy toward big business, but that court could not justify an opinion by stating, “We are Republicans, therefore we rule in favor of big business.” Similarly, a federal court in a diversity case could not use the same rationale to justify a prediction about state law that favors big business, irrespective of its predictive validity. Thus, any court predicting the decisions of another court must not merely explain its prediction, but must provide valid legal justification for its holding.

By contrast, when parties settle a dispute, they do not give reasons for the assessments underlying their bargain.¹⁸⁷ Thus, a court using a settlement as a surrogate for patent validity is not justifying its decision based on reasons derived from patent law. Moreover, the parties’ bargain will typically reflect all the reasons they anticipate a court would rely upon in assessing the patent, not merely the legitimate reasons. In reaching a settlement, the parties will presumably consider the unreliability of juries and the competence, ideological predilections, and perceived bias of the district judge.¹⁸⁸ Indeed, in patent settlements with millions of dollars at stake, it would be folly to ignore such factors in negotiating a settlement. When a subsequent court uses the settlement as a surrogate for a

District v. Gobitis, 310 U.S. 586 (1940), as binding on federal circuit courts because four of the seven Justices who participated in *Gobitis* had “given public expression to the view that [the decision was] unsound”), *aff’d*, 319 U.S. 624 (1943); Dorf, *supra* note 173, at 702–03 (criticizing the head-counting approach to prediction).

186. See *State Farm*, 949 F.2d at 103–04 (outlining previous opinions of various Pennsylvania Supreme Court justices to support the court’s legal predictions).

187. See Fiss, *Against Settlement*, *supra* note 2, at 1085 (describing how judges “explicate and give force to the values embodied in authoritative texts such as the Constitution and statutes,” a “duty [that] is not discharged when the parties settle”); Luban, *Settlements*, *supra* note 5, at 2639 (observing that settlements typically provide “little more than a bare announcement of how much money changed hands” and “no reasons or reasoning”).

188. *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 261 F. Supp. 2d 188, 208 (E.D.N.Y. 2003) (“[N]o matter how valid a patent is . . . it is still a gamble to place a technology case in the hands of a lay judge or jury.”), *aff’d*, 544 F.3d 1323 (Fed. Cir. 2008), *abrogated by* *FTC v. Actavis, Inc.*, 133 S. Ct. 2223 (2013); Dru Stevenson & Nicholas J. Wagoner, *Bargaining in the Shadow of Big Data*, 67 FLA. L. REV. 1337, 1364–72 (2015) (describing how litigants use databases that provide information about judges’ decisional tendencies when settling patent disputes).

legal judgment, however, it cannot isolate the legitimate considerations from the illegitimate ones. The court cannot know if the settlement was based on the parties' best assessment of the law or their negative assessments of the competence of judges and juries.

3. *Force of law*

The permissible forms of prediction have a third feature in common: they can be used to resolve particular claims, but they carry limited force of law. When a judge determines whether to grant a preliminary injunction or a temporary stay, the judge's opinion is not considered a final judgment on the merits.¹⁸⁹ Similarly, judicial approval of a settlement may be precedential as to the standards for approval but not to the underlying merits. Federal court predictions of state law are binding on the parties in the dispute, but such predictions do not have precedential effect in state courts.¹⁹⁰ In *Actavis*, by contrast, the litigants' predictions, as embodied in their settlement of the infringement case, have binding force in the subsequent antitrust action.¹⁹¹

4. *Necessity of prediction*

Finally, prediction is permitted when procedural rules or practical considerations preclude the authoritative court from resolving the legal issue in the first instance. The very nature of preliminary injunctions and temporary stays limits their application to situations where a plaintiff "is likely to suffer irreparable harm in the absence of preliminary relief."¹⁹² Similarly, approval of a settlement must necessarily take place prior to a determination of the merits. Federal courts interpreting state law in diversity cases are sometimes able to certify questions of state law to the state supreme court, but the state

189. See RESTATEMENT (SECOND) OF JUDGMENTS § 13 (AM. LAW INST. 1982). The holding can be precedential as to the standards for granting preliminary injunctions or temporary stays. A preliminary injunction similarly does not count as a victory on the merits for determining whether fee-shifting statutes apply. See *Sole v. Wyner*, 551 U.S. 74, 77–78 (2007) (holding that prevailing on a motion for a preliminary injunction is not sufficient for an award of attorneys' fees under 42 U.S.C. §§ 1983, 1988 (2012)).

190. See *Clark*, *supra* note 173, at 1508–13 (discussing how a federal court prediction of state law can be binding as to the litigants even if it lacks precedential force in state courts).

191. *Actavis*, 133 S. Ct. at 2230.

192. *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008); see *Rostker v. Goldberg*, 448 U.S. 1306, 1308 (1980) (requiring "a demonstration that irreparable harm is likely to result from the denial of a stay" as a precondition for granting a stay).

courts are not obligated to resolve every such question.¹⁹³ By contrast, the argument for permitting lower courts to predict the decisions of higher courts is somewhat weaker. Although it may be unlikely that the higher court itself will resolve the issue on appeal, the higher court possesses the power to do so.

In *Actavis*, the Court was concerned about the substantial burdens of litigating a patent dispute as part of an antitrust action.¹⁹⁴ However, there is no doubt that a court adjudicating an antitrust challenge to a patent settlement has the capacity to decide all relevant patent issues. In contrast to a court approving a settlement or considering a preliminary injunction, there are also no time constraints that would preclude the court from resolving these issues.

5. Conclusion

The type of prediction that the Court relied on in *Actavis* differs starkly from other accepted forms of legal prediction. The litigants lacked formal authority to interpret the law, and they did not articulate legal reasons in predicting the outcome of their litigation. Nonetheless, their settlement carried legal force in a subsequent antitrust case. Finally, although addressing the merits of the patent would have been burdensome, it was not impossible to do so.

The Court provided only a cursory discussion of the rationale underlying its use of the settlement terms as a surrogate for the patent.¹⁹⁵ It did not acknowledge that it was relying on the litigants' predictions of the merits, nor did it carefully consider the reasons justifying this holding. Indeed, the Court's broad expansion of the use of legal prediction in *Actavis* may well have been unintentional. Now that the Court has validated this practice, however, litigants will likely argue that courts should draw similar inferences in other contexts or from other types of economic assets.¹⁹⁶ Given how sharply *Actavis* deviates from prior understandings regarding the use of legal

193. See Green, *supra* note 173, at 1250 n.65. In fact, a few states do not permit certification at all. See Deborah J. Challener, *Distinguishing Certification from Abstention in Diversity Cases: Postponement Versus Abdication of the Duty to Exercise Jurisdiction*, 38 RUTGERS L.J. 847, 866 n.133 (2007) (stating that Arkansas and North Carolina do not permit certification as a statutory matter, while the Missouri Supreme Court refuses to answer certified questions on state constitutional grounds).

194. *Actavis*, 133 S. Ct. at 2234 (noting the Eleventh Circuit's "fear that antitrust scrutiny of a reverse payment agreement would require the parties to litigate the validity of the patent," which would be "time consuming, complex, and expensive").

195. *Actavis*, 133 S. Ct. at 2237–38.

196. For examples where courts and scholars have considered such arguments, see *infra* Section IV.B.

prediction in judicial decisions, it will be important for lower courts to provide principled limits to the use of such inferences.

III. *ACTAVIS* IGNORES FEEDBACK EFFECTS BETWEEN THE COURT AND THE LITIGANTS

Although the terms of a patent settlement cannot provide a legitimate justification for a subsequent holding on the validity or infringement of the patent, courts may potentially draw inferences from settlements in making purely factual or discretionary determinations. The terms of such settlements may also be informative to actors outside the court system, who need not be concerned with legal justification. For example, if a settlement signals a lack of confidence in the patent, the Patent and Trademark Office (PTO) could initiate an administrative review of the patent's validity.¹⁹⁷ The FTC may also exploit such signals to determine which firms to investigate. Similarly, other generic competitors may draw inferences about the weakness of a patent from the terms of such a settlement, which may inform their decisions about whether to challenge the patent.

Firms negotiating a settlement should therefore consider the inferences that competitors and regulators may draw about the patent from the terms of their settlement and how these inferences will affect the behavior of these third parties. Similarly, agents drawing inferences from settlements must properly account for the fact that the settling firms may adjust their settlement strategy as a result of these inferences. Thus, there is an interdependence between the settlement terms and subsequent inferences made by courts, regulators, and rivals.

In an analogous context, finance scholars have used the term "feedback effects" to describe the two-way influences between asset prices and decision making by firms and regulators.¹⁹⁸ Stock prices,

197. See Gregory Dolin, *Reverse Settlements as Patent Invalidation Signals*, 24 HARV. J.L. & TECH. 281, 322–23 (2011) (proposing that the Patent and Trademark Office treat reverse-payment settlements as a signal that would trigger the administrative review process).

198. See Philip Bond et al., *The Real Effects of Financial Markets*, 4 ANN. REV. FIN. ECON. 339, 343 (2012) ("[T]he extent to which prices reveal information about an underlying state variable depends critically on how decision makers will use this information. When using information in the price, decision makers might harm the informativeness of the price with respect to the variable they wish to learn."); Philip Bond & Itay Goldstein, *Government Intervention and Information Aggregation by Prices*, 70 J. FIN. 2777, 2780 (2015) (stating that government policies affect "[t]he information in security prices" and that "it is thus important to consider the consequences this

for example, convey information about a firm's prospects to the firm's managers, competitors, investors, and other market participants. These agents may exploit this information when making decisions, which may in turn affect stock prices. For example, a regulator considering a bailout of a struggling bank may draw inferences about the firm's financial condition from its stock price, but the stock price will also reflect the market's expectation about the likelihood of a bailout. Thus, in deriving inferences about the firm's financial condition from the stock price, the regulator should account for how the market's expectation about the regulator's action influences the stock price.¹⁹⁹

Similar reasoning applies to inferences from settlements. The Court in *Actavis* implicitly relied on an economic model that assumed the litigants were settling in the shadow of an expected court judgment.²⁰⁰ However, this model did not account for the fact that a court could draw an inference from the settlement. From the external perspective of a policy-maker, such models demonstrated the potential for collusive settlements and offered strong arguments for regulating patent settlements. Nevertheless, the model did not incorporate the feedback effects that arose once courts were permitted to draw inferences from settlement terms. If courts are drawing such inferences, parties are no longer settling in the shadow of the law; they are settling in the shadow of the inference a court will draw from their settlement. By drawing this inference from the settlement terms, the Court negated the validity of the economic model upon which it relied.

Thus, the *Actavis* inference is valid only if one assumes that the parties are naïve about the inference that a court will derive from the terms of their settlement. They must be oblivious to the possibility that a subsequent court will infer their beliefs from the settlement terms and hence they must not internalize the effects of this inference. The Court's holding in *Actavis* thus rests on a peculiar set of assumptions about the parties' sophistication: they are evidently sophisticated enough to generate a reliable prediction about the outcome of the patent litigation, yet they are completely naïve about the potential for antitrust liability.

has for price informativeness"); Emre Ozdenoren & Kathy Yuan, *Feedback Effects and Asset Prices*, 63 J. FIN. 1939, 1939 (2008) (modeling how "asset prices [are] determined if price affects fundamental value, which in turn affects price").

199. See Bond & Goldstein, *supra* note 198, at 2780.

200. *Actavis*, 133 S. Ct. at 2237.

These assumptions would be absurd for any settlement that took place after *Actavis*. Litigants that settled prior to *Actavis*, however, would not have perfectly anticipated the Court's ruling. Nevertheless, as long as antitrust liability was a plausible concern, rational litigants would have considered the possibility that a court would draw an inference from their settlement terms and adjusted their behavior accordingly. Indeed, there is evidence that litigants considered antitrust consequences in structuring settlements. If litigants were confident that reverse-payment settlements were immune from antitrust scrutiny, they could have maximized their profits by structuring settlements that precluded generic entry for the entire term of the relevant patent.²⁰¹ Yet most reverse-payment settlements did not exclude competition for the full terms of the relevant patents. Empirical evidence also shows that litigants considered the potential of antitrust liability. For example, reverse-payment settlements disappeared in 2000 when the FTC announced it would challenge them, reappeared in 2005 when the Second and Eleventh Circuits deemed them to be legal,²⁰² and then declined substantially again after *Actavis*.²⁰³

Feedback effects also complicate inferences by non-judicial actors such as regulators or competitors. As long as the settling parties are aware of the signaling value of their settlement, they will internalize the effects their settlement has on regulators and competitors. For example, a settlement that reveals doubt about the patent's validity might provoke a generic manufacturer to challenge the patent or the PTO to review it. Because such effects will influence the patent holder's incentives in settling, the settlement will not directly reflect the patent holder's beliefs about the outcome of litigation. Such beliefs can only be inferred from a sophisticated signaling model.

This flaw in the *Actavis* inference can be remedied by modeling the interaction between the settling parties and the court as a signaling game. Indeed, a robust body of literature in law and economics discusses how courts may draw valid inferences from signaling

201. See Murat C. Mungan, *Reverse Payments, Perverse Incentives*, 27 HARV. J.L. & TECH. 1, 34–36 (2013) (showing that the parties would exclude entry for the entire patent life if reverse payments were per se legal).

202. See Carrier, *Unsettling Drug Patent Settlements*, *supra* note 8, at 75.

203. See FTC, AGREEMENTS FILED WITH THE FEDERAL TRADE COMMISSION UNDER THE MEDICARE PRESCRIPTION DRUG, IMPROVEMENT, AND MODERNIZATION ACT OF 2003, at 3 (2016), <https://www.ftc.gov/system/files/documents/reports/agreements-filled-federal-trade-commission-under-medicare-prescription-drug-improvement/160113mmafy14rpt.pdf>.

behavior by litigants or other courts.²⁰⁴ Finance scholars have developed sophisticated models of feedback effects in financial markets, demonstrating how firms and regulators can draw valid inferences from asset prices, which simultaneously internalize predictions about the firms' and regulators' actions.²⁰⁵

To illustrate how valid inferences could be drawn from settlements, suppose that a patent holder settles a lawsuit on terms that signal a lack of confidence that the patent will be upheld. If a court, regulator, or competitor could observe the terms of the settlement, it could infer the patent holder's lack of confidence, which would in turn inform its decisions. A competitor, for example, could challenge the patent or market an infringing product; a regulator could review the patent. A rational patent holder would recognize the signaling effects of the settlement and would take them into account when bargaining over the settlement terms. Similarly, the rational competitor would understand that the patent holder was aware of the signaling effects of the settlement. In the terminology of game theory, the dynamic between the parties could be modeled as a signaling game,²⁰⁶ and the parties would choose strategies that result in a perfect Bayesian equilibrium.²⁰⁷ The litigants and the court would be drawing rational inferences from the others' behavior, and each would choose an optimal course of conduct given their beliefs.

204. See Ronen Avraham & Abraham Wickelgren, *Third-Party Litigation Funding—A Signaling Model*, 63 DEPAUL L. REV. 233, 247–54 (2014) (constructing a model in which a Bayesian judge draws inferences from litigation financing terms); Andrew F. Daughety & Jennifer F. Reinganum, *Appealing Judgments*, 31 RAND J. ECON. 502, 502–03 (2000) (developing a model in which an appellate court can draw inferences from a litigant's decision whether to appeal); Chris William Sanchirico, *The Burden of Proof in Civil Litigation: A Simple Model of Mechanism Design*, 17 INT'L REV. L. & ECON. 431, 432 (1997) (constructing a model of Bayesian adjudication that justifies traditional burdens of proof); Matt Spitzer & Eric Talley, *Judicial Auditing*, 29 J. LEGAL STUD. 649, 649–51 (2000) (developing a model of judicial hierarchy in which a Bayesian higher court decides whether to audit lower court decisions).

205. See *supra* note 198 and accompanying text.

206. In two-player signaling games, one player has superior information about a particular parameter and chooses an action that may convey information about this parameter to the uninformed player. See DREW FUDENBERG & JEAN TIROLE, *GAME THEORY* 324–26 (1991) (defining signaling games). In this context, there are three players: the patent holder, the generic firm, and the court. The first two players have private information about the strength of the patent, which is potentially revealed to the court through the settlement terms.

207. *Id.* at 175–80 (defining perfect Bayesian equilibrium). A perfect Bayesian equilibrium can be understood informally as “a set of strategies and beliefs such that, at any stage of the game, strategies are optimal given the beliefs, and the beliefs are obtained from equilibrium strategies and observed actions.” *Id.* at 326.

However, the economic analysis upon which *Actavis* relies cannot be premised on any such model of rational behavior. The inference in *Actavis* depends on the notion that the magnitude of a reverse payment conveys information to the court about the strength of the patent. In game theory parlance, there must be a separating equilibrium.²⁰⁸ The litigants' actions—the terms on which they settle the infringement action—must vary according to their beliefs about the strength of the patent.

Such a separating equilibrium may well have existed with the litigants in *Actavis*. The possibility of antitrust liability was evidently not sufficient to deter the reverse payment at the time of their settlement, although antitrust concerns may have reduced the magnitude of the payment.²⁰⁹ This would be true for other litigants who settled their infringement claims prior to *Actavis*.

Yet the same reasoning does not support applying the inference going forward. If the rule in *Actavis* provides sufficient deterrence against reverse payments, then the separating equilibrium disappears. If the litigants are aware that a reverse-payment settlement will trigger antitrust liability, then they will anticipate that their agreement could be deemed unenforceable, the patent could lose much of its value, and parties could face financial penalties and a class action lawsuit seeking treble damages. Litigants who believe that a patent is likely to be upheld would not want to incur such costs, but neither would litigants who were less confident. If the penalties for reverse payments were severe enough, then all patent litigants would choose to avoid them. In the terminology of signaling games, there would be a pooling equilibrium:²¹⁰ all patent litigants would choose the same signal—that is, no reverse payment. As such, the absence of a reverse payment would not convey any information about the litigants' beliefs.

If game theory predicts that all rational patent owners would eschew reverse payments, then it is difficult to draw inferences about litigants' beliefs if they agree to a settlement that includes a reverse

208. In a signaling game, a separating equilibrium is one in which the informed player chooses a strategy that fully reveals its private information. *Id.* at 327–28.

209. If the parties reduced the size of the reverse payment due to antitrust concerns, then the size of the reverse payment would understate the parties' actual pessimism about the outcome of litigation and hence underestimate damages. Nevertheless, the inference would be valid with regard to the conclusion that the profits from settlement exceed the expected profits from litigation.

210. In a signaling game, a pooling equilibrium is one in which the informed player always chooses the same strategy, so that the informed player does not reveal any of its private information. FUDENBERG & TIROLE, *supra* note 206, at 327.

payment. In game theory parlance, a reverse payment would be “off the equilibrium path,” because rational actors would never follow that course.²¹¹ Perhaps the litigants are not fully rational, which would invalidate all of the economic analysis upon which *Actavis* relies. The model might also omit other considerations, such as whether a court can precisely value the terms of a complex settlement.²¹² A more sophisticated signaling model, one that incorporates error in valuing the settlement terms, might potentially support a valid inference about the parties’ beliefs from a reverse-payment settlement. In *Actavis*, however, the Court did not rely on any such sophisticated model. Even if the inference in *Actavis* was valid as applied to the litigants in that case, as long as the Court’s holding provides adequate deterrence against reverse payments, then the Court’s reasoning cannot justify the same inference in future cases.

More sophisticated signaling models could support valid inferences from settlement terms, but such models would require a sophisticated understanding of game theory. This game theoretic approach would also require a court to determine a prior probability of validity, which would represent the court’s belief about the validity of the patent before it even observes the settlement terms. Conceivably, the court could reach its own independent assessment of the patent strength on the basis of conventional legal materials, and then update this assessment using the settlement terms. However, this approach would negate the primary advantage of *Actavis*—avoiding an inquiry into the merits. Alternatively, a prior probability could be stipulated based on the presumption of patent validity; however, this presumption does not apply to infringement. A third alternative would be to derive a prior probability from a broader reference class of patents; however, the choice of reference class will be inherently contestable.²¹³

Given these complexities, it is questionable whether such an approach would be more feasible for courts than simply investigating the merits of the patent. A game theoretic approach to inference might be more practical for regulatory agencies, which possess greater technical sophistication. Agencies, for example, could

211. ROBERT GIBBONS, *GAME THEORY FOR APPLIED ECONOMISTS* 178 (1992).

212. See Thomas McGuire et al., *Resolving Reverse-Payment Settlements with the Smoking Gun of Stock Price Movements*, 101 IOWA L. REV. 1581, 1585–86 (2016) (describing the difficulties that courts encounter in estimating the value of reverse payments).

213. See Ronald J. Allen & Michael S. Pardo, *The Problematic Value of Mathematical Models of Evidence*, 36 J. LEGAL STUD. 107, 109–10 (2007) (discussing how the prior probability in a Bayesian model of legal inference depends critically on the choice of reference class).

exploit signals generated from patent settlements to determine which patents to review and which settlements to challenge as anticompetitive. However, deriving valid inferences from settlements involves serious conceptual challenges that were overlooked in the Court's opinion as well as in the academic commentary on *Actavis*.

IV. IMPLICATIONS

A. *Implications for Antitrust Cases Involving Reverse Payments*

Much of the confusion in the academic literature and case law on reverse-payment settlements stems from a failure to distinguish law, as viewed from an internal perspective, with predictions about court judgments, as made by external observers. As a matter of economic reality, the legal standard announced in *Actavis* was based on the litigants' predictions about court judgments. Nevertheless, the majority's opinion itself did not acknowledge that it was departing from the internal point of view in analyzing the patent issues in the case. As a result, the antitrust standard for patent settlements may sometimes depend on what parties predict courts will do but at other times on the legal merits. The Court's failure to acknowledge this distinction created deep confusion about when an internal or external perspective should apply.

Unsurprisingly, district courts have struggled to apply *Actavis*.²¹⁴ Some courts have interpreted *Actavis* broadly, condemning reverse payments and refusing to consider alternative explanations for them.²¹⁵ Other courts, however, have interpreted its holding narrowly. For example, some courts have applied *Actavis* only to reverse payments involving cash, but not to other forms of

214. See *In re Aggrenox Antitrust Litig.*, 94 F. Supp. 3d 224, 235 (D. Conn. 2015) ("Several district courts have already applied *Actavis*, with not entirely consistent results."); Michael A. Carrier, *How Not to Apply Actavis*, 109 NW. U. L. REV. ONLINE 113, 113–14 (2015), http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1005&context=nulr_online (criticizing district courts for failing to follow *Actavis* faithfully); Davis & McEwan, *supra* note 21, at 567–70, 573–74 (discussing various ways lower courts have misinterpreted *Actavis*).

215. See, e.g., *In re Aggrenox*, 94 F. Supp. 3d at 241–46 (using *Actavis*'s rule of reason analysis in determining that the plaintiffs alleged sufficient plausible facts to survive a motion to dismiss); *In re Niaspan Antitrust Litig.*, 42 F. Supp. 3d 735, 750–51 (E.D. Pa. 2014) (criticizing a narrow reading of *Actavis*); *United Food & Commercial Workers Local 1776 v. Teikoku Pharma USA, Inc.*, 74 F. Supp. 3d 1052, 1065–66, 1069–73 (N.D. Cal. 2014) (holding that the court does not have to analyze the validity of the patent to determine that the allegations are adequate under the rule of reason).

consideration.²¹⁶ At least one federal district court has questioned whether courts can avoid addressing the strength of the patent in the antitrust analysis.²¹⁷ These courts may be motivated in part by skepticism about the Court's reasoning.²¹⁸

In some cases, such as settlements involving reverse payments in cash or other readily valued assets, a court can simply apply the rule of *Actavis* without confronting its underlying rationale. Many settlements, however, involve transactions that are substantially more complicated.²¹⁹ For example, patent settlements may be coupled with licensing agreements, joint marketing agreements, agreements by the generic firm to serve as a backup producer of the branded drug, or "no authorized generic" provisions in which the branded firm agrees not to market its own generic version of the drug during the exclusivity period.²²⁰ Indeed, settling firms may intentionally choose arrangements that are difficult to value in order to obscure the magnitude of a reverse payment.

In such cases, courts will be forced to grapple with some of the unanswered questions raised by *Actavis*. For example, the court may need to address whether *Actavis* actually rests on a Holmesian conception of patent law or whether the size of the reverse payment merely serves as a proxy for the weakness of the patent.²²¹ If the latter, then courts will have to clarify when antitrust defendants may present arguments regarding the merits of the patents and how such arguments should be weighed against the inferences drawn from the settlement.

216. See *In re Loestrin 24 FE Antitrust Litig.*, 45 F. Supp. 3d 180, 192 (D.R.I. 2014) (holding that *Actavis* only applies to reverse payments in the form of cash), *vacated by* 814 F.3d 538 (1st Cir. 2016); *In re Lamictal Direct Purchaser Antitrust Litig.*, 18 F. Supp. 3d 560, 570 (D.N.J. 2014) (same), *vacated*, 791 F.3d 388 (3d Cir. 2015); see also *In re Effexor XR Antitrust Litig.*, No. 11-5479 (PGS)(LHG), 2014 WL 4988410, at *19-23 (D.N.J. Oct. 6, 2014) (dismissing a lawsuit because plaintiffs failed to provide a reliable foundation for valuing a non-cash reverse payment).

217. See *FTC v. Cephalon, Inc.*, 36 F. Supp. 3d 527, 531 (E.D. Pa. 2014) (doubting whether the FTC's position reflected the most reliable interpretation of *Actavis* when it argued that "a patent's strength or weakness is irrelevant to the antitrust analysis of a reverse payment settlement" and "there is simply no room for a defense based on the strength of the patent").

218. Cf. Davis & McEwan, *supra* note 21, at 560-61, 561 n.18 (attributing lower courts' defiance of *Actavis* to their discomfort with "the internal logic . . . of federal antitrust law" and their "ingrained disposition in favor of settlement").

219. William O. Kerr & Cleve B. Tyler, *Measuring Reverse Payments in the Wake of Actavis*, 28 A.B.A. ANTITRUST MAG., Fall 2013, at 30 (2013).

220. *Id.*

221. See *supra* Section II.C.3.

If defendants are allowed to present arguments on the merits, then courts will have to determine what sort of inquiry is appropriate. The legality of settlements could be assessed by reference to an *ex ante* test, comparing the terms of the settlement with an estimate of the probability that the patent would be found valid, as determined at the time of the settlement.²²² Alternatively, courts could determine the validity of the relevant patents on an *ex post* basis, as Chief Justice Roberts advocated in his *Actavis* dissent.²²³ Although they are distinct tests, they are clearly interrelated. If a court determines a patent to be valid *ex post*, the reasons supporting that conclusion would likely also support a holding that any settlement within the scope of that patent was *ex ante* reasonable.²²⁴

If courts acknowledge that a reverse payment is merely a proxy for patent strength, then courts must address whether defendants should be allowed to present arguments that the terms of their settlement provide a poor proxy. For example, litigants in patent cases often consult databases that provide detailed information about the judges' tendencies to grant or deny particular types of motions.²²⁵ Accordingly, antitrust defendants could argue that they settled in the shadow of a particularly patent-hostile judge, so their patent infringement case was stronger than the settlement terms indicated. Defendants also could argue that they settled following a motion that was wrongly decided, so their perceived chances of winning did not correspond to the merits.

At least two scenarios may force judges to address some of the difficult questions underlying *Actavis*. First, some patent settlements also involve the settlement of counterclaims or parallel litigation involving the same firms.²²⁶ To determine whether such a settlement was anticompetitive under *Actavis*, a court would need to determine whether the other claims were settled for fair value, if the patentee

222. See *supra* note 87 and accompanying text.

223. See *FTC v. Actavis, Inc.*, 133 S. Ct. 2223, 2244 (2013) (Roberts, C.J., dissenting) (arguing that the majority's arguments "are unresponsive to the basic problem that settling a patent claim *cannot possibly* impose unlawful anticompetitive harm if the patent holder is acting within the scope of a valid patent and therefore permitted to do precisely what the antitrust suit claims is unlawful").

224. See *supra* note 168.

225. See *Stevenson & Wagoner*, *supra* note 188, at 1364–72 (describing how parties negotiating a patent settlement use databases such as Lex Machina that provide information about judges' decisional tendencies).

226. See, e.g., *In re Lipitor Antitrust Litig.*, 46 F. Supp. 3d 523, 533 (D.N.J. 2014) (describing a pharmaceutical patent settlement in which firms simultaneously settled parallel litigation).

overpaid, or if the generic firm underpaid to settle these claims. Thus, a court would need to assess the likelihood of each party prevailing in the other claim. If the parties simultaneously settled two infringement cases, the legality of each settlement would then require an inquiry into the merits of the patent at issue in the *other* case. Given the complexity that this inquiry might entail, it might make more sense for a court to simply evaluate the merits of the patent at issue in each case.

Second, some settlement provisions may have asymmetric effects on the parties, so that the loss to the patent holder is smaller than the gain to the generic firm. Whenever the parties have potential gains from trade—through licensing, backup manufacturing, or co-development agreements—they can structure the transaction so that both parties are better off relative to a settlement based only on the entry date. For instance, a patent holder could supply another drug to the generic at a price that is above its own cost but below the price that the generic could otherwise negotiate.²²⁷ Such a deal could generate positive surplus to both parties.

To illustrate further, suppose that a patent has ten years remaining in its term, and the parties agree that there is a fifty percent chance that it will be upheld, so that entry after five years would yield the same expected surplus as litigation. Also suppose that a licensing deal generates positive surplus and distributes it so that both the patent holder and the generic firm are strictly better off. The patent holder might be willing to allow entry after four years, and the generic might be willing to settle for entry after six years. Now, only some of the mutually acceptable settlement outcomes would harm consumers, relative to the expected outcome of litigation. In this scenario, a court would have to assess the strength of the patent directly in order to determine whether the settlement was anticompetitive. Thus, the court would have to confront whether the assessment of the patent is based on its legal merits or its economic value.

To be sure, even a limited inquiry into the merits of the patent would be burdensome for the government, the pharmaceutical companies, and the courts.²²⁸ However, courts are capable of conducting patent “mini-trials” when appropriate.²²⁹ Courts regularly litigate patent issues within antitrust cases that involve allegations of

227. See *FTC v. AbbVie, Inc.*, 107 F. Supp. 3d 428, 436 (E.D. Pa. 2015) (describing a settlement that included such an agreement).

228. *Actavis*, 133 S. Ct. at 2234 (majority opinion).

229. *Gunn v. Minton*, 133 S. Ct. 1059, 1065 (2013).

sham litigation²³⁰ or allegations that a patent was procured by fraud.²³¹ Courts also regularly conduct “mini-trials” in legal malpractice cases involving patent issues such as when a patent is invalidated due to a lawyer’s alleged incompetence.²³²

Of course, if the government and the defendants both believed that litigating a patent would be too burdensome, they would be free to settle the antitrust case on terms that are mutually acceptable. If a large reverse payment accurately predicted that a patent was unlikely to be upheld, the government would have significant leverage over the patent holder in negotiating a settlement. Admittedly, the government would have been in a weaker bargaining position than if it did not have to litigate the patent at all. Even under those circumstances, however, the threat of an antitrust action may still be sufficient to deter most collusive settlements involving weak pharmaceutical patents.

Whether courts will succeed in developing coherent case law to address collusive patent settlements remains unclear; a legislative or regulatory solution may still be necessary.²³³ Agencies do not face the same limitations as courts in drawing inferences from settlement terms, and they potentially possess the sophistication to do so. In addition, *Actavis* may have left some anticompetitive settlements untouched. For example, the patent holder could agree to license the challenger as a distributor of an authorized generic version of the drug. Such a license could be struck at terms that allow the firms to share monopoly profits, yet such a settlement would likely be legal

230. See Ian Simmons et al., *The Continuing Relevance of Patent Validity in Reverse-Payment Litigation*, 2014 CONCURRENCES, No. 2, at 25, 28. In such cases, courts may conduct bifurcated proceedings, in which the patent issues are litigated prior to the antitrust issues. See *id.* at 28 & nn.108–09 (citing examples of cases involving bifurcated proceedings).

231. See *id.* at 25. These claims are more commonly known as “Walker Process claims.” See *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172 (1965).

232. See *Minton*, 133 S. Ct. at 1065 (discussing how a plaintiff in a legal malpractice case would need to demonstrate, through a mini-trial, that his patent would have been upheld but for his attorney’s error).

233. See Dolin, *supra* note 197; Rebecca S. Eisenberg & Daniel A. Crane, *Patent Punting: How FDA and Antitrust Courts Undermine the Hatch-Waxman Act to Avoid Dealing with Patents*, 21 MICH. TELECOMM. & TECH. L. REV. 197, 203–04 (2015) (advocating a greater role for the FDA in addressing patent validity and infringement in reviewing patent settlements); C. Scott Hemphill, *An Aggregate Approach to Antitrust: Using New Data and Rulemaking to Preserve Drug Competition*, 109 COLUM. L. REV. 629, 670–82 (2009) (describing the FTC’s comparative institutional advantage over courts in regulating patent settlements due to greater expertise and superior ability to collect and analyze information).

under *Actavis*.²³⁴ A policy restricting collusive settlements will likely be most effective if settling firms have a clear understanding of the standards for legality. Given the confusions underlying the rationale in *Actavis*, a regulatory solution may be more effective than case-by-case adjudication in providing such clarity.²³⁵

B. Implications for Inferring the Merits from Other Economic Indicators

The concerns that this Article raises about *Actavis* may also apply to other contexts in which courts draw inferences about substantive law from economic indicators that reflect agents' predictions about judicial decisions. One district court applying *Actavis*, for example, looked beyond the terms of the settlement to draw inferences from other economic indicators.²³⁶ The court observed that the generic firm launched its drug "at risk"—before the patent litigation had been resolved—so that it would be liable for damages if the patent was valid and infringed.²³⁷ Because the at-risk launch suggested that the generic firm was confident it would prevail in litigation, the court inferred that the patent was weak.²³⁸ The court further reasoned that this inference was bolstered by a large drop in the patent holder's share price when the at-risk launch was announced,²³⁹ suggesting that investors also believed that the generic firm would prevail in litigation. Recently, some antitrust scholars have argued that courts should follow a similar approach, inferring the legality of patent settlements from changes in stock prices after settlements are announced.²⁴⁰ Scholars have also advocated allowing courts to draw

234. See Eisenberg & Crane, *supra* note 233, at 240–41 (describing such a licensing arrangement as an "anticompetitive work-around[]" to *Actavis*); Glynn S. Lunney, Jr., FTC v. Actavis: *The Patent-Antitrust Intersection Revisited*, 93 N.C. L. REV. 375, 428–30 (2015) (interpreting *Actavis* as permitting such licensing arrangements despite their anticompetitive potential).

235. See Hemphill, *supra* note 233, at 673–82 (advocating the use of FTC rulemaking to address reverse-payment settlements and discussing the FTC's statutory authority to do so).

236. *In re Niaspan Antitrust Litig.*, 42 F. Supp. 3d 735 (E.D. Pa. 2014).

237. *Id.* at 756.

238. *Id.*

239. *Id.*

240. See McGuire et al., *supra* note 212, at 1582–83.

inferences about the merits of cases from prediction markets²⁴¹ and the terms of litigation financing agreements.²⁴²

Such inferences would raise the same issues as in *Actavis*. For instance, an at-risk launch by a generic firm reflects its beliefs about the likelihood that a court would uphold the patent. Such beliefs, however, do not provide legal justification for a court holding that the patent is weak. Feedback effects also complicate the inference. Once firms recognize that courts will draw inferences from their strategy, more firms will enter at risk in order to increase their chances of prevailing in the patent action.²⁴³ Thus, a court must recognize that the at-risk launch serves partly as a signal to the court and must account for this in drawing inferences about the strength of the patent.

These arguments apply as well to inferences from stock prices. Stock market investors may predict that a court would hold the patent to be weak, but this hardly serves as a justification for a court to do so. Furthermore, if market speculators are aware that courts will draw inferences from their activity, they will internalize the effects of these inferences when engaging in market speculation. Thus, feedback effects will complicate the process of drawing inferences from stock prices.²⁴⁴

CONCLUSION

Given the pervasiveness of settlement and the potential for abuse, courts will continue to play an essential role in reviewing settlements. This is especially true in the context of pharmaceutical patent settlements, where firms have strong incentives to collude. The process of reviewing settlements, however, inevitably involves tradeoffs. *Ex post* review of the merits is burdensome and may inhibit the settlement of disputes, however, *ex ante* review often provides only

241. See MICHAEL ABRAMOWICZ, PREDICTOCRACY: MARKET MECHANISMS FOR PUBLIC AND PRIVATE DECISION MAKING 227–28 (2008).

242. See Michael Abramowicz & Omer Alper, *Screening Legal Claims Based on Third-Party Litigation Finance Agreements and Other Signals of Quality*, 66 VAND. L. REV. 1641, 1644 (2013) (“We suggest that the legal system allow some claims to proceed and bar others based on signals of litigation quality gleaned from third-party assessments.”); Avraham & Wickelgren, *supra* note 204, at 235 (arguing that the benefits of third-party litigation financing “could be enhanced significantly if third-party funding contracts were allowed to be admissible as evidence in courts”).

243. The situation becomes much more complicated if generic firms also anticipate that a court will draw an inference about patent weakness in a subsequent antitrust action. This could discourage generic firms from entering at risk. It is unclear which of these effects will dominate the generic firm’s decision.

244. See *supra* note 198 and accompanying text.

weak scrutiny. In antitrust cases where a settlement is reviewed in subsequent litigation, either approach entails making a counterfactual, *post hoc* determination of the merits.

In *Actavis*, the Supreme Court endorsed the use of economic analysis of settlement terms as a substitute for legal analysis of the merits. Although the Court's approach has superficial appeal, it overlooks key distinctions between the internal and external points of view. Settlements reflect the litigants' predictions about how a court would have resolved their dispute, but such predictions cannot provide a basis for a legal standard by which the legality of the settlement is assessed.

The economic approach endorsed in *Actavis* also ignores the possibility of feedback effects between the litigants and the court. The litigants' incentives change if they are aware that a court will draw an inference from their settlement, and the court must account for this in drawing its inference. At a minimum, this requires a much more sophisticated model than the Court relied on in *Actavis*.

Economic analysis has deeply enriched our understanding of legal doctrine and legal institutions, particularly in antitrust law. Nevertheless, integrating economic and legal reasoning presents real challenges, particularly when antitrust law intersects with other doctrinal areas. Economic models are not always compatible with accepted forms of legal reasoning, and courts may have only a superficial understanding of the assumptions upon which these models rely. When economists offer guidance to courts, they should be conscious of the forms of reasoning that are appropriate for judges. When judges rely on insights from academic economists, they should scrutinize the assumptions upon which their models are based. Developing a coherent solution to the problem of collusive patent settlements will require more careful attention to the challenges of combining legal and economic reasoning.