Are Antitrust "Treble" Damages Really Single Damages?

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I. INTRODUCTION

Everbody "knows" that antitrust violations lead to mandatory treble damages and attorneys' fees. This provision appears to constitute automatic punitive damages, and would seem large enough both to discourage most defendants from violating the antitrust laws and to over-compensate injured plaintiffs. The assumption that antitrust damages are trebled has given rise to several controversies that would be dramatically affected if this assumption were false.

First, many believe that automatic trebling should not apply to all types of antitrust violations. The difficulty in detecting and proving many types of violations has led most analysts to conclude that awards of substantially more than single damages are often sensible.[1] Price fixing and bid rigging, for example, are difficult to detect and unquestionably anticompetitive, so few

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[1] Damages for "hard core" offenses should be much greater than singlefold to account for detection problems, proof problems, and risk aversion. *See* Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 199 (1968); *see also* sources cited *infra* note 3. The presence of these considerations does not necessarily mean that three is the correct multiplier. If only 20% of existing cartels are detected, for example, a multiplier of five would be more appropriate. (Then) Assistant Attorney General Douglas H. Ginsburg, in testimony before the U.S. Sentencing Commission, July 15, 1986, stated his belief that the probability that price fixing would be detected, indicted, and convicted was less than one in ten. *See Need to Deter Offenses Is Stressed by Ginsberg Before Sentencing Commission*, 51 Antitrust & Trade Reg. Rep. (BNA) No. 1274, at 92 (July 17, 1986). Peter G. Bryant and E. Woodrow Eckard estimate that between 13% and 17% of price fixing conspiracies are successfully prosecuted. Peter G. Bryant & E. Woodrow Eckard, *Price Fixing: The Probability of Getting Caught*, 48 REV. ECON. & STAT. 531, 531–36 (1991). This Article will not attempt to ascertain whether three is the optimal multiplier to account for detection problems, proof problems and risk aversion. It will, however, assume that a large multiplier is appropriate.

advocate lower penalties for these offenses. Other antitrust violations, however, including those associated with large mergers and joint ventures, are relatively simple to detect. Moreover, those offenses judged under the rule of reason are less likely to be anticompetitive.[2] Many in the antitrust community believe that treble damages should be reserved for *per se*, "hard core," hard-to-detect offenses, while penalties for other types of offenses should be reduced to the single level.[3]

Second, there is a controversy over whether indirect purchasers should be given standing to sue for damages. As a result of *Illinois Brick*[4] only direct purchasers can now recover treble damages under the federal antitrust laws. Many states, however, have passed "*Illinois Brick* repealers" that allow certain indirect purchasers to sue,[5] and federal repeal legislation has been repeatedly introduced.[6] One argument repeatedly raised against *Illinois Brick* repealers is that they can result in sixfold or greater damages because treble damages might

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[2] *See* Thomas G. Krattenmaker, *Per Se Violations in Antitrust Law: Confusing Offenses with Defenses*, 77 GEO. L.J. 165 (1988).

[3] For analysis and citations to additional discussions, see ABA ANTITRUST SECTION, MONOGRAPH No. 13, TREBLE-DAMAGES REMEDY 48–65 (1986) [hereinafter TREBLE-DAMAGES REMEDY]; 2 PHILIP AREEDA & DONALD F. TURNER, ANTITRUST LAW § 331 (1978) (multiple damages could be awarded at the discretion of the court); WILLIAM BREIT & KENNETH G. ELZINGA, ANTITRUST PENALTY REFORM 4, 44–46 (1986); RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 231 (1976) (calling for single damages for such readily identifiable violations as anticompetitive mergers); William Baumol and Janusz Ordover, *Use of Antitrust to Subvert Competition*, 28 J.L. & ECON. 247, 263 (1985) ("One should consider both the use of a multiple smaller than three, at least in those types of cases, such as predatory pricing . . . and in some types of cases one might even consider [single damages]."); Frank Easterbrook, *Detrebling Antitrust Damages*, 28 J.L. & ECON. 445, 447–48 (1985) (discussing various types of legislative detrebling proposals); Ira M. Millstein, *The Georgetown Study of Private Antitrust Litigation: Some Policy Implications*, *in* PRIVATE ANTITRUST LITIGATION 399, 404 (Lawrence White ed., 1988).

[4] Illinois Brick Co. v. Illinois, 431 U.S. 720 (1977).

[5] "Illinois Brick repealers" have been enacted in 14 states and the District of Columbia. *See* Thomas Greene, *State Indirect Purchaser Remedies Should Be Preserved*, 5 ANTITRUST 25 (1990).

[6] *See* Thomas B. Leary, *State Indirect Purchaser Laws Should Be Preempted*, 5 ANTITRUST 25, 26 (1990).

be awarded to two or more levels of plaintiffs.[7] Violations of state antitrust[8] or business tort[9] law can lead to the same consequences.[10]

Third, there is controversy over whether the recovery statute's provision for treble damages systematically biases anaitrust litigation. Some argue that the automatic nature of the treble damages multiplier might cause some judges to favor defendants when they formulate substantive antitrust rules, measure ambiguous factual situations against these rules, devise appropriate standing rules, or compute damages.[11] Some courts might be reluctant to "trebly"

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[7] *See* sources cited *supra* notes 5 and 6.

[8] *See* California v. ARC Am. Corp., 490 U.S. 93 (1989).

[9] The same actions can sometimes violate federal antitrust laws as well as state tort laws or "baby FTC Acts." *See, e.g., Multiple Damages Are Awarded in Suit Against Waste Management Firm*, 58 Antitrust & Trade Reg. Rep. (BNA) No. 1458, at 415 (Mar. 22, 1990).

[10] Discussing the Supreme Court's decision in California v. ARC Am. Corp., 490 U.S. 93 (1989), which held that state *Illinois Brick* repealers are not preempted by Section 4 of the Clayton Act, Thomas Wilson notes:

> [T]he Court's rationale, which makes clear that states are generally free to fashion their own remedies for antitrust violations, seems quite hospitable to the concept of one plaintiff recovering treble damages (one-third actual and two-thirds punitive) under federal law and double damages (punitive only) under state law (or vice versa) from the same defendant for the same conduct. But because the decision does not address the distinction, if any, between state and federal antitrust injury, it does not shed any light on the question whether actual damages are recoverable twice—once under state law and once under federal law—by the same plaintiff, from the same defendant, and for the same conduct.

See Thomas Wilson, *The Spectre of Double Recovery in Antitrust Federalism*, 58 ANTITRUST L.J. 201, 206 (1989).

[11] *See* Stephen Calkins, *Equilibrating Tendencies in the Antitrust System, with Special Attention to Summary Judgment and to Motions to Dismiss*, in PRIVATE ANTITRUST LITIGATION, *supra* note 3, at 185 and the sources cited therein, particularly the reference to a similar analysis by Areeda and Turner at 191. Professor Calkins discusses how the law of monopolization, horizontal restraints and vertical restraints might have developed more narrowly because of the effects of damages awards that the courts believed were treble. *Id.* at 191–95. He concludes that "class actions probably would be more easily certified were there no trebling." *Id.* at 197. Professor Calkins also marshals support by demonstrating why "it seems probable that trebling is a factor" in causing courts to scrutinize damage claims more rigorously than they once did." *Id.* at 198. "Plaintiffs would find standing rules more hospitable in a single damage world." *Id. See also* Stephen Calkins, *Summary Judgment, Motions to Dismiss, and Other Examples of Equilibrating Tendencies in the*

penalize defendant(s) or "overreward" plaintiff(s) unless the activity at issue was outrageous. For this reason the automatic trebling feature, designed to encourage plaintiffs to bring suit and to discourage defendants from engaging in anticompetitive behavior, might have the opposite of its intended effect.[12]

These heated controversies are all built upon a false foundation, for they are all predicated upon the assumption that antitrust damages are currently at the threefold level. This Article will establish that this assumption is mistaken, and in so doing will help decide the controversies premised upon it. This Article will show that, when viewed correctly, antitrust damages awards are approximately equal to, or less than, the actual damages caused by antitrust violations.

Part II of this Article will analyze the relatively quantifiable harms from antitrust violations, modeling the issues under both deterrence and compensation frameworks. Part III will calculate rough estimates of those factors that affect the magnitude of the antitrust damages multiplier actually awarded. These adjustments to the "treble" damages multiplier arise from: (1) the lack of prejudgment interest; (2) the effects of the statute of limitations; (3) plaintiffs' attorneys' fees and costs; (4) other costs to plaintiffs pursuing cases; (5) costs to the judicial system in handling antitrust cases; (6) umbrella effects of market power; (7) allocative inefficiency effects of market power; and (8) tax effects.[13] Part IV will combine these adjustments using both deterrence and

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Antitrust System, 74 GEO. L.J. 1065 (1986); Homer Clark, *The Treble Damage Bonanza: New Doctrines of Damages in Private Antitrust Suits,* 52 MICH. L. REV. 363, 363 (1954) ("[T]he mandatory trebling of any recovery has generated a natural reluctance in the courts to impose prodigious damages upon violators of the act . . . ."); John F. Hart, *Standing Doctrine in Antitrust Damage Suits, 1890–1975,* 59 TENN. L. REV. 191, 241–2 (1992).

[12] "[A]n award of treble damages for violating section 2's proscription of 'monopolization' in some cases might appear to be unpredictable, capricious and thus, unfair [because] . . . the line between permissible and impermissible conduct for a monopolist is too imprecise and unpredictable a basis on which to impose punitive damages." Joseph L. McEntee, Jr. & Robert C. Kahrl, *Damages Caused by the Acquisition and Use of Monopoly Power,* 49 ANTITRUST L.J. 165, 167–68 (1980).

[13] This Article's analysis omits relatively nonquantifiable factors that also could affect the true magnitude of the damages multiplier. For example, plaintiffs desiring competent counsel might have to pay their lawyers more than the attorneys' fees awarded against defendant by the court. Also, juries might over- or under-award damages depending, respectively, on whether or not they are unaware of the trebling. *See* Note, *Controlling Jury Damage Awards in Private Antitrust Suits,* 81 MICH. L. REV. 693, 694–96 (1983). Third, because members of a conspiracy are responsible for the damages caused by their co-conspirators, it can be argued that the amount paid by one conspirator might sometimes be disproportionate because it encompasses all damages caused by the cartel. Because each

compensation frameworks.[14] It will compare the sum of the damages caused by antitrust violations to the typical amounts awarded to successful plaintiffs to determine, on average, the true effective ratio of recovery to damage. This analysis will show that when all the appropriate adjustments are considered together, awarded damages are, at most, probably at the single level. From either a deterrence or compensation perspective, the actual damages awarded in civil antitrust cases are therefore, on average, probably only at most equal to the actual damages caused by the violations. Part V will briefly discuss some implications of this finding in light of the consensus that antitrust damages generally should be substantially higher than singlefold to account for detection problems, proof problems, and risk aversion.

II. THE DAMAGES FROM ANTITRUST VIOLATIONS

Before the actual magnitude of the "treble damages" remedy can be calculated, it is necessary to determine which antitrust violation effects should be considered "damages." Then the effective payouts under the "treble damages" remedy can be compared to the effects that should be termed "damages." This methodology can determine whether damages are really trebled.

Figure I illustrates (1) allocative inefficiency; and (2) the transfer of wealth from victims to the firm(s) with market power, the two most well-known effects of the market power associated with most antitrust violations.

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cartel member helped cause all of the damages attributable to the cartel, however, such damages seem generally to be appropriate.

This Article's analysis does not consider claims not brought because of *Illinois Brick* problems, effects of undue plaintiff risk aversion caused by illegal activity, or free rider problems that prevent antitrust suits from being filed. Nor does this Article attempt to incorporate the effects of antitrust violations on corporate reputations. This Article's scope is also limited to civil antitrust violations; the effects of criminal antitrust provisions are omitted. Finally, this Article assumes that the underlying substantive antitrust provisions are sound. To the extent these factors could be proven, clarified, rebutted, or quantified, the adjustments could, of course, affect this Article's conclusions significantly.

[14] Part IV will utilize the deterrence and compensation frameworks modeled in Part II.

Figure I[15]
Allocative Inefficiency and Wealth Transfer Effects of Market Power

Price

C

P_1

D

R

E

P_0

Marginal Cost

Marginal
Revenue

Demand

O Q_1 Q_0

Quantity
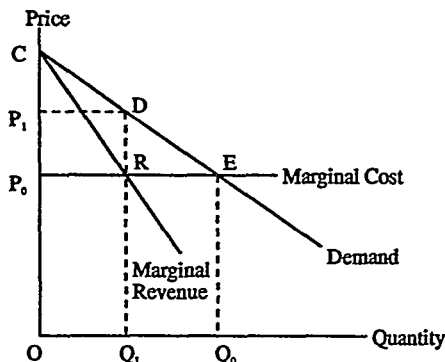
Triangle DER in Figure I represents the allocative inefficiency effects of monopoly power. Rectangle P_1DRP_0 represents the transfer of wealth from consumers of the product to the firm with monopoly power. Allocative inefficiency represents suboptimal use of societal resources as a result of market power.[16] While there is controversy over whether the transfer of wealth from consumers to firms with market power constitutes a harm that the antitrust laws were enacted to prevent,[17] there is consensus in the courts and

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[15] Figure I is taken from BREIT & ELZINGA, *supra* note 3, at 10.

[16] The reason why monopoly power causes a suboptimal use of societal resources is relatively straightforward:

> To raise prices a monopoly reduces output from the competitive level. The goods no longer sold are worth more to would-be purchasers than they would cost society to produce. This foregone production of goods worth more than their cost is pure social loss and constitutes the "allocative inefficiency" of monopoly. For example, suppose that widgets cost $1.00 in a competitive market (their cost of production plus a competitive profit). Suppose a monopolist would sell them for $2.00. A potential purchaser who would have been willing to pay up to $1.50 will not purchase at the $2.00 level. Because a competitive market would have sold the widgets for less than they were worth to him, the monopolist's reduced production has decreased the consumer's satisfaction without producing any countervailing benefits for anyone. This pure loss is termed "allocative inefficiency." For an extended discussion and formal proof that monopoly pricing creates allocative inefficiency, see E. MANSFIELD, MICROECONOMICS: THEORY AND APPLICATIONS 277-92 (4th ed. 1982).

Robert H. Lande, *The Rise and (Coming) Fall of Efficiency as the Ruler of Antitrust*, 33 ANTITRUST BULL. 429, 433-34 n.17 (1988).

[17] For the contrasting sides, see Lande, *supra* note 16, at 458-65.

the remainder of the antitrust community that allocative inefficiency (sometimes termed "deadweight welfare loss") is undesirable.[18] Moreover, some or all of the transfer, instead of becoming monopoly profits, may be consumed by inefficient rent-seeking behavior.[19]

Market power also can lead to higher prices (and the resulting wealth transfers and allocative inefficiency) for goods or services not sold by the violator(s). Significant monetary damages generally arise only in cases in which market power is required[20] or presumed,[21] so many violators in these cases[22] also affect the prices of their competitors. These "umbrella" effects of antitrust violations can be significant.[23] By analogy, OPEC never produced or sold as much as seventy percent of the free world's oil supply, yet it affected oil prices throughout the world.[24] This cartel even affected the prices of fuels that could substitute for oil to a degree, such as coal and natural gas.[25]

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[18] *Id.*

[19] *See, e.g.*, Posner, *supra* note 3, at 11–12. Monopoly power can also lead to suboptimal quality, variety, and choice. *See* Alan Fisher & Robert H. Lande, *Efficiency Considerations in Merger Enforcement*, 71 CAL. L. REV. 1580, 1634–35 (1983). It also can permit firms to raise rivals' costs. *See* Thomas Krattenmaker et al., *Monopoly Power and Market Power in Antitrust Law*, 76 GEO. L.J. 241 (1987).

[20] Monopolization cases, for example, require market power. *See infra* notes 160–66.

[21] Many violations not requiring proof of market power, such as cartelization, lack this requirement because market power is almost always present and its proof would be wasteful.

[22] Some violations, such as mergers, require only incipient market power. *See* Fisher & Lande, *supra* note 19, at 1591. These cases are less likely to give rise to significant monetary damages.

[23] For an excellent discussion of umbrella effects and a sophisticated argument that they should be counted as antitrust damages, see William H. Page, *The Scope of Liability for Antitrust Violations*, 37 STAN. L. REV. 1445, 1465–67 (1985).

[24] *See* MOHAMMED E. AHRARI, OPEC: THE FAILING GIANT 203 (1986) (maximum OPEC share of noncommunist world production was 68% in 1974; maximum OPEC share of world production was 55.5% in 1973).

[25] One author described this impact as follows:

> The depressing effects of the oil crisis on the economy are underestimated in the projections to the extent that they make no allowance for price increases in other fuels that are competitive with oil. Prices of coal and natural gas have risen with oil prices. While on a BTU equivalent basis, the importance of these two fuels is comparable to that of oil, the aggregate importance of increases in their prices has not been nearly so great. Much of natural gas production is price-controlled, and both coal and gas are generally sold under long-term contracts. As time passes, price increases for these two alternative fuels will become increasingly significant to the aggregate economy. For the

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Not only does the antitrust violation itself produce various damage effects, but so too does the litigation necessary to recover damages and prevent future occurrences. Attorneys' fees,[26] other costs in pursuing and defending the litigation (including the value of corporate employees' time), and the litigation's inevitable costs to the judicial system can also be considered damages from the violation. Moreover, each factor can affect income taxes paid and can therefore affect American taxpayers.

Which of these effects should be considered "damages arising from an antitrust violation"? The answer depends on whether the purpose of the remedy is compensation or deterrence.

A. *Using a Compensation Framework*

The legislative history[27] and case law[28] indicate that compensation is a goal, perhaps even the dominant goal, of antitrust's damages remedy.

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future, the extent to which they rise will depend in part on policies still to be made, particularly in the case of natural gas.

George L. Perry, *The United States*, *in* HIGHER OIL PRICES AND THE WORLD ECONOMY: THE ADJUSTMENT PROBLEM 102 (Edward R. Fried & Charles L. Schultze eds., 1975).

[26] Theoretically, one could distinguish between attorneys' fees spent on antitrust litigation in good faith from those spent unethically. Further, the existence of some actual examples of anticompetitive conduct caused the antitrust laws to be enacted, thus opening the way for erroneous suits by unharmed plaintiffs. Arguably, it would be fair to hold the actual violators responsible for the attorneys' fees paid by the innocent defendants.

[27] Senator Coke complained about a bill that would have provided only for double damages:

> How would a citizen who has been plundered in his family consumption of sugar by the sugar trust recover his damages under that clause? It is simply an impossible remedy offered him . . . . [H]ow could the consumers of the articles produced by these trusts, the great mass of our people—the individuals—go about showing the damages they had suffered? How would they establish the damage which they had sustained so as to get a judgment under this bill? I do not believe they could do it.

21 Cong. Rec. 2615 (1890).

Representative Webb stated that the damages provision "opens the door of justice in every man whenever he may be injured by those who violate the antitrust laws and gives the injured party ample damages for the wrong suffered." 51 Cong. Rec. 9073 (1914). He also stated that "we are liberalizing the procedure in the courts in order to give the individual who is damaged the right to get his damages anywhere—anywhere you can catch the offender . . . ." 51 Cong. Rec. 16274 (1914). See also the discussion in Herbert Hovenkamp, *Antitrust's Protected Classes*, 88 MICH. L. REV. 1, 21-30 (1989).

Moreover, the underlying substantive provision's primary aim was to prevent wealth transfers from victims to firms with market power[29]—a concept analogous to that of compensating victims.[30] The decision of Congress to award "treble damages" might suggest that at least two-thirds of damages were intended to be for punitive purposes or deterrence. It is possible, however, that even this portion was intended to compensate plaintiffs for such unawarded harms as the lack of prejudgment interest and such difficult to quantify damage elements as the value of plaintiff's time expended pursuing the case.[31]

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[28] *See, e.g.*, Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) ("[The treble damages remedy was passed] as a means of protecting consumers from overcharges resulting from price fixing."). A large number of Supreme Court cases hold that both deterrence and compensation are purposes of the treble damages remedy. *See, e.g.*, Atlantic Richfield Co. v. USA Petroleum, 495 U.S. 328, 330 (1990); California v. ARC Am. Corp., 490 U.S. 93, 102 (1989); American Soc'y of Mechanical Eng'rs, Inc. v. Hydrolevel Corp., 456 U.S. 556, 557 (1982); Pfizer, Inc. v. India, 434 U.S. 308, 314 (1978); Illinois Brick Co. v. Illinois, 431 U.S. 720, 746, 748, 749 (1977); Fortner Enters. v. United States Steel Corp., 394 U.S. 495, 502 (1969).

[29] A summary of comments by legislators suggests congressional intent:

> Congress was well aware . . . that higher prices transfer wealth from consumers to firms with market power. The debates strongly suggest that Congress condemned trusts and monopolies for exactly this reason. For example, Senator Sherman termed monopolistic overcharges "extortion which makes the people poor," and "extorted wealth." Congressman Coke referred to the overcharges as "robbery." Representative Heard declared that the trusts, "without rendering the slightest equivalent," have "stolen untold millions from the people." Congressman Wilson complained that a particular trust "robs the farmer on the one hand and the consumer on the other." Representative Fithian declared that the trusts were "impoverishing" the people through "robbery." Senator Hoar declared that monopolistic pricing was "a transaction the direct purpose of which is to extort from the community . . . wealth which ought to be generally diffused over the whole community." Senator George complained: They aggregate to themselves great enormous wealth by extortion which makes the people poor.

Lande, *supra* note 16, at 449–50 (footnotes omitted).

[30] *See generally* BREIT & ELZINGA, *supra* note 3.

[31] Professor Vold explored this possibility:

> In other words, closely analyzed, the threefold damage provision is remedial to the plaintiff, compensatory in its nature in liquidating compensation for accumulative intangible harm incurred outside of and beyond the ordinarily recoverable legal damages to the business or property. It is a penalty upon the defendant only in the loose sense of penalty as signifying a burden encountered by the defendant as a consequence of his wrongdoing. In that broad sense of penalty this provision of course is a burden to the defendant in requiring him to make compensation for damage wrongfully caused,

If the purpose of the remedy is compensation, the "damages" caused by an antitrust violation should consist of the sum of all relatively predictable harms caused by that violation affecting anyone other than the defendants. Damages should include the wealth transferred from consumers to the violator(s), as well as the allocative inefficiency effects felt by society, whether caused directly, or indirectly via "umbrella" effects. Plaintiffs' attorneys' fees, the value of plaintiffs' time spent pursuing the case, and the cost to the American taxpayer of administering the judicial system should also be included.[32] Attorneys' fees, corporate time and other costs spent defending the case are not, of course, harms to others and should not be a concern if the goal of the damages provision is compensation to victims.

A compensation model should also consider the effects of federal and state income taxes. Tax effects ameliorate some harms to potential plaintiffs from antitrust violations and deprive them of some benefits of these violations. As subpart III(H) will demonstrate, these effects do not always cancel one another. They will, therefore, be accounted for.

B. *Using an Optimal Deterrence Framework*

Virtually every analysis of antitrust damages issues assumes that the entire purpose of the remedy provision is deterrence.[33] This view finds support in the relevant legislative history[34] and case law,[35] and draws support from the belief

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comparable to the burden that is imposed by every provision which imposes legal liability to make compensation to the injured party. The three-fold damage provision is a provision for liquidated compensation for accumulative harm, largely intangible in its nature, which is so conspicuous part of the loss suffered when a going business is destroyed in violation of the anti-trust act.

Lawrence Vold, *Are Threefold Damages Under the Antitrust Act Penal or Compensatory?* 28 KY. L.J. 117, 157–58 (1940).

Criminal penalties, including fines and prison, probably are better at deterrence. Thus Congress's decision to award to plaintiffs the relief obtained could imply a compensation goal.

[32] *See* TREBLE-DAMAGES REMEDY, *supra* note 3, at 48–65.

[33] For citations, see BREIT & ELZINGA, *supra* note 3, at 3–28.

[34] Senator Sherman observed that "the measure of damages, whether merely compensatory, putative [sic], or vindictive, is a matter of detail depending upon the judgment of Congress. My own opinion is that the damages should be commensurate with the difficulty of maintaining a private suit against a combination such as is described." 21 Cong. Rec. 2456 (1890). Representative Webb stated, "[u]nder the civil remedies any man throughout the United States, hundreds and thousands, can bring suit in the various

that the major,[36] or the exclusive,[37] purpose of the underlying substantive provisions is to enhance economic efficiency, the goal of optimal deterrence models.[38] Congress's decision to award treble damages could also imply that at least part of their purpose is the deterrence of undesirable behavior.[39]

The issue of what should count as harm from an antitrust violation under an optimal deterrence standard was once the subject of spirited debate within the antitrust community. For example, Professor William Page concluded that the transfer effects of market power should be the optimal measure for calculating damages,[40] while Professor Warren Schwartz concluded that the allocative inefficiency caused by a violation should be its measure.[41] But in

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jurisdictions and thus the offender will begin to open his eyes because you are threatening to take money out of his pocket." 51 Cong. Rec. 16,275 (1914)

[35] *See* cases cited *supra* note 28.

[36] *See* Lande, *supra* note 16.

[37] Robert Bork analyzed the relevant legislative history and concluded that "[t]he whole task of antitrust can be summed up as the effort to improve allocative efficiency without impairing productive efficiency so greatly as to produce either no gain or a net loss in consumer welfare." ROBERT BORK, THE ANTITRUST PARADOX 91 (1978). Bork further asserted that there was "not a scintilla of support" in the Act's legislative history for "broad social, political, and ethical mandates." *Id.* at 10. Bork explicitly rejected distributive issues as a possible area of congressional concern: "[I]t seems clear the income distribution effects of economic activity should be completely excluded from the determination of the antitrust legality of the activity. It may be sufficient to note that the shift in income distribution does not lessen total wealth . . . ." *Id.* at 111.

[38] *See* BREIT & ELZINGA, *supra* note 3.

[39] Compare, however, the discussion accompanying notes 29–31.

[40] *See* William H. Page, *Antitrust Damages and Economic Efficiency: An Approach to Antitrust Injury*, 47 U. CHI. L. REV. 467, 479 (1980). Professors Breit and Elzinga explain, as follows:

> [T]his is clearly wrong since . . . the profit rectangle P_1DRP_0 would be the incorrect measure on which to base the damage judgment. This is true because of the possibility that the cartel would generate cost savings. That is, the agreement among the firms to collude might cause the firms to take into account technical diseconomies they impose on each other. If so, the firm would not be deterred from engaging in the cartel activity even when it imposes a deadweight loss on society in an amount greater than the allocative efficiencies generated by the cartel. Thus a fine in the amount of the profit rectangle P_1DRP_0 would lead to under-deterrence.

BREIT & ELZINGA, *supra* note 3, at 9–10 (footnote omitted).

[41] Warren F. Schwartz, *An Overview of the Economics of Antitrust Enforcement*, 68 GEO. L.J. 1075, 1081–85 (1980). Breit and Elzinga explain as follows:

recent years the antitrust community has generally accepted[42] a standard proposed by Professor William Landes of "the net harm to persons other than the offender,"[43] a standard similar or identical to one proposed by (then) Professors Posner and Easterbrook of the monopoly profit rectangle plus the allocative inefficiency (deadweight loss). A full explanation of why antitrust damages should consist of "the net harm to persons other than the offender" (adjusted by such factors as risk aversion and the probabilities of detection and conviction) is complex,[44] but the underlying intuition is relatively straightforward.

[Professor Schwartz] suggests that the imposition of such a fine would be optimal since it would require the offender to pay the complete social costs of his offense. If the offender pays the amount DER back to society, and that is the full amount of its inefficiency, how could there be any objection? Even if the profit rectangle P_1DRP_0 is greater than the deadweight loss DER, and the cartel continues to operate, society is recompensed for any losses imposed on it. If the profit rectangle is less than the deadweight loss, the firm will be deterred from the illegal activity.

But Schwartz's rule would be incorrect if the cartelist's monopoly profits *plus* any cost savings from cartelization are greater than the deadweight loss while the cost savings alone are smaller than the deadweight loss. For in that case the cartelist would continue to engage in collusive behavior. Yet the gain to society in savings would be smaller than the deadweight loss. Once again there would be under-deterrence.

BREIT & ELZINGA, *supra* note 3, at 10–11 (footnote omitted).

[42] *See* BREIT & ELZINGA, *supra* note 3, at 3–28 for citations.

[43] William M. Landes, *Optimal Sanctions for Antitrust Violations*, 50 U. CHI. L. REV. 652, 656 (1983).

[44] *See id.* Breit and Elzinga, referring to the diagram reprinted in this Article as Figure I, explain as follows:

The trick to discovering the optimal sanction is to find a rule that will force the potential cartelist to compare any cost saving from his activity with the deadweight loss triangle. If the cost saving were larger than the deadweight loss, it would be in his (and society's) interest to undertake the illegal activity. So after he deducts the monopoly profit rectangle (which is only part of the fine to be paid under the Posner-Easterbrook rule), the cartelist will examine the deadweight loss (the remainder of the fine to be paid) and compare it with the value of the cost saving. The fine that is the sum of the deadweight triangle plus the profit rectangle is the correct sanction since it will encourage the "right" amount of illegal antitrust activity. Damages larger than this (that is, a fine larger than the area *DER* plus P_1DRP_0) could lead to over-deterrence, for in that case the potential offender would be comparing the wrong magnitudes. After paying the trapezoid P_1DEP_0, the remaining part of the fine to be paid would be compared with the cost saving from the illegal activity. If it is larger than that amount, the potential cartelist would be deterred from forming the cartel. But this would be

Optimal deterrence models are founded upon the assumption that the sole goal of antitrust is to enhance economic efficiency.[45] A horizontal restraint producing market power, for example, would not be permitted if its cost savings were less than the resulting allocative inefficiency. Defendants will only be deterred from undertaking inefficient conduct if the cost of their conduct is greater than the gain, the transfer due to the effects of market power plus any cost savings from the venture. For example, if the arrangement produced one dollar in transfer plus fifty cents in allocative inefficiency, it should only be allowed if its cost savings exceeded fifty cents. Thus, the optimal fine would be the sum of the transfer and the allocative inefficiency,[46] or one dollar and fifty cents. If the arrangement produces more than fifty cents in cost savings, it is net efficient[47] and society wants it to proceed. Because the venture can pay the fine out of its profits (the transfer plus the cost savings), it will do so and the venture will continue. If the arrangement produces less than fifty cents in cost savings, however, it is not net efficient[48] and society does not want it to proceed. Because the one-and-a-half dollar fine exceeds the venture's total expected gain, the venture cannot afford the fine and so will not proceed. Thus, the optimal fine is equal to the sum of the damages to others caused by the arrangement.[49]

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incorrect from a social standpoint if the deadweight loss triangle were in fact less than the cost saving . . . .

Therefore, the Posner-Easterbrook penalty causes the antitrust violator to compare any efficiency gains of the violation to the deadweight loss to society. The antitrust violator must be made to forgo his monopoly overcharge (rectangle P_1DRP_0) in order to give him the proper incentives to make the correct comparison. Only a fine equal to the total loss in consumers' surplus brings about this result.

BREIT & ELZINGA, *supra* note 3, at 11–12.

[45] *See* BREIT & ELZINGA, supra note 3. All the standard optimal deterrence models assume that efficiency is the only legitimate goal of antitrust. *Id.* If one believes that another purpose of antitrust is to prevent wealth transfers from consumers to firms with market power (*see* Lande, *supra* note 16), then the transfer effects of market power, in addition to the inefficiency effects, should be deterred. This type of deterrence model would be the equivalent of the compensation model described in subpart II.A.

[46] This fine must, of course, be adjusted for risk and the probability of detection and conviction.

[47] It is net efficient because the cost savings exceeds the $.50 in allocative inefficiency.

[48] It is not net efficient because the allocative inefficiency of $.50 exceeds the cost savings.

[49] Breit and Elzinga explain further:

A numerical example may help to clarify the concept of the optimal antitrust sanction. Assume that a potential cartelist calculates that joining a horizontal price-fixing

Interestingly, Landes's focus upon net harm to others differs in only two minor respects from the standard that should be employed under a compensation approach. First, as noted earlier, an antitrust offense can give rise to "umbrella" effects when, for example, a cartel raises prices throughout an industry.[50] If the cartel's competitors charge higher prices, allocative inefficiency results—a harm to society undesirable under either a compensation or deterrence perspective. These higher prices also cause a transfer of wealth from consumers to the cartel's competitors. This transfer is not a net harm to others, so Landes does not believe it should be included as a factor in an optimal deterrence approach.[51] Yet, these consumers are victims because they are forced to pay prices elevated as an indirect result of the cartel. Their welfare should, therefore, count under a compensation perspective.

In addition, the overcharge, lost time value of money and any resulting damages award might have tax effects.[52] Optimal deterrence's net harm to

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conspiracy will increase his profits by $100 million. He also is aware that the deadweight loss imposed on society by his activity is $50 million. If the expected value of the fine imposed is the entire amount of consumers' surplus ($150 million) would he enter the cartel? He would do so if he believed that the cartel would be accompanied by cost reductions to him greater than $50 million. If the cost saving were, say, $60 million, he would still enter the price-fixing conspiracy because he would know that his fine would be $100 million (his cartel profits) plus $50 million (the deadweight loss), leaving him $10 million more revenue than would be the case if he did not enter the cartel. In this case the cartel is accompanied by cost reductions greater than the deadweight loss it imposes on society. On efficiency grounds, it should be permitted.

BREIT & ELZINGA, *supra* note 3, at 12.

[50] *See* text accompanying notes 23–25.

[51] *See* Landes, *supra* note 43, at 666–68. Landes's decision to omit these umbrella effects from factoring into an optimal deterrence calculation has been insightfully and thoughtfully criticized. *See* William H. Page, *Optimal Sanctions for Antitrust Violations*, 37 STAN. L. REV. 1445, 1490 (1985). Moreover, Landes notes that it might sometimes be appropriate to count these transfers:

Although the net benefit rule is perfectly general, the conclusion that the cartel should not be liable for any overcharges on units sold by the competitive fringe holds only under the cost conditions [described earlier]. If the fringe's marginal cost were to exceed the previous competitive price, then their rents or benefits would be less than the harm to consumers on the units purchased from the fringe. In the limit, if the fringe's marginal cost were constant and equal to the cartel price, optimal damages would equal . . . the entire overcharge plus the deadweight loss.

Landes, *supra* note 43, at 668.

[52] *See infra* subpart III.H.

others standard does not care how these losses or gains are shared between the victims and the Treasury. Regardless who pays or obtains them, they should be counted. Thus it is unnecessary to determine tax effects under an optimal deterrence standard. If the concern is determining how much to compensate injured victims, however, it does matter whether the Treasury pays part of the victim's initial losses or removes some of their "treble" damages.

In summary, the "harms" from antitrust violations are only slightly different regardless of whether the analysis employs a · deterrence or compensation perspective. This Article will not attempt to determine which approach better reflects the intent of Congress or which approach is superior;[53] it will instead attempt to calculate estimates of the total harms caused by antitrust violations from both perspectives. As the calculations in Part IV will show, the results do not differ substantially. In either case, the "treble damages" actually awarded are probably at most as large as the damages caused by the violation.

III. FACTORS NECESSITATING ADJUSTMENTS TO THE "TREBLE" DAMAGES MULTIPLIER

This Part will calculate estimates for a number of types of disparities between actual and awarded damages.[54] Each is highly uncertain and subject to many contingencies and caveats.[55] To help account for some of this

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[53] It is unclear, moreover, whether we can fully separate deterrence and compensation effects. If we do not adequately compensate plaintiffs, they might not bring enough suits to deter violations optimally.

[54] There are two general types of disparities between the damages caused by antitrust violations and the damages typically awarded for them. The first consists of factors that apply, to varying degrees, to most civil violations: the lack of prejudgment interest; statute of limitations issues; the costs to the judicial system of handling the case; and the lack of compensation for nonattorney time and expenses incurred as plaintiffs' employees pursue the case. The second consists of factors relatively unique to antitrust offenses: the resulting allocative inefficiency; the resulting umbrella effects; and, of course, the "treble" damages plus "reasonable" attorneys' fees that are awarded.

[55] The existing data do not, for example, allow us to know precisely such required quantities as the length of the "average" antitrust case or the effect of the "average" cartel or monopoly on the prices of other firms in its industry.

This Article, moreover, implicitly assumes that courts decide most cases correctly. If Section 2 of the Sherman Act actually does more harm than good by discouraging hard competition, single damages would certainly be more appropriate than treble damages for these violations.

uncertainty, and to rebut any inadvertent implication that the following figures are precise, ranges, rather than point estimates, will generally be utilized.[56]

A. *The Absence of Prejudgment Interest*

Automatic interest on antitrust damages only accrues after judgment for plaintiff.[57] While the same is true for common-law suits,[58] it has a greater effect in the antitrust area because these cases usually take longer to resolve than most others.[59] During the period between the violation and judgment, the victims of antitrust violations are deprived of this money while defendants enjoy its use. The two sections in this subpart will attempt to calculate the approximate average time lag involved and the time value of this money.

1. *The Time Lag*

The time lag consists of three possibly overlapping periods: (1) the duration of the violation; (2) any delay between detection and filing; and (3) the litigation period. These lags will be considered separately and then in combination.

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[56] The author believes that these ranges are reasonably suggested by the existing data and that they encompass the "true" figures. It must be stressed that every estimate that follows is a "first cut" approximation without claim to scientific precision. The results of this analysis should cast doubt on the assumption that damages are currently treble. The analysis does not establish their "actual" level. The purpose of this exercise is to advance the discussion over the "true" level of damages, not to end it.

[57] 15 U.S.C. § 15 does provide that interest can be awarded on untrebled damages prior to judgment if the court finds the award to be just, considering such factors as delay and violation of the rules. *See generally* Antitrust Procedural Improvements Act of 1980, Pub. L. No. 96-349, 1980 U.S.C.C.A.N. (94 Stat.) 2716. Such awards are rarely made.

Even though prejudgment interest is almost never explicitly awarded, it can sometimes be awarded implicitly as part of destroyed goodwill or the value of a business. It is possible that a business destroyed through predation, for example, might be able to recover the expected value of the business at the time of judgment, thus implicitly recovering a form of prejudgment interest. Successful plaintiffs in suits involving cartel overcharges, however, which are much more common than successful claims in monopolization cases, are much less likely to be able to capitalize or figure out some other indirect method of recovering lost prejudgment interest.

[58] Pierce v. United States, 255 U.S. 398, 406 (1921) (holding that even judgments bear interest only if there is an appropriate statute).

[59] Joseph F. Brodley, *Comment: Critical Factual Assumptions Underlying Public Policy*, in PRIVATE ANTITRUST LITIGATION, *supra* note 3, at 253, 260-61.

First, (then) Professor Posner found that during the 1960s the average private antitrust conspiracy lasted approximately six years.[60] Blackstone and Bowman, analyzing Department of Justice Sherman Act Section 1 cases filed during the 1970s, found that the average case lasted eight years.[61] Professors Gallo, Daw-Schmidt, Craycraft and Parker analyzed all Department of Justice cases filed from 1963 to 1990 and found that the average duration of civil antitrust violations was 8.4 years.[62] The average of these three estimates suggests that the true average is probably between seven and eight years.[63]

Second, Professor Joseph Brodley, using data contained in the Georgetown study of private antitrust litigation filed between 1973 and 1983, concluded that on average two years pass from the time of injury to the filing of suit.[64] The Gallo et al. study noted above found that the average time between the discovery of the violation and the filing of a criminal antitrust suit was twenty-seven months.[65] Blackstone and Bowman found that private "follow on" cases were instituted two years after the government case ended.[66]

The length of the delay between a violation and its discovery and the filing of suit is likely to depend upon many factors, including the type of case involved and the looming of the statute of limitations.[67] Because an experienced

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[60] Richard Posner, *A Statistical Study of Antitrust Enforcement*, 13 J.L. & ECON. 365, 401 (1970). Posner cautioned that not every conspiracy had the power to affect prices during its entire length, and that some lapsed or collapsed and regrouped. Posner also found an eleven year average for cases filed from 1950–54 and a seven year average for cases filed from 1955–59. *Id.*

[61] Edwin A. Blackstone & Gary W. Bowman, *Antitrust Damages: The Loss from Delay*, 32 ANTITRUST BULL. 93, 95 (1987). The Sherman Act is codified at 15 U.S.C. §§ 1–7 (Supp. 1992).

[62] *See* Joseph Gallo et al., A Preliminary Investigation of the First Century of Department of Justice Antitrust Enforcement (1991) (unpublished manuscript, on file with the author; relevant statistics calculated by Dr. Gallo for author, letter on file with author) (average duration of civil antitrust violation is 101 months (8.4 years)).There were 302 civil cases in this sample. I am grateful to Professor Gallo et al. for providing this information and allowing me to use it.

[63] (6+8+8.4)/3 = 7.5 years.

[64] *See* Brodley, *supra* note 59.

[65] *See* Gallo et al., *supra* note 62. The sample contained 378 cases. A comparable figure for civil cases is not available.

[66] *See* Blackstone & Bowman, *supra* note 61.

[67] The statute of limitations will be discussed *infra* at subpart III.B.

antitrust lawyer can usually file many types of cases within a few weeks,[68] it is probable that most of the "two-year delay" is caused by the victim not knowing about the violation or hesitating to contact a lawyer. It is difficult to know how long most violations continue while the potential plaintiff hesitated or before the violation was discovered. Because much of the "two-year delay" would be likely to overlap the violation period, a much shorter period is more appropriate to use as a "net delay" estimate; a range from zero to six months seems a more reasonable estimate.

Third, Professor Brodley further analyzed the data in the Georgetown study and concluded that, on average, a private antitrust case lasted 4.5 years from filing to judgment.[69] Elzinga and Wood arrived at 4.3-year estimate.[70] Blackstone and Bowman analyzed the 165 Department of Justice Section 1 antitrust cases filed during the 1970s in which the government prevailed and found that the "average interval between the reported violation and the case's outcome was 8.6 years."[71] Posner, analyzing private antitrust cases that went to judgment during the 1960s, found average durations of 3.1 years for cases that were disposed of in 1964, and 3.9 years for cases disposed of in 1969.[72] The average of these five figures is 4.9 years, but because the Blackstone and

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[68] An experienced lawyer might be able to assemble the information necessary to file suit against a relatively straightforward cartel in a few weeks. The lawyer would be unlikely, however, to file a monopolization case so quickly.

[69] *See generally* Brodley, *supra* note 59. Settlements took less time on average, but the correct figure should be the interval between filing and judgement because the parties' knowledge that judgment will probably take years is likely to influence the settlement. A comparable figure for class action cases was not available because most settled, but it is interesting to note that these cases took four years from filing until settlement. *See id.*

[70] Kenneth G. Elzinga & William C. Wood, *The Costs of the Legal System in Private Antitrust Enforcement, in* PRIVATE ANTITRUST LITIGATION, *supra* note 3, at 111 (Table 3.4). Kauper and Snyder found that the average time between the filing of the first case in a multidistrict litigation and the termination of the proceeding was 6.1 years. For multidistrict litigations that were follow-ups to government cases the average elapsed time was 5.7 years; for other cases it was 6.4 years. Thomas E. Kauper & Edward A. Snyder, *Private Antitrust Cases that Follow On Government Cases, in* PRIVATE ANTITRUST LITIGATION, *supra* note 3, at 357.

[71] *See* Blackstone & Bowman, *supra* note 61, at 95.

[72] Richard Posner, *A Statistical Study of Antitrust Enforcement*, 13 J.L. & ECON. 363, 381 (1970). Different types of cases required different lengths of time. Monopolization cases, for example, required an average of 7.0 years. *Id.* at 406.

Bowman estimate of 8.6 years seems anomalous, a 4.5-year estimate probably would be more likely to be correct.[73]

Some cartels and other violations might fit an "average" sequential pattern suggested by this data.[74] A "typical" cartel might persist for seven to eight years (ending either because it collapsed or was detected), followed by a lawsuit filed an average of zero to one-half years later, followed by a judgment four-and-one-half years later. The damages generated by this cartel might be delayed for some eight to nine years prior to judgment.[75] Other scenarios consistent with the existing data also are reasonable,[76] and the parameters for other types of violations could be very different.[77] Although the available data

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[73] Another reason why a slightly shorter average might be appropriate is that in recent years courts appear to have been increasingly dismissing cases pursuant to summary judgment motions.

[74] Some violations might be less likely to fit this sequential pattern. A monopoly achieved through predatory pricing or by activities that raise rivals' costs is, in contrast to a cartel, much less likely to be judged illegal. Whereas naked cartels usually end upon detection or the filing of suit, monopolies or more complex horizontal arrangements might well continue until judgment (or appeal), especially if the owners are risk-seeking or confident of final victory. Because some monopoly profits could be earned right up until judgment in these cases, on average the damages caused by these violations would have occurred closer to the date of judgment. Consider, for example, a monopolization scheme that lasted seven years before detection. Suppose suit were filed two years thereafter, followed by the average seven years of litigation until judgment, as calculated by Posner (*supra* note 72, at 406) for monopolization cases. If the violator continued its practices until judgment, the damages it caused would only be distanced from the judgment by approximately half of the period over which the violation occurred, or $1/2 \times (7 + 2 + 7) =$ 8 years on average.

[75] That is, approximately $[½ \times (7 \text{ to } 8)] + (0 \text{ to } .5) + 4.5 = 8 \text{ to } 9$ years. A mathematical complication arises because damages occurring throughout a 14-year period, for example, are not precisely the equivalent of damages delayed for 7 years. For example, $1.00 in damages per year during each of 14 years, increased at 7.69% per year, would yield $25.38 by the end of the fourteenth year, an increase of 81% on average. By contrast, $1.00 increased at 7.69% per year for 7 years would increase by only 68%. The methodology that this Article has chosen to use is relatively simple, but probably underestimates the lost time value of money. It therefore might slightly overestimate the final ratio of paid to actual damages.

[76] For example, many cartels might be strongest nearer their beginning, causing fewer damages towards their end. This could mean that the "average" damages caused by the cartel would be more than halfway from judgment, and so should be adjusted more for the lost time value of money.

[77] *See supra* note 72.

are incomplete and imprecise, they do suggest an average delay between damages and judgment of between eight and nine years.

2. *The Time Value of Money*

The next issue is the appropriate rate to be used to account for the lost time value of damages.[78] If compensation is the goal of antitrust, damages should place the victims in the same position they would have occupied had no violation occured. It is difficult to know, however, what would have happened had the violation not occurred. For example, the victim might have invested the money that it was forced to pay to the antitrust violator.[79] Because the transaction was involuntary, to be fair we should resolve doubts in favor of the victim—perhaps using a figure equal to, or in excess of, the rate for new three-month Treasury bills. Alternatively, suppose a victim had been harmed and knew with certainty[80] that it would recover from defendant in eight years. A reasonable course of action for that victim might be to obtain an eight-year loan[81] for the amount of the damages.[82] Thus, under a compensation

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[78] The timing issue was less significant in the past, when interest rates were low. The maximum rate for three-month U.S. Treasury bills, for example, was 1.1% during the 1940s and 3.4% during the 1950s. COUNCIL OF ECONOMIC ADVISORS, ECONOMIC REPORT OF THE PRESIDENT 368 (1991).

[79] A victimized individual, for example, might have invested in particular types of assets. Alternatively, a victimized business might have done the same, or might have undertaken projects yielding even higher expected rates of return.

[80] Lawyers rarely give antitrust advice with such certainty. *See* Harvey J. Goldschmid, *Comment on the Policy Implications of the Georgetown Study, in* PRIVATE ANTITRUST LITIGATION, *supra* note 3, at 412.

[81] A zero coupon bond would also be a good analogy.

[82] If information were perfect, plaintiffs could go to their bankers and convince them that, because the recovery in eight years was assured, the bank should extend an eight-year loan at its most favorable rate. Because plaintiff or defendant bankruptcy during those eight years for unrelated reasons would always be a possibility, however, the banker might not be repaid even if plaintiff were guaranteed to prevail. And, of course, information is not perfect, and no banker could be expected to believe plaintiff had a 100% chance of recovery (even if this actually was warranted). The banker would likely extend the loan at a rate that considered the particular plaintiff's and defendant's financial conditions at the time, incorporating some probability (in the banker's opinion) that the plaintiff would not recover treble damages in approximately eight years.

perspective, an appropriate discount rate probably should equal or exceed the prime interest rate.[83]

If optimal deterrence is the goal of the remedy provision, the discount rate should be viewed from defendant's perspective to focus on the gain to the defendant from undertaking the violation. This analysis would again attempt to ascertain whether the money that the violator gained was invested or whether it enabled the violator to forego obtaining a loan. Defendants might otherwise have foregone a loan at the prime interest rate or higher, or invested the money in such items as risk-free Treasury bonds.[84]

In light of this uncertainty, in subsequent calculations this Article will use a range of figures ranging from the three-month Treasury bill rate to the prime interest rate. Because interest rates have varied considerably in recent years,[85] this section will use the average rate of the last twenty years. The average three month Treasury bill rate for the last twenty years has been 7.69%.[86] This section will tentatively assume a low estimate of the effects of lost prejudgment interest for a hypothetical overcharge of one dollar, delayed an average of eight years, compounded at 7.69% per year (which yields $1.81). Alternatively, the prime interest rate for the last twenty years has averaged 10.22%.[87] This section will tentatively assume a high estimate of the actual value of a

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[83] An even higher interest rate would be appropriate if the plaintiff were financially less secure. Some believe that the defendant's payout should not depend upon the financial condition of its victims. Franklin M. Fisher & R. Craig Romaine, *Janis Joplin's Yearbook and the Theory of Damages*, 5 J. ACCT., AUDITING, & FIN. 145, 146–48 (1990). In tort litigation, however, defendants "take the victims as they find them," and might pay more if the victim is relatively vulnerable. *See* EDWARD J. KIONKA, TORTS: INJURIES TO PERSONS AND PROPERTY 359 (1977). It seems reasonable to make antitrust damages paid depend upon actual damages caused.

[84] This Article's use of the three-month Treasury bill rate is conservative because it includes no risk premium. An important reason why actual damages should be trebled is to take all risks of noncollection into account, including the risk of defendant bankruptcy and the risk that the violation will go undetected. Risk should already be accounted for in the "trebling" aspect of the multiplier; whether it actually does so is open to dispute. Because risk arguably should not affect the interest rate, the virtually risk-free three-month Treasury bill rate might be an appropriate yardstick for the time value of money.

[85] The prime interest rate during recent years has ranged, for example, from 18.87% (1981) to 6.83% (1977). *See* COUNCIL OF ECONOMIC ADVISORS, ECONOMIC REPORT OF THE PRESIDENT 378 (1992) (Table B-71).

[86] *Id.* This figure is an average of the average yearly rates for 1972 through 1991. The most recent ten-year period average is 7.59%. *Id.*

[87] *Id.*

hypothetical overcharge of one dollar compounded at the rate of 10.22% per year for nine years (which yields $2.40).

There is, however, an important reason why this range might be inappropriate. As the next subpart shows, some of the early years of an antitrust violation are often immunized from damage payouts by the four-year statute of limitations for private damage actions. For this reason, the actual period between damages and judgment is on average probably lower than eight to nine years. The next subpart will take the statue of limitations into account and make appropriate adjustments.[88]

B. *Effects of the Statute of Limitations*

Section 4 (b) of the Clayton Act provides that "[a]ny action to enforce any cause of action under sections [4 and 4(a)] of this title shall be forever barred unless [it commences] within four years after the cause of the action accrued."[89] Because cartels probably last an average of seven to eight years,[90] many violations that are detected[91] run longer than the statute of limitations and are therefore detected too late for recovery of damages.

If, as the previous subpart estimated, a conspiracy lasted for seven to eight years and was followed by a zero to one-half year delay before suit was filed, the four-year statute of limitations would immunize the first 3 to 4.5 years of damages caused by the violation.[92] The statute of limitations might immunize an average of thirty-eight to sixty-four percent of the damages caused by the conspiracy.[93]

The actual percentage of damages immunized by the statute of limitations is, however, likely to be less than this range. The four-year statute of limitations starts to run at the occurrence of every act that violates the antitrust laws, such as an agreement to fix prices, but is not generally affected by subsequent "routine" activities that the violators undertake to carry out their

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[88] Tax considerations also affect the actual amount of the interest that plaintiffs or defendants will be able to keep. *See supra* subpart III.H.

[89] 15 U.S.C. § 15b (Supp. 1992).

[90] *See supra* subpart III.A.

[91] Many violations are not detected at all, so their perpetrators pay no damages. This Article will make no attempt to account for this fact, other than to note that a primary reason why antitrust damages are automatically trebled is that the violations are frequently difficult to detect. *See supra* note 1 for rough estimates of the percentage of certain violations that are detected.

[92] Calculated as follows: (7 to 8) + (0.0 to 0.5) - 4 = 3 to 4.5.

[93] Calculated as follows: (3 to 4.5) / (7 to 8) = 38% to 64%.

illegal agreements, such as charging supracompetitive prices, cashing checks, or delivering goods or services.[94] Nor is there a federal exception for continuing conspiracies.[95] The statute of limitations can, however, be tolled in two relevant ways.[96]

First, government antitrust proceedings can toll the statute of limitations.[97] Kauper and Snyder reported that nine percent of the cases studied in the Georgetown sample were follow-on cases to government actions[98] and that more recently this figure dropped to six percent.[99] Follow-on cases were dismissed less frequently, however, and twelve percent of the cases in the Georgetown sample that were litigated to a conclusion were follow-up cases.[100] Perhaps this factor should cause no adjustment to the percentage of damages immunized by the statute of limitations.[101] Alternately, if twelve percent of the cases in which damages are obtained followed government cases, the damages lost to plaintiffs because of the statute of limitations should be reduced, so only thirty-three to fifty-six percent of damages would be lost because of the statute of limitations.[102]

The second major exception to the statute of limitations arises when an antitrust violation is fraudently concealed. Although the parameters of this doctrine are unclear and vary among circuits,[103] generally silence by the

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[94] *See* Robert Brina, Comment, *Complexities of Accrual: The Antitrust Statute of Limitations in a Contractual Context*, 31 UCLA L. REV. 1061, 1073–74 (1983); *see also* ABA ANTITRUST SECTION, ANTITRUST L. DEV. 682–83 (3d ed. 1992).

[95] Brina, *supra* note 94.

[96] For other relatively minor exceptions, see A.B.A. ANTITRUST SECTION, *supra* note 94, at 680–97. For example, some state antitrust laws have no statute of limitations. *See, e.g.,* Ohio ex rel. Brown v. Klosterman French Baking Co., 1977-1 Trade Cas. (CCH) ¶ 61,361 (S.D. Ohio 1976) (Ohio antitrust law has no statute of limitations).

[97] For a discussion, see A.B.A. ANTITRUST SECTION, *supra* note 94, at 683–88; *see also* 15 U.S.C. § 16 (i) (1976) (statute of limitations tolled by filing of certain government suits and for one year thereafter).

[98] Thomas E. Kauper & Edward A. Snyder, *Private Antitrust Cases that Follow on Government Cases, in* PRIVATE ANTITRUST LITIGATION, *supra* note 3, at 329, 333.

[99] *Id.* at 332.

[100] *Id.* at 343.

[101] Cartels stop for many reasons, including the filing of a government suit. This fact should be reflected in the 7.5-year average cartel duration calculated in subpart III.A.1, and there is no reason to believe that cartels persist once a government suit is filed.

[102] Calculated as follows: (38% to 64%) x .88 = (33% to 56%).

[103] *See* W. Glenn Opel, Note, *A Reevaluation of Fraudulent Concealment and Section 4B of the Clayton Act*, 68 TEX. L. REV. 649 (1990); *see also* ABA ANTITRUST SECTION, *supra* note 94, at 689–93.

defendant is not enough to show fraud. Most courts have held that affirmative acts of concealment by the defendant must be shown for the plaintiff to invoke the doctrine successfully.[104]

It might be impossible to determine how often this doctrine plays a role in antitrust damages actions.[105] Fraudulent concealment claims do not appear to be raised in the vast majority of antitrust cases when the statute of limitations might be an issue,[106] but such claims appear to be successful approximately sixty percent of the time they are decided on the merits.[107] If fraudulent concealment applied in sixty percent of the relevant cases,[108] only from thirteen to twenty-six percent[109] of antitrust damages would be lost because of statute of limitations problems.[110] This range roughly corresponds to the first one to two years of a violation's damages.[111]

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[104] *See generally* A.B.A. ANTITRUST SECTION, *supra* note 94, at 689–90.

[105] *See generally* PHILIP C. JONES, LITIGATING PRIVATE ANTITRUST ACTIONS 385 (1984).

[106] A computer-assisted search of all U.S. district court cases mentioning "Clayton Act" and "statute of limitations" found that 179 out of 764, or 23%, also mentioned "fraudulent concealment." The comparable figure for courts of appeals cases was 58 out of 333, or 17%. Of course the mere mention of the term does not make the case a "fraudulent concealment" case or "statute of limitations" case. Nor does it mean that either doctrine was successfully invoked.

[107] Of the 58 appellate court cases (*see supra* note 106), only 35 decided whether the doctrine was applicable in an antitrust case. Fraudulent concealment was found to exist in 21, or 60%, of the cases that decided the issue.

[108] This estimate is probably conservative. Although fraudulent concealment claims appear to be successful 60% of the time the issue was decided, they were only mentioned in 23% of cases discussing the statute of limitations. *See supra* note 106. Some of the 77% of the cases mentioning "statute of limitations" but not "fraudulent concealment" undoubtedly did not discuss fraudulent concealment because plaintiff had no reasonable basis for alleging the issue.

[109] This range is based upon the high and low figures calculated earlier in this subpart.

[110] Calculated as follows: .40 x (33% to 64%) = 13% to 26%. It matters relatively little whether the first year or two of damages is viewed as immunized by the statute of limitations or merely delayed, because these damages accrue so many years prior to judgment that they are worth little by the time judgment is rendered. The estimates in this Article show that the initial year of damages might be removed from judgment by roughly 8 +.5 + 4.5 = 13 years. Using the prime interest rate as a discount rate, the initial year's damages of $1.00 would be worth only $.28 at judgment.

[111] Subpart III.A calculated an average delay of eight to nine years from the imposition of antitrust damages to judgment, and the earliest period of damages is of course more likely to be barred by the statute of limitations. If we assume that the first one to two years of damages typically are lost because of the statute of limitations, this assumption

Because of the uncertainty involved, this subpart will expand this range slightly and assume that approximately ten to thirty percent of the damages are immunized by the statute of limitations. It will also assume that the remainder of the damages are recoverable, but are delayed for seven to eight years[112] prior to judgment instead of the eight to nine years calculated in subpart III(A). Because $1.00 compounded annually at 7.69% for seven years yields $1.68 and $1.00 compounded annually at 10.22% for eight years yields $2.18, this subpart will assume that lost damages should be increased to a range of $1.68 to $2.18 to account for lost prejudgment interest.

C. *Plaintiffs' Attorneys' Fees and Costs*

Salop and White's analysis of the Georgetown data sample concluded that awarded attorneys' fees were, on average, the equivalent of approximately ten to twenty percent of the monetary awards (that is, roughly thirty to sixty percent of the untrebled transfer).[113] Elzinga and Wood's analysis produced a significantly higher range.[114] Because plaintiff and defendant attorneys' fees for each party are approximately equal,[115] it probably is appropriate to assume that plaintiffs pay their lawyers at least an average[116] of thirty to sixty cents to bring a lawsuit in which one dollar in transfer is obtained (and trebled).[117]

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would imply a (1 to 2)/ (7 to 8) (the average length of a cartel) = a 12% to 29% reduction in damages attributable to the statute of limitations—virtually identical to the 13% to 26% range calculated earlier. This immunization of the first one to two years of damages means that the average delay between the imposition of recognizable damages and judgment would be less than the eight to nine-year estimate calculated in subpart III.A. A net figure for the life of an average cartel that would give rise to recognizable antitrust damages would only be (7 to 8) - (1 to 2) = 5 to 7 years. This calculation suggests that the average delay between the imposition of damages and judgment would be (5 to 7)/2 + (0 to .5) (filing lag) + 4.5 (litigation duration) = 7 to 8.5 years on average.

[112] The high estimate of 8.5 years, *supra* note 111, was reduced to eight to be conservative, because it seems unlikely that all of the factors implying a long time lag would occur.

[113] *See* Steven C. Salop & Lawrence J. White, *Private Antitrust Litigation: Introduction and Framework, in* PRIVATE ANTITRUST LITIGATION, *supra* note 3, at 13 (using court data and a confidential data set).

[114] Elzinga and Wood estimated a range of .58 to 1.02 times the recovery. Elzinga & Wood, *supra* note 70, at 107, 126 (using a confidential data set).

[115] Salop & White, *supra* note 113, at 15.

[116] Of course, this average range includes radically different cases. One extreme can be illustrated by United States Football League v. National Football League, 887 F.2d 408 (2d Cir. 1989), *cert. denied*, 493 U.S. 1071 (1990). Although plaintiff received only $1.00 before trebling, it also received over $5,000,000 in attorneys' fees. The other extreme is

Most of these fees are likely to be paid years before the date of judgment. Although the judgment may reimburse a successful plaintiff the nominal dollars paid to counsel, plaintiff nevertheless will lose the time value of this money during the lag between the payment of the fees and the date of judgment because plaintiffs are not awarded interest on their attorneys' fees.[118] It is difficult to ascertain whether plaintiffs or their lawyers lose as a result of this effect. Fee arrangements providing that plaintiffs' attorneys will get a contingent fee in addition to the court-awarded "reasonable" attorneys' fees can mean that plaintiffs, not their attorneys, will absorb this loss.[119] For deterrence purposes, this division is unimportant because in either case it is an unrecovered loss resulting from the antitrust violation. If we are interested in compensating victimized plaintiffs, however, this division becomes important. Because this author was unable to estimate how much of the recovery plaintiffs' attorneys typically receive in addition to their court-awarded attorneys' fees, this Article's decision not to adjust for this factor might have the effect of over-estimating the effective recovery to plaintiffs.[120]

Because the average time lag until judgment is substantial, it should be taken into account. Using the estimates of the average time lags and interest rates calculated in subpart III(A) above, the approximate expected cost to plaintiffs of their legal fees increases to between thirty-five (low estimate) and seventy-four (high estimate) percent of the untrebled transfer.[121] Thus, if

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illustrated by an unidentified cash settlement in favor of plaintiffs of $50,000,000, which required only $150,000 in plaintiff attorneys' fees (a 0.003 ratio of fees to settlement). *See* Elzinga & Wood, *supra* note 70, at 123.

[117] This range is, of course, subject to great uncertainty. As Elzinga and Wood caution: "It is unlikely . . . that any one figure characterizing the distributional efficiency of private antitrust could emerge unchallenged because the calculations are senstive to the method of computation." Elzinga & Wood, *supra* note 70, at 126.

[118] "Reasonable" attorneys' fees are normally set using a variation of the "lodestar" approach, which does not include any compensation for the lost time value of paid attorneys' fees. *See* JONES, *supra* note 105, at 548–54.

[119] *See* Kevin F. Kelly, Note, *Attorneys' Fees in Individual and Class Action Antitrust Litigation*, 60 CAL. L. REV. 1656, 1658–59 (1972) (discussing cases holding that such contracts are legal). *See generally* John Leubsdorf, *The Contingency Factor in Attorney Fee Awards*, 90 YALE L.J. 473 (1981).

[120] If the courts typically fix attorneys' fees that were reasonable at the time they accrued, it is reasonable to assume that plaintiffs' attorneys would protect themselves from the lost time value of their fees through mechanisms such as contingent fee arrangements.

[121] Section III.A.1 concluded that on the average there was as much as a .5 year gap between detection and filing, and another 4 or 4.5 years of litigation. If 1/3 of the attorneys' fees were incurred 4 years before judgment, 1/3 were incurred 2 years before judgment, and 1/3 immediately before judgment, and if a low estimate of a 7.69% annual interest rate

plaintiffs paid their attorneys thirty to sixty cents times the transfer in attorneys' fees and were later awarded this nominal amount by the court, they would be short .05 to .14 times the transfer because of the lost time value of their money.

This difference is undoubtedly not the only one between court-awarded attorneys' fees and costs and the actual attorneys' fees and costs that plaintiffs must expend. Other differences can arise from statutory expert witness and other cost-fixing provisions,[122] and contingent fee agreements requiring plaintiffs to pay their lawyers fees beyond those awarded by the court so that plaintiffs can obtain effective counsel.[123] Moreover, the .05 to .14 gap was calculated using Salop and White's relatively low estimates of the probable range of attorneys' fees; Elzinga and Wood's larger estimates would produce a significantly larger discrepancy.[124] To account somewhat for these factors, the gap will be widened to .05 to .20, a range that could well be low.

In summary, it seems likely that plaintiffs are not fully reimbursed for all their legal expenses. This subpart will assume that, on the average, court-awarded attorneys' fees and costs are thirty to sixty percent of the transfer effects of market power, but that actual plaintiff's attorneys' fees and costs are approximately thirty-five to eighty percent of the transfer. This assumption means that plaintiffs on average pay as attorneys' fees and costs a net unreimbursed amount equivalent to between five and twenty percent of the transfer.

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is used (*see supra* notes 78–86 and accompanying text), on average the legal fees should be increased by 17% to account for the lost time value of money. Legal fees of .30 times the transfer would be increased to .35 times the transfer. A higher estimated adjustment, using the 10.22% annual interest rate calculated *supra* in section III.A.2, would mean that the fees should be increased by 23%, from .60 up to .74 times the transfer. *See supra* notes 79–87 and accompanying text.

[122] *See generally* Note, *Redefining the "Cost of Suit" Under Section Four of the Clayton Act*, 82 MICH. L. REV. 1905 (1984).

[123] Some of these adjustments are more likely to apply to suits by consumers, others to suits by businesses. Another complication arises because Section 4 of the Clayton Act mandates the award of attorneys' fees for successful civil antitrust judgments, but not for settlements. Thus, the "only basis for awarding an attorney's fee in such cases is the equitable fund theory doctrine, which may be used to 'make fair and just allowances for expenses and counsel fees to [those] parties promoting litigation. . . .'" City of Detroit v. Grinnell Corp., 495 F.2d 448, 469 (2d Cir. 1974) (quoting Trustees v. Greenough, 105 U.S. 527, 537 (1881)). In other words, plaintiffs' attorneys obtain part of the settlement.

[124] *See supra* notes 113–14.

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D. *Other Plaintiff Costs of Pursuing the Case*

In addition to the actual victory or defeat, a corporation's involvement in an antitrust action is likely to affect it in other ways, usually for the worse. For example, the prospect of supracompetitive profits gives plaintiffs and defendants an incentive to engage in wasteful offensive or defensive "rent seeking" behavior,[125] and it is possible that victims or potential victims of antitrust actions will become unduly risk averse.[126] Most of these potential costs of antitrust violations are extremely difficult to measure.

There is, however, one effect of a violation and its subsequent litigation that lends itself to rough partial quantification. It is common for corporate employees to spend significant amounts of time pursuing antitrust litigation.[127] This investment includes time spent conferring with lawyers, assembling necessary documentation, testifying, and responding to the inevitable requests from the other parties.[128]

The Georgetown private damages study asked a sample of corporate officials how long they spent pursuing their antitrust cases. The 225 officials who responded reported spending an average of 203 hours of executive time per case.[129] This figure does not include administrative or nonexecutive time,

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[125] *See* Richard Posner, *The Social Costs of Monopoly and Regulation*, 83 J. POL. ECON. 807 (1975); POSNER, *supra* note 3, at 4–11. Similarly, a cartel or monopoly often must expend resources to protect its position. *Id.*

[126] Many also believe that organizational slack, or X-inefficiency, often results from monopoly power. *See* Harvey Liebenstein, *Allocative Efficiency vs. "X- Efficiency,"* 56 AM. ECON. REV. 392 (1966). To the extent that plaintiffs are awarded three times defendants' supracompetitive profits, monopolies and cartels have an incentive to be lazy or inefficient. Lower supracompetitive profits could mean a lower eventual payout, so victims could end up paying threefold for defendants' laziness and inefficiency.

[127] Individual cases vary remarkably for many reasons, including the fact that corporate time spent on a case can often substitute for attorney time.

[128] Antitrust cases often require the attention of top corporate executives who are prevented from exploiting other corporate opportunities or formulating or carrying out strategic plans. Several clients have told the author that, when they are deciding whether to file an antitrust suit, these corporate costs are a larger impediment than the cost of their attorneys' fees. Moreover, plaintiffs are required to mitigate damages, and these efforts are not compensated by the judgment.

[129] This figure was calculated from the material presented in Paul V. Teplitz, *The Georgetown Project: An Overview of the Data Set and its Collection, in* PRIVATE ANTITRUST LITIGATION, *supra* note 3, at 73. Only a small percentage of lawyers responded to the survey, so this data set must be used with more caution than most of the data relied upon in this Article.

corporate overhead or direct expenses, Board of Directors time, in-house counsel time, time wasted because of disruption of employees routine, or time spent by employees discussing the case.[130] If the executive time is valued at $100.00 per hour[131] and the result is doubled or tripled to account for the omitted corporate time, overhead, and expenses, the "average" lawsuit would cost the corporation $40,600 to $60,900.[132] Because the average litigation cost for this same sample of cases was $77,000,[133] the lost corporate time and expenses might cost the corporation approximately fifty-three to seventy-nine percent as much as the attorneys' fees. Subpart III(C), above, calculated that attorneys' fees cost approximately thirty-five to eighty percent of the "average" transfer effects of market power.[134] Under these assumptions the lost corporate time and expenses would constitute from nineteen to sixty-three percent of the transfer.[135]

This range is uncertain for many reasons,[136] including its reliance upon a relatively small and possibly atypical sample of cases reporting corporate time

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[130] *Id.* Nor does it include the "water cooler" effects of significant antitrust cases. Corporate personnel often spend considerable time speculating about the course of a case and its effects upon the company's future and their careers.

[131] In 1979 the average attorney fee awarded in antitrust class actions was calculated to be $115.00 per hour. Robert B. Reich, *The Antitrust Industry*, 68 GEO. L.J. 1053, 1069 n.42 (1980).

[132] Calculated as follows: $100 x 203 x (2 or 3) = $40,600 to $60,900.

[133] Teplitz, *supra* note 129, at 71 (average of $45,000 and $109,000).

[134] This calculation uses attorney fee estimates increased to adjust for the lost time value of money. The lost corporate time and expenses should be similarly adjusted.

[135] Calculated as follows: (53% to 79%) x (35% to 80%) = 19% to 63%.

[136] Stephen Susman cautions that the complexities involved are enormous:

> My experience has been that there is a certain "fixed cost" of pursuing just about any lawsuit, regardless of the amount in controversy or the size of the company. To that extent, the amount of company investment is disproportionately large in small cases, but becomes less and less significant as the amount of actual damages increases, even on a single damage measure. At the same time, this factor changes with a number of random variables, including the executive's commitment to the lawsuit (something that often has nothing to do with the merits); the involvement of the company's law department in the litigation; whether the officers are named individually; the ratio of the damages sought to the net worth of the company; whether the charges outrage the executives (for instance, in an antitrust lawsuit with RICO claims)—and I am sure there are other factors.

Letter from Stephen Susman, an extremely experienced antitrust attorney, to Robert Lande (April 30, 1987) (on file with author).

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spent on antitrust cases.[137] It surely does not apply to consumer class action suits, because the total value of lost consumer time from an antitrust violation would usually be de minimis.[138] Nevertheless, for the reasons given at the beginning of this subpart, this range probably includes only a small portion of the noncompensable time and expenses consumed by the prospect of an antitrust violation, the violation itself, and the subsequent litigation. This Article will round these estimates and, to account for uncompensated victim time and expenses, assume a low adjustment of twenty percent of the transfer and a high adjustment of sixty-five percent. This range will be used in the subsequent calculations.

E. *The Costs of the Judicial System*

Every antitrust case entails unreimbursed costs to the judicial system that directly harm the taxpayer and society as a whole. Although every party is entitled to a fair trial, and it would be unfair to consider defendants "responsible" for the costs in cases in which they ultimately prevail, the judicial costs involved in obtaining an award for the victorious plaintiff are as necessary and inevitable as attorneys' fees, and should therefore be considered another damage from antitrust violations.[139]

A 1979 Federal Judicial Center study (the most recent available) indicated that federal district court judges spent approximately 4.1% of their time on civil antitrust cases not involving the federal government.[140] There is no

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[137] *See* Elzinga & Wood, *supra* note 70, at 110. This Article's analysis assumes that defendant's expenses are the same as those of the plaintiff; the Georgetown study does not specify whether the responses are from plaintiffs or defendants. Teplitz, *supra* note 129, at 73. No losses are assumed for the fringe firms or the allocative inefficiency multiplier.

[138] If these calculations were performed solely for consumers, an estimate of zero would be appropriate. A separate analysis of consumer class action suits could reveal other differences.

[139] Even if we assume that all defendant losses were "close calls" contested in good faith, the court costs are nevertheless damages from the violation. The taxpayers, through their representatives who established the court system, have decided to absorb this cost rather than assess it against the losing party. Nevertheless, if the violation had not occurred, taxpayers would not have incurred these costs. Professor Landes believes that optimal deterrence requires that all enforcement costs that are a net damage to others, such as costs of judicial administration, should be considered as damages from antitrust violations. Landes, *supra* note 43, at 653, 657

[140] *See* STEVEN FLANDERS, 1979 DISTRICT COURT TIME STUDY (1980), *cited in* Reich, *supra* note 131, at 1069, and Brodley, *supra* note 59, at 261. Table 16 of the Flanders study reports that judges spent 5.4% of their time on civil antitrust cases. John Shapard, Project

comparable data available for federal court of appeals judges or magistrates, but it is not unreasonable to expect at least a comparable figure.[141] Under this approach the average total cost to the judicial system of handling antitrust cases would be approximately $40,000.[142]

This approach, however, includes certain fixed and indirect costs of maintaining the judiciary that would remain even if the antitrust laws were repealed, so it might be more appropriate to figure the judicial cost per antitrust case on more of an incremental basis. This method yields $21,000 per case.[143]

Director, Research Division, Federal Judicial Center, in a telephone conversation with the author on July 29, 1992, stated that an in-progress study showed that federal district judges spent a much smaller percentage of their time on antitrust cases, although the sample size probably was too small to have statistical significance.

[141] It certainly is possible that circuit courts devote a higher percentage of their time to antitrust. In 1991, 20.2% of all civil cases in federal courts were appealed. Of the 681 antitrust cases, 190, or 27.9%, were appealed. L. RALPH MECHAM, ADMIN. OFFICE OF THE U.S. COURTS, JUDICIAL BUSINESS OF THE UNITED STATES COURTS, 1 ANNUAL REPORT OF THE DIRECTOR 56, App. I at 16 (1991) [hereinafter 1991 ANNUAL REPORT]. Moreover, Shapard, *supra* note 140, reports that the ongoing Federal Judicial Center Study shows that federal magistrates spend more time on antitrust cases than federal district court judges.

[142] The total cost to the taxpayers of administering these courts in 1990 (the 1990 cost rather than the 1979 cost is used to take account of inflation) was $1.361 billion. L. RALPH MECHAM, ADMIN. OFFICE OF THE U.S. COURTS, ACTIVITIES OF THE ADMINISTRATIVE OFFICE, REPORT OF THE DIRECTOR 3 (1990) [hereinafter 1990 REPORT]. These costs should be allocated to the 1,234 private antitrust actions filed in 1979. See Brodley, *supra* note 59, for citations. Cases usually last for more than one year, but their judicial costs are incurred over several years. Thus, (4.1% x $1,361 billion) / 1,234 cases would equal an average cost to the taxpayer per antitrust case of some $45,000. However, the size of the federal judiciary has grown by approximately 10% during the last decade. 1991 ANNUAL REPORT, *supra* note 141, at 3, 7 and 43. Accordingly, an estimate 10% lower, $40,000 per case, would probably be more appropriate.

[143] The direct recurring costs of maintaining federal judgeships as of January 1, 1991 is an estimated $641,000 for circuit court judges, $605,000 for district court judges, $428,000 for federal magistrates, and $334,000 for senior status district court judges (a comparable figure for senior status circuit court judges is not available; it will be assumed to be equal to that for senior status district court judges) (figures supplied by the Administrative Office of the United States Courts, Budget Division, on file with the author). In 1990 these positions were occupied by approximately 158, 531, 484, 201, and 63 people respectively, producing a total cost to the U.S. taxpayer of $718 million. 1990 REPORT, *supra* note 142, at 8, 9. The federal judiciary has grown by approximately 10% during the past decade, 1991 ANNUAL REPORT, *supra* note 141, at 3, 7, 43, so it might be appropriate to reduce the cost per case comparably. Thus, (4.1% x $718 million x 90%) / 1234 = $21,000 per case.

This estimate of $21,000 per case would, according to the Georgetown study,[144] represent 5.5%of the average plaintiff award. Because these awards trebled the transfer effects of market power, the cost of judicial administration is approximately sixteen percent of the transfer effects of market power.[145]

There is, however, one reason why this estimate might understate the average judicial cost associated with a plaintiff victory. Significantly more defendant victories than plaintiff victories are achieved early,[146] and the judicial costs for the average plaintiff victory may well be closer to those for the average antitrust case that reaches judgment. This figure can also be approximated as forty percent of the transfer effects of antitrust violations.[147]

There are other reasons, however, why this estimate may be too high. While it is probably irrelevant that the total number of antitrust cases has dropped dramatically since 1979,[148] it is significant that the average amount of judicial time spent per antitrust case probably has dropped in recent years. In many areas, including monopolization[149] and RPM,[150] summary judgment motions are more likely to be granted against antitrust plaintiffs, and in general criminal cases involving illegal drugs are tending to crowd civil cases off of

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[144] The average plaintiff award was $380,903 for the Georgetown sample's 1973–83 cases. Teplitz, *supra* note 129, at 77. The median plaintiff award was $153,416. *Id.*

[145] This figure only includes judicial costs as a percentage of plaintiff awards. It omits consideration of judicial costs in cases in which the defendant wins.

[146] Teplitz, *supra* note 129, at 74.

[147] The average trial length of 11.4 days, Brodley, *supra* note 59, at 260, x $605,000 ($605,000 is the average recurring annual cost of a federal district court judgeship; *see supra* note 143) /135 (the average number of trial days per judge per year; *id.*) = $51,000 per case. $51,000 divided by $380,903 (*see supra* note 144 for the average award in an antitrust case) = 13.4%; trebled, this figure is 40%. Alternatively, the approximate cost of a day of a civil jury trial is $2,711. (Figure supplied by Budget Development Branch, Administrative Office of the United States Courts, dated Feb. 12, 1992, on file with author). 135 (average number of trial days per judge per year) / 11.4 (average number of trial days per antitrust case) = 11.8. Average recurring cost of a federal district court judgeship is $605,000 / 11.8 = $51,000 per case.

[148] In 1979, 1,234 civil antitrust cases were filed. *See supra* note 142. In 1991, 681 civil antitrust cases were filed. 1991 ANNUAL REPORT, *supra* note 141, at 56. This decrease probably is not relevant, however, because this section is ultimately concerned with average judicial resources per antitrust case, not total judicial resources spent on antitrust.

[149] *See, e.g.*, Matsushita Elec. Indus. Corp. v. Zenith Radio Corp., 475 U.S. 574 (1986).

[150] *See, e.g.*, Monsanto Co. v. Spray-Rite Serv. Corp., 465 U.S. 752 (1984).

judicial calendars.[151] Antitrust settlements, moreover, often involve little court time.

Nevertheless, huge antitrust cases continue to be litigated,[152] and some areas of antitrust have become more complex.[153] For all these reasons, it seems reasonable to construct a range for the judicial costs of handling antitrust cases that is both relatively large and lower than the sixteen percent figure presented above. This Article will assume a range of five to twenty percent of the transfer effects of market power, a range of course subject to the same uncertainty present throughout this analysis.

F. *Umbrella Effects of Market Power*

Courts are split over whether customers of the violator's competitors can successfully sue the offenders on the theory that the offenders were responsible for "umbrella" effects.[154] As a practical matter, however, umbrella effect damages are rarely awarded against an offending cartel or monopoly,[155] largely because of proof problems.[156]

It is difficult to estimate how large an adjustment should be made for these uncompensated consequences of market power.[157] There are severe problems

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[151] *See, e.g.*, 1991 ANNUAL REPORT, *supra* note 141, at 2–10.

[152] Of the 56 civil cases in district courts requiring more than 25 trial days during the 12-month period ending June 30, 1990, 8 were antitrust cases. 1990 ANNUAL REPORT, *supra* note 142, at 165–66 (Table C-9).

[153] For example, vertical nonprice cases today probably use more judicial resources on the average than they did 20 years ago.

[154] *Compare* Mid-West Paper Prods. Co. v. Continental Group, Inc., 596 F.2d 573 (3rd Cir. 1979) (no standing granted to customers of competitors of violators to sue violator for these damages) *with* Beef Indus. Antitrust Litig., 600 F.2d 1148 (5th Cir. 1979), *cert. denied*, 449 U.S. 905 (1980) (standing allowed for umbrella claims); *see also* discussion in PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 337.3 (Supp. 1992) (making a persuasive argument that such plaintiffs should have standing).

[155] *See* sources cited in AREEDA & HOVENKAMP, *supra* note 154 (citations to, and analysis of, many of the relatively few cases that discuss the issue); *see also* State of Wash. v. American Pipe & Constr. Co., 280 F. Supp. 802 (S.D. Cal. 1968), *cert. denied*, 393 U.S. 842 (1968) (umbrella claims allowed; proof problems discussed).

[156] Practical proof problems include causation complexities, confidentiality issues, and coordination difficulties. *See* Page, *supra* note 23, at 1490–92.

[157] Umbrella effects are less likely when a cartel or monopoly has a smaller market share. Landes and Posner conclude that market power is unlikely to occur when a firm has less than a 40% market share. *See* Landes & Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 944 n.15 (1981) (citing F.M. SCHERER, INDUSTRIAL MARKET

in using cartel[158] or merger[159] cases to arrive at even rough estimates of possible umbrella effects. Monopolization cases, however, are relatively suitable; monopoly power is required, market shares are often reported, and markets are defined with relative care. This subpart contains the analysis of three groups of monopolization cases (one collected by Koller that encompasses cases from 1907 to 1965,[160] one collected by Zerbe and Cooper that encompasses cases from 1944 to 1981,[161] and one consisting of every plaintiff victory at the court of appeals level from 1980 through 1991) that, together, should constitute a good sample.[162] Attempted monopolization cases were excluded because umbrella effects are far less likely in these situations.

The firms judged by the courts to be monopolists in Koller's sample[163] were found to have had an average market share of approximately eighty-two

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STRUCTURE AND ECONOMIC PERFORMANCE 232 (2d ed. 1980)). Professor Weiss's massive study of the relationship between concentration and price concludes that there rarely is any relationship if the four leading firms in a market have less than a combined 50% share, but that industry concentrations above this critical level frequently lead to supracompetitive pricing for an industry. Leonard W. Weiss, *A Review of Concentration-Price Studies in Banking, in* CONCENTRATION AND PRICE 272–74, 283 (Leonard W. Weiss ed., 1989) (volume includes other pertinent studies by Marvel, Berger, and Hannan). These data suggest that the largest fringe in which umbrella effects could occur normally would consist of 50% of a market.

[158] It is exceedingly difficult to determine the average market share of cartels because courts do not routinely report cartels' market shares or devote a great deal of effort to accurately defining the relevant market for these per se offenses. Nor does every illegal cartel possess market power. *See generally* A.B.A. ANTITRUST SECTION, *supra* note 94, at 33–41.

[159] Merger cases usually report market shares and give careful attention to market definition, although the prophylactic nature of the antimerger statutes makes it uncertain that illegal mergers would often give rise to significant umbrella effects. *See* Fisher & Lande, *supra* note 19, at 1591.

[160] *See* ROLAND H. KOLLER, PREDATORY PRICING IN A MARKET ECONOMY (1969).

[161] *See* Richard O. Zerbe & Donald S. Cooper, *An Empirical and Theoretical Comparison of Alternative Predation Rules,* 61 TEX. L. REV. 655 (1982).

[162] I am grateful to William Atkins for assistance with this analysis.

[163] Many of the cases in Koller's sample were attempted monopolization cases or cases that did not give usable market share statistics. KOLLER, *supra* note 160, at 45–47. There were many "close calls" that arguably could have been included, such as Forster Mfg. Co. v. F.T.C., 335 F.2d 47, 49–52 (1st Cir. 1964), *cert. denied,* 380 U.S. 906 (1965) ("effect of . . . [company's price] discriminations . . . has resulted in a tendency toward monopoly . . ." with 58% of the market); Union Leader Corp. v. Newspapers of New England, Inc., 284 F.2d 582, 584 (1st Cir. 1960), *cert. denied,* 365 U.S. 833 (1961) (newspaper enjoyed what might be termed a "'natural' monopoly" by employing practices that eventually gave it a 100% market share; average share over time not reported).

percent by the courts and eighty percent by Koller.[164] The Zerbe and Cooper sample (excluding cases also reported by Koller) yields an average market share of seventy-nine percent,[165] while the more recent sample (excluding cases

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[164] KOLLER, *supra* note 160. These unweighted averages were derived from the following plaintiff victories holding that the firm with the stated market share possessed monopoly power: (1) United States v. American Tobacco Co., 328 U.S. 781, 795–97 (1946) (averaging cigarette market shares of 90.7%, 73.3%, 71%, and 68%, or an average share of 75.8%, with a "10 cent cigarette" market share of 80%, for an average of 77.9%; averaging this 77.9% figure, in turn, with 75.3% (from shares of 83.6%, 84.7%, 85.8%, 76.4%, 79.7%, 74.9%, 72.8%, 71.6%, 68.8%, 66.4%, and 63.2% in KOLLER, *supra* note 160, at 142), for a combined two sample average of 76.6%); (2) United States v. American Tobacco Co., 221 U.S. 106, 157, 159, 176 (1911) (cartel with "96 or 97"% market share in 1890, 88.9% in 1891, for an average share of 92.7%; figures for 6 different markets in KOLLER, *supra* note 160, at 75, averaging 85.8%; combined average (of 92.7% and 85.8%) of 89.3%); (3) United States v. Standard Oil Co. of N.J., 221 U.S. 1 (1911) (averaging 90% (*See Standard Oil*, 221 U.S. at 33) with 75.8% (an average based on shares of 80% (transportation), 75% (refining), 50% (tank cars), 80% (illuminating oil), 80% (naphta), and 90% (lubricating oil) reported in the decision below at 173 F. 177, 178, 192 (C.C.E.D. Mo. 1909)) for an average of 82.9%; Koller reports shares of 90% (refining) and 80% (pipelines), or an average of 85% (KOLLER, *supra* note 160, at 55–56; combined average of 82.9% and 85% is 84%); (4) United States v. E.I. DuPont de Nemours & Co., 188 F. 127, 145, 154 (C.C.D. Del. 1911) (defendant with shares of 64%, 72%, 72%, 73%, 64%, and 100%, for an average of 74.2%; same estimates in KOLLER, *supra* note 160, at 98).

[165] Zerbe & Cooper, *supra* note 161. There were 40 cases in the Zerbe & Cooper article, of which 18 were also analyzed in the Koller study, *supra* note 160, and therefore are not analyzed in this footnote. Only the following cases had specific language holding that the firm possessed monopoly power and reported usable market share statistics: Borden, Inc. v. F.T.C., 674 F.2d 498, 511 (6th Cir. 1982), *vacated and remanded because of settlement*, 461 U.S. 940 (1983) (Borden possessed 75.3% to 88% on a volume basis and 88.9% to 91.8% on a dollar basis. These average to 86%, and the court held that "these market shares are more than sufficient to infer monopoly power . . . ." *Borden*, 674 F.2d at 511.); Columbia Metal Culvert Co. v. Kaiser Aluminum & Chem. Corp., 579 F.2d 20, 23, 31 (3d Cir.), *cert. denied*, 439 U.S. 876 (1978) ("an entity controlling more than 80% of the market, would be sufficient to allow the jury to find" monopoly power; the court used 80%); Greyhound Computer Corp. v. International Bus. Machs. Corp., 559 F.2d 488, 496–97 (9th Cir. 1977), *cert. denied*, 434 U.S. 1040 (1978) ("[t]here was evidence from which the jury could reasonably infer that IBM possessed monopoly power" with market shares of 82.5% in 1964, 75.1% in 1967, and 64.68% in 1970, for an average of 74.1%); Weber v. Wynne, 431 F. Supp. 1048, 1054–55 (D.N.J. 1977) (average of four year market share (77.4% in 1971, 78.6% in 1972, 77.5% in 1973 and 1974) is 77.75%. This market share level created a "presumption of monopoly power" found to be attributable to skill, efficiency and foresight.).

also reported by Zerbe and Cooper) produces an average market share of seventy-six percent.[166] These results imply an "average" monopolist market

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[166] The USAPP file of the Lexis GENFED library was searched in August 1992 with the term "Antitrust and Sherman Act and Monopoly and Section Two or Section 2 and Date (Aft 1979)." This search produced 461 cases that were decided in the years 1980 to 1991 by the U.S. Courts of Appeals. The following plaintiff victories reported usable market share statistics and contained specific language supporting a conclusion that the firm possessed monopoly power: Reazin v. Blue Cross & Blue Shield of Kan., 899 F.2d 951, 969 (10th Cir.), *cert. denied*, 497 U.S. 1005 (1990) ("we hold that sufficient evidence supports the jury's findings of market and monopoly power" with market control of 47% to 62%; this averages to 54.5%); United States v. Rockford Memorial Corp., 898 F.2d 1278, 1283-85 (7th Cir.), *cert. denied*, 111 S. Ct. 295 (1990) (although not a § 2 case, postmerger share of 64% to 72% "would create a firm having a market share approaching, perhaps exceeding, a common threshold of monopoly power—two thirds . . . ."); Omni Outdoor Advertising Inc. v. Columbia Outdoor Advertising, Inc., 891 F.2d 1127, 1142 (4th Cir. 1989), *rev'd on other grounds*, 111 S. Ct. 1344 (1991) ("a case of retention and solidification of monopoly power" with market control of 95%); U.S. Philips Corp. v. Windmere Corp., 861 F.2d 695, 704 (Fed. Cir. 1988), *cert. denied*, 490 U.S. 1068 (1989) ("[e]vidence that a firm holding 90% of a market that has substantial entry barriers drastically slashes its prices in response to the competition of a new entrant . . . is sufficient to show monopolization . . . ."); Oahu Gas Serv. v. Pacific Resources, Inc., 838 F.2d 360, 366-67 (9th Cir.), *cert. denied*, 488 U.S. 870 (1988) (affirmed a jury finding that the defendant possessed monopoly power with 100%, 95.5%, 89.7%, 69.6%, 68.2% market shares in different years, which averages to 84.6%); Syufy Enters. v. American Multicinema, Inc., 793 F.2d 990, 996 (9th Cir. 1986) ("market share of 60% to 69%, when coupled with other evidence of additional factors, is adequate" to support a jury finding of monopoly power; average is 64.5%); Bonjorno v. Kaiser Aluminum & Chem., 752 F.2d 802, 809, 811 (3d Cir. 1984), *cert. denied*, 477 U.S. 908 (1986) ("sufficient evidence to permit the monopolization claim to go to the jury" with 80% of the market); United States v. American Airlines, Inc., 743 F.2d 1114, 1115-16, 1118 (5th Cir. 1984), *cert. dismissed*, 474 U.S. 1001 (1985) ("would have acquired monopoly power" with 76% overall market share); Aspen Highlands Skiing Corp. v. Aspen Skiing Co., 738 F.2d 1509, 1520, 1525 (10th Cir. 1984), *aff'd*, 472 U.S. 585 (1985) (market share every year but one between 81.5% and 83.2% supported finding of monopoly power); Reid Bros. Logging Co. v. Ketchikan Pulp Co., 699 F.2d 1292, 1299 (9th Cir.), *cert. denied*, 464 U.S. 916 (1983) (over 90% market share shows sufficient monopoly power for § 2 violation); Associated Radio Serv. Co. v. Page Airways, Inc., 624 F.2d 1342, 1357 (5th Cir. 1980), *cert. denied*, 450 U.S. 1030 (1981) (50% to 64% enough for monopolization in light of the small number of competitors, high entry barriers, limited products, and the defendant's power over price); Hunt-Wesson Foods, Inc. v. Ragu Foods, Inc., 627 F.2d 919, 924-25 (9th Cir. 1980), *cert. denied*, 450 U.S. 921 (1981) (65% market share was sufficient basis for a finding of market power to support monopolization claim).

share of between seventy-five and eighty-five percent, and thus an average share of the nonmonopolistic fringe of fifteen to twenty-five percent[167]

This does not, of course, necessarily mean that the umbrella effects of monopoly power can safely be assumed to apply to a fifteen to twenty-five percent market share. Actual umbrella effects can be larger or smaller for many reasons. Some antitrust violators can, like OPEC, cause umbrella effects in related markets for substitute or complementary products; activities that raise rivals' costs also can give rise to a type of umbrella effect.[168] Umbrella effects can also be magnified if they are marked up and passed to another level in a distribution chain.[169] Alternatively, some fringe firms might choose to maintain a sub-monopoly price to gain market share. Many types of behavior are possible, and it is may be nearly impossible to determine what generally occurs in either monopolization or collusion cases. To account for this uncertainty, the range over which umbrella effects are likely to occur will be expanded to ten to thirty percent of a defendant's market. This range means that a relatively low adjustment for unreimbursed umbrella effects of monopoly power would increase the effects of market power by eleven percent,[170] while a relatively high adjustment would increase the effects by forty-three percent.[171] As with other figures in this Article, the umbrella effects estimates must be regarded as approximations made with incomplete data over which reasonable people can differ.

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[167] The sample sizes are small, and there is no guarantee that this range also would apply to collusion cases. Umbrella effects of cartels might be higher or lower for many reasons. Successful bid rigging conspiracies, for example, must include all potentially successful bidders or the conspirators would have to limit price to the level of the excluded firms.

[168] Violators that monopolize by raising rivals' costs are likely to cause strong umbrella effects because the higher prices charged by rivals are the lever that allows the violator to increase its prices. *See* Krattenmaker et al., *supra* note 19. For an analysis of the raising rivals' costs phenomena in a damages context, see Hovenkamp, *supra* note 27, at 12–21.

[169] *See generally infra* notes 256–61 and accompanying text.

[170] Calculated from a 10/90 ratio between the market share of the fringe and the monopolist.

[171] Calculated from a 30/70 ratio between the market share of the fringe and the monopolist.

G. *Allocative Inefficiency*

Market power almost always results in allocative inefficiency (as well as a transfer of wealth from the victim(s) to the firm(s) with market power).[172] The only violations that would not give rise to allocative inefficiency would be in those rare situations in which demand for a product is completely inelastic.[173]

Despite allocative inefficiency's virtual ubiquity, there does not appear to have been even a single instance in which a plaintiff has recovered for any allocative inefficiency effects of market power.[174] Instead, the awarded "treble damages" treble only the transfer effects of market power.[175]

It is extremely difficult to determine how large, on average, the allocative inefficiency effects of market power are likely to be. Thoughtful antitrust analysts discussing the average ratio of the wealth transfer effects of market power to its allocative inefficiency effects typically assume a two-to-one ratio,[176] which follows from the use of a number of standard assumptions.[177] Some thoughtful antitrust analysts predict an average ratio lower than two to one,[178] while others predict that the ratio will usually be four to one or higher, at least under specified conditions.[179] All of these assessments are partly

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[172] *See supra* notes 16–19 and accompanying text.

[173] An example of a product that could rise significantly in price without suffering a measurable decrease in quantity demanded might be insulin.

[174] The practical proof problems involved would make this a formidable task. *See* Page, *supra* note 23, at 1489–90.

[175] *Id. See generally* Charles C. Van Cott, Note, *Standing at the Fringe: Antitrust Damages and the Fringe Producer*, 35 STAN. L. REV. 763 (1983).

[176] *See, e.g.*, Frank H. Easterbrook, *Panel Discussion*, 55 ANTITRUST L.J. 123, 126 (1986); Frank H. Easterbrook, *Predatory Strategies and Counterstrategies*, 48 U. CHI. L. REV. 263, 330 n.144 (1981); Richard Schmalensee, *Another Look at Market Power*, 95 HARV. L. REV. 1789, 1812 (1982).

[177] *See* HERBERT HOVENKAMP, ECONOMICS AND FEDERAL ANTITRUST LAW 401 (1985). As Judge Easterbrook observed, the two to one ratio depends upon the assumption of linear demand and supply curves, and "[t]hese curves doubtless are not linear, but legal rules must be derived from empirical guesses rather than exhaustive investigation." Easterbrook, *supra* note 3, at 455.

[178] *See* Herbert Hovenkamp, *Treble Damages Reform*, 33 ANTITRUST BULL. 233, 249 (1988) (citing for support JOAN ROBINSON, THE ECONOMICS OF IMPERFECT COMPETITION 144 (2d ed. 1969)). Concave demand curves imply a lower ratio, and Hovenkamp believes that demand curves are more likely to be concave than convex.

[179] *See* Fisher & Lande, *supra* note 19, at 1645. Fisher and Lande show how a ratio ranging from 4/1 to 40/1 might arise from an anticompetitive merger under specified circumstances. The analysis assumes, inter alia, a price rise that would not exceed 30%;

theoretical because the actual ratio depends upon such factors as the actual average amounts of price increases caused by market power and the average demand elasticity in specific situations.[180] The crucial questions involve the typical nature of specific underlying real-world parameters, and no one knows what these actually are. The only empirical estimate of the relative sizes of the allocative inefficiency and transfer effects appears to be that by Professors F.M. Scherer and David Ross. They reviewed the empirical literature on the size of the two effects and concluded that the best evidence suggests the wealth transfer effects of market power might approximate two to three percent of our nation's GNP, while the allocative inefficiency effects might range from one-half to two percent of GNP.[181] The averages of these figures yield a ratio of transfer to allocative inefficiency of 2/1; the highs a ratio of 1.5/1; and the lows a ratio of 4/1.[182]

If a ratio of 2/1 is assumed, market power resulting in one dollar in transfer effects would also result in another fifty cents in allocative inefficiency.[183] A more conservative approach would use a ratio of 4/1; that is, each dollar in transfer is accompanied by only twenty-five cents in allocative inefficiency. This Article will use these ranges in subsequent calculations: it will assume that every dollar in transferred wealth produces an additional twenty-five to fifty cents in allocative inefficiency.[184]

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because mergers likely to give rise to larger increases probably would be prevented, they are unlikely ever to be attempted. A cartel or monopoly would be more likely to lead to a larger increase, however, and larger increases usually result in dramatically lower ratios of transfer to allocative inefficiency. *Id.* at 1644-50. Thus, the ratios calculated in the Fisher & Lande article would be less likely to generalize to market power created by antitrust violations other than mergers. For additional qualifications and insights, see Laura B. Peterson, *Comment on Antitrust Remedies*, 28 J.L. & ECON. 483, 486 (1985).

[180] Fisher & Lande, *supra* note 19.

[181] F.M. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 661-67 (3d ed. 1990).

[182] Calculated as follows:

$(2+3/(.5+2.0) = 2.5/1.25 = 2.0$ (using averages)

$3/2 = 1.5$ (using highs)

$2/.5 = 4.0$ (using lows)

[183] Judge Easterbrook points out that this factor alone reduces damages so that "[f]rom the violators perspective, 'treble' damages really are double the starting point of overcharge plus allocative loss . . . ." Easterbrook, *supra* note 3, at 455.

[184] This assumes that allocative inefficiency also results from the fringe's price increases. The monopoly or cartel would have to take the fringe's reaction, whether cooperative or competitive, into account in fixing the final supracompetitive price. Afterwards, allocative inefficiency should result from the entire industry's subcompetitive output.

H. *Tax Effects*[185]

1. *Defendants' Perspective*

Tax considerations normally would not affect the corporate defendant's relative gains and losses. The gain, payout,[186] attorneys' fees, and time spent pursuing the case would normally affect corporate income or constitute a deductible business expense. These effects would normally cancel one another so that there would be no relative tax effect upon defendants.

2. *Business Plaintiffs' Perspective*

With one important exception, normally the effects of taxes on the actual magnitude of the gains and losses from antitrust violations should cancel one another for business plaintiffs. A business victim would have less profit, for example, as a result of being forced to pay overcharges resulting from price fixing.[187] With one crucial exception, the recovery would be taxed as ordinary income,[188] so the victim normally[189] would be in the same relative position

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[185] The author is grateful to his colleagues Fred Brown, Walter Schwidetzky and Wendy Shaller for assistance on this subpart.

[186] *See* Rev. Rul. 80-211, 1980-2 C.B. 57. The defendant's payment is only one-third deductible, however, if the civil suit is a follow-on to a criminal conviction or nolo contendere plea. *See* I.R.C. § 162 (West Supp. 1992); *see* Federal Paper Bd. Co. v. Commissioner, 90 T.C. 1011 (1988). Kauper and Snyder, however, reported that only 9% of all cases filed in the Georgetown sample were follow-on cases. Kauper & Snyder, *supra* note 98, at 329, 333. In recent years, moreover, this figure was only 6%. *Id.* at 332. However, the follow-on cases were dismissed less frequently, and 16% of the cases in the Georgetown sample that were litigated to a conclusion were follow-on cases. Calculated from *id.* at 344.

This Article is only focusing on civil cases. An entirely different set of considerations apply to criminal antitrust actions.

[187] If we assume an average marginal federal corporate income tax rate of approximately 34% (I.R.C. § 11 (West Supp. 1992) (provides that, at least after the phase-out of the benefits attributable to low initial corporate tax rates, corporations with taxable income exceeding $75,000 pay a marginal tax rate of 34%) and an assumed average state corporate tax rate of approximately 6%, then the victim's lost profit would be reduced by 40%.

[188] I.R.C. § 61 (West Supp. 1992); *see also infra* note191.

[189] If the recovery is for destroyed goodwill, however, the analysis is more complex. Such a recovery would be nontaxable to the extent it does not exceed the corporation's basis

both before and after taxes. Attorneys' fees would be deductible business expenses[190] and lost corporate employees' time or expenses would diminish overall corporate income.

The important exception comes from section 186 of the Internal Revenue Code, which has a major effect on the relative status of business plaintiffs. This section provides that compensatory antitrust damages included in gross income[191] (reduced by amounts paid in securing the award) shall in turn be allowed as a deduction.[192] This provision conveys a significant advantage upon business plaintiffs who recover lost income in antitrust cases.

To illustrate (putting aside for simplicity the issue of legal fees), suppose a plaintiff pays one dollar extra for its products because of price fixing and receives three dollars after the judgment. Assume that the effective corporate income tax rate is forty percent[193] The prejudgment loss to the plaintiff would only be sixty cents.[194] The taxable postjudgment gain would be two dollars (three dollars less one dollar). Thus, the plaintiff would be left in the year of judgment, after taxes, with $2.20.[195]

An example incorporating the effects of legal fees would be slightly more complex. Assume that a plaintiff initially pays an additional one dollar because of a cartel and also incurs thirty-five to eighty cents in legal fees. Suppose that plaintiff later recovers three dollars plus thirty to sixty cents in legal fees.[196] Assume that the effective corporate tax rate is forty percent.[197] As a result of tax savings, the prejudgment loss to the plaintiff would only be between $.81

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in the goodwill. Ad Visor, Inc. v. Commissioner, 47 T.C.M. (P-H) 141 (1978); State Fish Corp. v. Commissioner, 48 T.C. 465 (1967). The recovery would be treated as a capital gain to the extent it exceeded the corporation's basis. Rev. Proc. 67-33, 1967-2 C.B. 659.

[190] I.R.C. § 162 (West Supp. 1992).

[191] Typically the full $3.00 would be included in income subject to the I.R.C. § 186 deduction. Portions of some awards, however, will not be included in gross income to the extent they compensate the victim for destroyed goodwill. The plaintiff's basis in its goodwill is decreased to the extent of the nontaxable compensatory recovery when the recovery is less than the basis. Awards in excess of basis generate gain. I.R.C. § 1001 (West Supp. 1992).

[192] I.R.C. § 186 (a) (West Supp. 1992).

[193] *See supra* note 187.

[194] Calculated as follows: $1.00 x .60 = .60. This calculation assumes that the $1.00 diminished plaintiff's income.

[195] Calculated as follows: ($2.00 x .60) + $1.00 = $2.20.

[196] This hypothetical assumes that the plaintiff will obtain less in legal fees than it paid because of the reasons given *supra* in subpart III.C. It also assumes, for simplicity, that the legal fees were incurred in an earlier year than the year of judgment.

[197] See *supra* note 187 for the underlying rationale.

and $1.08, rather than $1.35 and $1.80.[198] The postjudgment taxable gain would range from $2.30 to $2.60.[199] Because this amount would be taxable at the forty percent rate, and because the one dollar deduction would not be taxable at all, the plaintiff would be left with $2.38 to $2.56.[200]

3. *Consumer Plaintiffs' Perspective*

The effects of taxation on consumer plaintiffs are also significant because consumers buy supracompetitively priced goods with after-tax dollars. While they would not be required to pay income tax on the portion of their recovery that compensated them for the extra amount they paid when the violation occurred[201] or for the attorneys' fees that the court awarded,[202] the "punitive double damages" portion of the award would be taxable as ordinary income.[203]

The average marginal tax rate for consumers is approximately thirty percent, roughly twenty-five percent for federal tax[204] plus another five percent

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[198] ($1.00 + (.35 to .80) x .60) = $.81 to $1.08.

[199] Calculated as follows: $3.00 + (.30 + .60) - $1.00 = $2.30 to $2.60. The $1.00 is excluded from income under § 186. Because the .30 to .60 attorneys' fees were deducted in the year they were paid to the attorneys they cannot be deducted again.

[200] Calculated as follows ($2.30 to $2.60) x .60 + 1.00 = $2.38 to $2.56.

[201] Any increase in wealth is taxable if it is received in lieu of taxable income. Commissioner v. Glenshaw Glass Co., 348 U.S. 426 (1955); Hort v. Commissioner, 313 U.S. 28 (1941); Raytheon Prod. Corp v. Commissioner, 144 F.2d 110 (1st Cir.), *cert. denied*, 323 U.S. 779 (1944); Clark v. Commissioner, 40 B.T.A. 333 (1939), *acq.*, 1957-1 C.B. 4 holds that damages paid to compensate for nondeductible economic losses are not includible in income.

[202] Technically, it is possible that only two-thirds of the attorneys' fees could be considered as an expenditure to produce income, I.R.C. § 212(1) (West Supp. 1992), because one-third could be attributable to recovery of the overcharge, and therefore only two-thirds of the attorneys' fees might be deductible as an expense for the production of income. It seems unlikely as a practical matter, however, that consumers would have to pay tax on the remainder, because as a matter of administrative convenience, the I.R.S. would be unlikely to attempt to collect the tax on this one-third of the imputed attorneys' fees, an amount that is likely to be trivial for virtually every consumer. Another complication could arise from the fact that deductions for production of income, such as attorneys' fees, are only deductible to the extent they exceed 2% of adjusted gross income. I.R.C. § 67 (West Supp. 1992).

[203] *Glenshaw Glass*, 348 U.S. at 431–33.

[204] The current federal marginal tax rates for individuals are 15%, 28% and 31%. The 28% marginal tax bracket starts at a high of $32,450 (for married individuals filing joint

for state tax.[205] This means that a one dollar overcharge actually would cost consumers one dollar, but they probably will pay thirty percent income tax on two dollars of their recovery. Thus, the total recovery they would actually receive would be reduced to $2.40.[206]

Another issue involves interest consumers might have lost because of the violation.[207] Absent the violation, consumers might have earned some $.60 to $1.18 in interest on every dollar in overcharges during the period between the occurrence of overcharges and judgment.[208] Because consumers would have had to pay tax on this interest had it been earned, it seems reasonable to consider their loss as reduced by approximately thirty percent because of the tax they would have had to pay on this interest.[209] Thus, a tentative loss ranging from $.68 to $1.18 because of the lack of prejudgment interest would be reduced by thirty percent, down to only a loss of forty-eight to eighty-three cents. Consumers of fringe firms able to price higher because of the violator(s) actions would be similarly affected, so the reduction actually would be greater,

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returns) and a low of $16,225 (for married individuals filing separate returns). I.R.C. § 1 (West Supp. 1992). Taxable income falls into these brackets as follows:

A Income Tax Rate	B Total Taxable Income	C % of Total	A x C
15%	$729,421,936	32%	5%
28%	$942,204,831	42%	12%
31%	$592,034,469	26%	8%
			25%

Thus, the weighted average personal income tax rate is 25% at the margin. These figures are for the 1990 tax year. *See* IRS, 12 STAT. OF INCOME BULL. 154 (1992).

[205] The average state income tax rate, for low to high tax brackets, was between 2.07% and 5.11%. Many states also have local "piggyback" provisions. For example, Maryland permits counties to charge up to 50% of the state's maximum rate of 5%. *See* THE WORLD ALMANAC AND BOOK OF FACTS 188–89 (Mark S. Hoffman et al. eds., 1992).

[206] Calculated as follows: 30% x 2.00 = 60¢ tax; $3.00 - .60 = $2.40. Section 212 would not apply.

[207] "Consumer surplus" is essentially an after-tax concept, so no tax effect will be calculated on the allocative inefficiency effects of market price.

[208] This calculation assumes the 7.69% to 10.22% rates of return computed in subpart III.A.

[209] Alternately, if they had been able to deposit the overcharge in an interest bearing account, they would have been required to pay tax on the interest. The amount the consumers actually receive therefore should be calculated after tax.

perhaps by a factor of 1.25.[210] The total tax savings to consumers would range from twenty-five cents to forty-four cents.[211]

In sum, there are no significant net tax effects for defendants. If consumers are plaintiffs, however, all interest they would have earned on the money they were wrongfully deprived of, and two-thirds of their recovery, would have been taxed at approximately thirty percent.[212] If plaintiffs are corporations, the section 186 deduction for compensatory damages would significantly improve their status as noted above. This Article, therefore, will use these different adjustments to account for tax effects in subsequent calculations depending upon whether corporate plaintiffs, consumer plaintiffs, or defendants are involved.

IV. COMBINING THE ADJUSTMENTS

Each of the preceding adjustments is, as has been noted, subject to a host of uncertainties. While it would be possible to arrive at and combine a "best estimate" for each factor, this approach could inadvertently convey the impression that any number so generated was very likely to be accurate. Accordingly, this Article has constructed a range of estimates for each factor to raise the probability that the true adjustments will be encompassed within this Article's analysis. A "low adjustment" uses the extreme of each range that would least tend to change the nominal "trebling" multiplier, while a "high adjustment" uses the extreme that produces the greatest change. The high and low estimates are then averaged to produce a mean estimate.[213]

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[210] *See* subpart III.F for a range of possibilities.

[211] (.20 to .35) x 1.25 = .25 to .44.

[212] This assumption may slightly overstate consumers' actual recovery. *See supra* note 202.

[213] A potential problem with the approach used in this Article is that when all the low adjustments (*i.e.*, estimates that would not change the nominal "trebling" factor very much) are combined to produce a low estimate, and all the high adjustments (*i.e.*, estimates that tend to reduce the nominal "trebling" factor a great deal) are combined, the result might be an unrealistically wide range. It seems unlikely that all of either the high or the low estimates are correct. Hopefully, the errors offset one another to a significant degree. A figure close to the mean of all the adjustments might be justified not only because it represents the mean estimate for the adjustments, but also because of this offsetting tendency.

A. *Under an Optimal Deterrence Framework*

Subpart II(B) shows, under an optimal deterrence perspective, that an antitrust violation's "damages" should consist of its net harm to others. Damages calculated under this approach should include an adjustment for the direct transfer and inefficiency effects of market power, lack of prejudgment interest, effects of the statute of limitations, plaintiffs' attorneys' fees and other costs of bringing suit, and court costs.[214] It should include the inefficiency results of umbrella effects of market power,[215] but not the wealth transfer effects.[216] Nor should it consider income tax effects.[217]

Table 1 contains the results of combining the appropriate adjustments. Stage I presumes an initial overcharge of one dollar and incorporates the effects of a range of adjustments that should be made even if no litigation were filed. These changes compensate for the effects of the lack of prejudgment interest,[218] directly-caused allocative inefficiency,[219] and the allocative inefficiency aspects of the umbrella effects of monopoly power.[220] Stage II incorporates the effects of antitrust litigation, adjusting for attorneys' fees,[221] other plaintiff costs of pursuing the case,[222] and court costs.[223] Stage III incorporates the effects of an award of three dollars (the one dollar overcharge trebled) plus "reasonable" attorneys' fees,[224] less the damages not awarded because of the statute of limitations.[225]

Table I shows that the effects of the low adjustments indicate that awarded damages are approximately equal to actual damages (they are 1.09 times as large), while the high estimate for the adjustments yields awarded damages of forty-eight percent, or approximately half of actual damages. The mean of the high and low damages and awards calculations produces an estimate—sixty-eight percent—that is less than actual damages

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[214] *See supra* subparts III.A–E.

[215] *See supra* subpart III.F.

[216] *See supra* subpart III.G.

[217] *See supra* subpart III.H.

[218] *See supra* subpart III.A.

[219] *See supra* subpart III.G.

[220] *See supra* subparts III.F and III.G.

[221] *See supra* subpart III.C. Of course, attorneys' fees will be awarded to a victorious plaintiff, and these will be accounted for appropriately.

[222] *See supra* subpart III.D.

[223] *See supra* subpart III.E.

[224] *See supra* subpart III.C.

[225] *See supra* subpart III.B.

Estimates of the Actual Magnitude of the "Treble" Damages Remedy

Table 1: Deterrence Perspective

	Range of Adjustments	Effects of Low Adjustments	Effects of High Adjustments
I. Initial overchage of $1.00			
A. No prejudgment interest	7.69% for 7 yrs. = 1.68; to 10.22% for 8 yrs. = 2.18	$-1.00 \times 1.68 = -1.68$	$-1.00 \times 2.18 = -2.18$
B. Allocative inefficiency	25% to 50% of the transfer	$-1.68 \times 1.25 = -2.10$	$-2.18 \times 1.50 = -3.27$
C. Umbrella effects' allocative inefficiency	effects on 10% to 30% of market times (25% to 50%)	$-2.10 \times 1.03 = -2.16$	$-3.27 \times 1.22 = -3.99$
II. Litigation effects			
D. Attorneys' fees	35% to 80% of the transfer	$-2.16 - .35 = -2.51$	$-3.99 - .80 = -4.79$
E. Other costs of pursuing case	20% to 65% of the transfer	$-2.51 - .20 = -2.71$	$-4.79 - .65 = -5.44$
F. Court costs	5% to 20% of the transfer	$-2.71 - 0.05 = -2.76$	$-5.44 - .20 = -5.64$
III. Effects of tentative award of $3.00 plus "reasonable" attorneys' fees			
G. Tentative award	$3.00 plus (.30 to .60)	3.30	3.60
H. After effects of the statute of limitations	unrecoverable 10% to 30% of $3.00	$3.30 - .30 = 3.00$	$3.60 - .90 = 2.70$
I. Net effects of award		$3.00 - 2.76 = .26$	$2.70 - 5.64 = -2.94$

Actual Magnitude of the "Treble" Damages Remedy:

Low Adjustments	-	Awarded damages are approximately actual damages; $3.00/2.76 = 1.09$ times actual damages.
High Adjustments	-	Awarded damages are significantly less than actual damages; $2.70/5.64 = 48\%$ times actual damages.
Mean Adjustment	-	Mean value of the ratio of awarded damages to actual damages; $(3.00 + 2.70)/2 = 2.85$; $(2.76 + 5.64)/2 = 4.20$; $2.85/4.20 = 68\%$ of actual damages.

B. *Under a Compensation Framework*

If compensating those harmed by violations is a purpose of antitrust damages provisions, it is necessary to calculate all reasonably foreseeable damages to others caused by a violation.[226] The appropriate adjustments will be performed for three different groups of victims. The first will consider all victims—all purchasers, whether consumers or businesses, and society as a whole; the second will focus only upon consumer victims; and the last will focus upon businesses victimized by antitrust violations.

1. *Compensating All Victims—Purchasers, Taxpayers and Society*

The broadest compensation approach would compensate all reasonably foreseeable victims of antitrust violations. It would account for such damages to purchasers as overcharges, lack of prejudgment interest,[227] effects of the statute of limitations,[228] and plaintiffs' attorneys' fees.[229] It also would consider damages caused to society from allocative inefficiency and the costs to the judicial system. It would adjust for the umbrella effects of market power's allocative inefficiency results and (unlike the deterrence perspective) also its transfer results.[230]

A total compensation approach need not, however, consider tax effects, for it is concerned only with the total potentially compensable damage caused by antitrust violations. Tax effects merely shift some of the loss or recovery between direct victims and the taxpayers; they do not affect total damages caused by the violation. (The next two subparts, however, will reconsider the analysis from the perspective of consumer-plaintiffs and business-plaintiffs. Each will consider tax effects.).

One additional complexity must be incorporated. Subpart III(D) calculated the value of plaintiffs' time spent pursuing the case to be between twenty and sixty-five percent of the transfer effects of market power. A consumer class action, however, probably would involve negligible amounts of consumer time. Because some plaintiffs are consumers, the low estimate used in this subpart to account for the value of lost plaintiff time will be lowered to zero.

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[226] *See supra* subpart II.A.

[227] *See supra* subpart III.A.

[228] *See supra* subpart III.B.

[229] *See supra* subpart III.C. Attorneys' fees awarded as part of the recovery will also be factored into the analysis.

[230] *See supra* subpart III.F and III.G. Many antitrust violations are undetectable or cannot be proven. Victims of these violations will not, of course, be compensated.

Table 2: Compensation Perspective: Compensating All Victims

	Range of Adjustments	Effects of Low Adjustments on All Victims	Effects of High Adjustments on All Victims
I. Initial overcharge of $1.00			
A. No prejudgment interest	7.69% for 7 yrs. = 1.68; to 10.22% for 8 yrs. = 2.18	$-1.00 \times 1.68 = -1.68$	$-1.00 \times 2.18 = -2.18$
B. Umbrella effects' allocative inefficiency	effects on 10% to 30% of market	$-1.68 \times 1.11 = -1.86$	$-2.18 \times 1.43 = -3.12$
C. Allocative inefficiency	25% to 50% of the transfer	$-1.86 \times 1.25 = -2.32$	$-3.12 \times 1.50 = -4.68$
II. Litigation effects			
D. Attorneys' fees	35% to 80%	$-2.32 - .35 = -2.67$	$-4.68 - .80 = -5.48$
E. Other costs of pursuing case	0 to 65% of the transfer	no change	$-5.48 - .65 = -6.13$
F. Court costs	5% to 20% of the transfer	$-2.67 - .05 = -2.72$	$-6.13 - .20 = -6.33$
III. Effects of tentative award of $3.00 plus "reasonable" attorneys' fees			
G. Tentative award	$3.00 plus (.30 to .60)	3.30	3.60
H. After effects of the statute of limitations	unrecoverable 10% to 30% of $3.00	$3.30 - .30 = 3.00$	$3.60 - .90 = 2.70$
I. Net effects of award		$3.00 - 2.72 = .28$	$2.70 - 6.33 = -3.63$

Actual Magnitude of the "Treble" Damages Remedy:

Low Adjustments   -   Awarded damages are approximately actual damages;
                            $3.00/2.72 = 1.10$ times actual damages.

High Adjustments   -   Awarded damages are significantly less than actual damages;
                            $2.70/6.33 = .43$ times actual damages.

Mean Adjustments   -   Mean value of the ratio of awarded damages to actual
                            damages; $(3.00 + 2.70)/2 = 2.85$; $(2.72 + 6.33)/2 = 4.52$;
                            $2.85/4.52 = .63$ times actual damages.

Table 2 combines the appropriate adjustments. Stage I assumes an initial overcharge of one dollar, and adjusts for three factors: lack of prejudgment interest,[231] umbrella effects of monopoly power,[232] and allocative inefficiency.[233] These adjustments would apply even if no litigation occurred.

Stage II builds in the effects of antitrust litigation. It adjusts for attorneys' fees,[234] corporate costs of pursuing the case,[235] and court costs.[236] Stage III incorporates the effects of an award of three dollars (the dollar overcharge trebled) plus "reasonable" attorneys' fees,[237] and also the effects of the statute of limitations.[238]

As Table 2 shows, the effects of the low adjustments demonstrate that awarded damages are approximately equal to actual damages (they are actually ten percent larger), while the high estimate shows that awarded damages are nearly half of actual damages (forty-three percent). The mean of the high and low damage awards produces an estimate that is less than actual damages (sixty-three percent).

2. *Compensating Consumer Plaintiffs*

This section focuses solely upon consumers for two reasons. First, the net effect on consumers is of interest if the primary purpose of antitrust law is to protect consumers.[239] Second, in close cases judges sometimes decline to impose liability out of a reluctance to "over-reward" consumer-plaintiffs.[240] For both reasons, this Article will attempt to determine the size of consumers' actual damages compared with their eventual recovery.

Some of the damages calculated in subpart IV(B)(1)—the allocative-inefficiency effects of market power—were losses to society in general, not

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[231] *See supra* subpart III.A.

[232] *See supra* subpart III.F.

[233] *See supra* subpart III.G.

[234] *See supra* subpart III.C. Of course, attorneys' fees will be awarded to a victorious plaintiff, and these will be accounted for appropriately.

[235] *See supra* subpart III.D.

[236] *See supra* subpart III.E.

[237] *See supra* subpart III.C.

[238] *See supra* subpart III.B.

[239] *See* Lande, *supra* note 16.

[240] *See supra* note 11 and accompanying text.

specifically to consumers of the products in question.[241] Moreover, some of the damages to consumers, and some of the recovery, might be shifted to taxpayers through the tax laws, but this effect was ignored because subpart IV(B)(1) was concerned only with calculating total damages to all victims of the violation.

Table 3 assumes an initial overcharge of one dollar, and in Stage I adjusts for the transfers from consumers to violators caused by umbrella effects of market power,[242] lack of prejudgment interest,[243] and taxes saved by the consumers on the interest they would have earned absent the violation.[244] Stage II, litigation effects, does not adjust for attorneys' fees because the analysis assumes that plaintiffs' attorneys will fund the lawsuit themselves in the hope that the court will award them reasonable attorneys' fees.[245] Nor does the analysis adjust for consumer time spent pursuing the case, for this time is likely to be negligible. Stage III considers the effect of a tentative award of threedollars to the consumers plus "reasonable" attorneys' fees to the attorneys, adjusting for effects of the statute of limitations and taxes.[246]

The net effect of the low adjustments is that consumers receive compensation approximating 132 percent of their losses. The high adjustments imply that consumers are only compensated for sixty-four percent of their losses. The mean of these figures shows that successful plaintiffs receive ninety percent of their losses; that is, approximately single damages.

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[241] The term "consumers" is used in this subpart to include only those individuals who actually purchased the product(s) or service(s) at issue, not those who would have purchased at the competitive level but declined to do so at the supracompetitive level.

[242] *See supra* note subpart III.F. This section will include an adjustment for umbrella effects' transfer effects, but not their allocative inefficiency effects. One could eliminate the adjustment for the transfers caused by the umbrella effects because they victimize consumers not involved in the lawsuit, but this Article will include these effects because they do victimize consumers.

[243] *See supra* subpart III.A.

[244] *See supra* subpart III.H.

[245] This assumption could overstate the amount that consumers actually recover because of the reasons given *supra* in subpart III.C.

[246] Interest that consumers would have earned absent the violation would have been taxed. While tax will be computed for consumers' recovery, this Article will assume that a winning consumer's attorneys' fees will not be taxed. As a matter of administrative discretion and convenience, it seems unlikely that the I.R.S. will attempt to make consumers receiving a $10.00 antitrust award pay tax on the attorneys' fees used to secure two-thirds of this award, especially because these fees are paid directly to the attorneys. *See supra* subparts III.B, III.C, and III.H.

Table 3: Compensation Perspective: Compensating Consumer Plaintiffs

	Range of Adjustments	Effects of Low Adjustments on Consumers	Effects of High Adjustments on Consumers
I. Initial overcharge of $1.00			
A. No prejudgment interest	7.69% for 7 yrs. = 1.68; to 10.08% for 8 yrs. = 2.18	-1.00 x 1.68 = -1.68	-1.00 x 2.18 -2.18
B. Tax savings on interest	.68 to 1.18 interest would have been taxed at 30%	.68 x .30 = .20; -1.68 + .20 = -1.48	1.18 x .30 = .35; -2.18 + .35 = -1.83
C. Umbrella effects	Effects on 10% to 30% of market	-1.48 x 1.11 = -1.64	-1.83 x 1.43 = -2.62
II. Litigation effects			
D. Attorneys' fees	None because assume paid by plaintiffs' attorneys	-1.64	-2.62
E. Other costs of pursuing case	Negligible cost to customers	-1.64	-2.62
III. Effects on consumers of tentative award of $3.00 plus "reasonable" attorneys' fees			
F. Tentative award	$3.00 (plus attorney fees to plaintiffs' attorneys)	3.00	3.00
G. After effects of statute of limitations	unrecoverable 10% to 30% of $3.00	3.00 - .30 = 2.70	3.00 - .90 = 2.10
H. Tax effects on award	$2.00 - (.20 to .60 unrecoverable) taxable at 30%	2.70 - (1.80 x .30) = 2.16	2.10 - (1.40 x .30) = 1.68
I. Net effects of award		2.16 - 1.64 = .52	1.68 - 2.62 = -.94

Actual Magnitude of the "Treble" Damages Remedy:

Low Adjustments	-	Awarded damages are 2.16/1.64 = 1.32; this is slightly more than actual damages.
High Adjustments	-	Awarded damages are 1.68/2.62 = .64; this is slightly less than actual damages.
Mean Adjustment	-	Awarded damges are (2.16 + 1.68)/(1.64 + 2.62) = .90; this is approximately actual damages.

3. *Compensating Business Plaintiffs*

The preceding analysis can be adapted to business plaintiffs by making two modifications. First, an adjustment should be made for plaintiffs' costs spent pursuing the case. Second, an adjustment should be made for different tax effects.

Table 4 combines adjustments appropriate from the perspective of business plaintiffs. Stage I presumes a dollar overcharge and adjusts for lack of prejudgment interest,[247] transfers caused by market power's umbrella effects,[248] and tax savings on foregone prejudgment interest.[249] Stage II considers litigation effects, including attorneys' fees[250] and the costs to the corporation pursuing the case,[251] on an after-tax basis.[252] Stage III incorporates the effects of a tentative award of three dollars plus "reasonable" attorneys' fees,[253] the statute of limitations,[254] and taxes.[255]

The results of Table 4 show that business plaintiffs who sue successfully probably receive an award that is approximately equal to their actual damages. The high adjustments (.69), the low adjustments (1.49), and the mean adjustments (.97) are much closer to single damages than to treble damages.

Table 4 might be misleading, however. It only considers the direct effects of the damages and subsequent recovery. Business plaintiffs are likely to pass on most of the overcharges to the products' ultimate consumers.[256] Plausible assumptions suggest that they might pass on the entire overcharge,[257] and it is possible that the direct purchasers will "mark up" the overcharge and pass on this mark-up as well.[258] Thus, business plaintiffs will usually be harmed by

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[247] *See supra* subpart III.A.

[248] *See supra* subpart III.F.

[249] *See supra* subpart III.H.

[250] *See supra* subpart III.C.

[251] *See supra* subpart III.D. '

[252] *See supra* subpart III.H.

[253] *See supra* subpart III.C.

[254] *See supra* subpart III.B.

[255] *See supra* subpart III.H.

[256] *See* Herbert Hovenkamp, *The Indirect-Purchaser Rule and Cost-Plus Sales*, 103 HARV. L. REV. 1719, 1726–27 (1990) (citing HAL VARIAN, INTERMEDIATE MICROECONOMICS § 17.7 (1987). Business plaintiffs would nevertheless be harmed to the extent that higher prices decreased the quantity of goods sold.

[257] These assumptions include a competitive direct-purchaser market and constant returns to scale. *Id.*

[258] *Id.* The necessary assumptions include a competitive direct-purchaser market and increasing returns to scale. *Id.*

Table 4: Compensation Perspective: Compensating Business Plaintiffs

	Range of Adjustments	Effects of Low Adjustments on Business Plaintiffs	Effects of High Adjustments on Business Plaintiffs
I. Initial overcharge of $1.00			
A. No prejudgment interest	7.69 for 7 yrs. = 1.68; to 10.22% for 8 yrs. = 2.18	-1.00 x 1.68 = -1.68	-1.00 x 2.18 =-2.18
B. Umbrella effects	effects on 10% to 30% of market	-1.68 x 1.11 =-1.86	-2.18 x 1.43 =-3.12
C. Tax savings	1.86 to 3.12 would have been taxed at 40%	-1.86 x .40 = .74; -1.86 + .74 = -1.12	-3.12 x .40 = -1.25; -3.12 + 1.25 = -1.87
II. Litigation effects			
D. Attorneys' fees	35% to 80% of the transfer	-1.12 - .35 = -1.47	-1.87 - .80 = -2.67
E. Other costs of pursuing case	20% to 65% of the transfer	-1.47 - .20 = -1.67	-2.67 - .65 = -3.32
F. Tax savings on litigation effects	40% of (.35 + .20) or (.80 + .65) saved	-1.67 + (.40 x .55) = -1.67 + .22 = -1.45	-3.32 + (.40 x 1.45) = -3.32 + .58 = -2.74
III. Effects of tentative award of $3.00 plus "reasonable" attorneys' fees			
G. Tentative award	$3.00 plus (.30 to .60)	3.30	3.60
H. After effects of the statute of limitations	unrecoverable 10% to 30% of $3.00	3.30 - .30 = 3.00	3.60 - .90 = 2.70
I. Tax effects on award	$2.00 + (.30 to .60) - (10% to 30% of $2.00 unrecoverable) taxable at 40%	3.00 - (2.10 x .40 in tax) = 2.16	2.70 - (2.00 x .40 in tax) = 1.90
J. Net effects of award		-1.45 + 2.16 = .71	-2.74 + 1.90 = -.84

Actual Magnitude of the "Treble" Damages Remedy:

Low Adjustments	-	Awarded damages are approximately 2.16/1.45 = 1.49 times actual damages.
High Adjustments	-	Awarded damages are approximately 1.90/2.74 = .69 times actual damages.
Mean Adjustments	-	Awarded damages are approximately (1.90 + 2.16)/(2.74 + 1.45) = .97 times actual damages.

less than the overcharge, and could remain completely unharmed.[259] Yet they probably will not pass any of their subsequent recovery to consumers,[260] so the "treble damages" recovery can be a complete windfall. Unharmed business plaintiffs might receive infinite damages, not treble or single damages.

The ultimate consumers, by contrast, will receive no recovery. They will pay most or all of the initial overcharge (or even a greater amount) and receive none of the fruits of the business plaintiffs' suit. Moreover, as a result of *Illinois Brick v. Illinois*,[261] they have no standing to sue because they are not direct purchasers. They would not even be helped by raising the nominal damages multiplier or awarding prejudgment interest; so long as *Illinois Brick* prevails, consumers will be undercompensated.

C. *Defendants' Perspective*

The optimal deterrence model discussed in subpart II(B) focused upon the defendant's perspective. The analysis attempted to determine the set of activity society wishes to prevent, and then calculated the penalty necessary to accomplish this task. The optimal penalty standard is different from defendant's gain (Landes's optimal penalty consists of all net losses to others caused by the action) for all of the reasons given in subpart II(B).[262]

Nevertheless, Professor Calkins and others persuasively demonstrate that the possibility of "overpunishing" defendants for conduct just below the standards of legality causes some judges to fail to declare such conduct illegal

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[259] Business plaintiffs could suffer even if they pass on all of the overcharge because they might have to make an adjustment to the supracompetitive pricings output reduction that will give them a one-time loss. *Id.* Moreover, antitrust actions can affect firms in a variety of ways, such as making them unduly risk averse, that cannot readily be passed to consumers.

[260] The recovery would be a lump sum expense rather than a change in the firm's marginal costs, so it should not affect the firm's pricing or output decisions. *See id.* at 1727.

[261] 431 U.S. 720 (1977).

[262] This standard should not be surprising because a similar result would arise concerning much undesirable activity. For example, suppose a thief stole a television that had just been purchased for $300.00. Society does not hesitate to fine the thief $300.00 (or more, to account for defendant's risk preference and the low probability of detection and deterrence) even if the thief could show that he or she had immediately fenced the stolen television for $50.00. Our concern would in effect be Landes's standard of net harm to others, the $300.00 loss to the victim, not the $50.00 gain to the thief. If the probability of detecting the crime and convicting the thief were 1/3, we would treble $300.00, not $50.00. (Landes's proposed standard is analogous to requiring people to internalize their externalities).

and might also affect some judges' decisions on the size of the damages.[263] It therefore becomes important to ascertain two quantities: (1) how much did the defendant "try to get away with" and (2) how much will defendant actually have to pay out?

If defendant overcharged by one dollar, defendant would gain more than a dollar because of the time value of money.[264] The defendant would have to incur attorneys' fees[265] and utilize corporate time[266] to defend itself. It would have to pay plaintiff three dollars plus "reasonable" attorneys' fees, except for that portion of the damages immunized by the statute of limitations.[267] There would be no net tax considerations.[268]

Table 5 performs the appropriate adjustments. The low range of adjustments[269] indicate that defendant must pay 201 percent of its attempted gains,[270] the high adjustments[271] indicate that defendant must pay 35 percent of its attempted gains,[272] and the mean figures imply that defendant must pay 107 percent of its attempted gains (rather than 300 percent, or "treble" damages).

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[263] *See* Calkins, *supra* note 11. We might hesitate to impose a fine of $900.00 unless we were virtually certain that the conduct described in the preceding footnote was undesirable. If the conduct were questionable we might focus upon the gain to defendant and hesitate to impose a fine of $900.00 for activity that only benefited defendant by $50.00.

[264] *See supra* subpart III.A.

[265] *See supra* subpart III.C. Defendants should take the possibility of attorneys' fees into account when they decide whether to undertake ventures of uncertain legality. Whether they often do so is problematic.

[266] *See supra* subpart III.D.

[267] *See supra* subpart III.B. Insurance could be another complication because defendants can sometimes insure themselves against the financial losses from antitrust actions. *See Insurance Policy Covers Legal Expenses Incurred by University in Antitrust Suit*, 61 Antitrust Trade Reg. Rep. (BNA) No. 1527, at 156 (Aug. 1, 1991).

[268] *See supra* subpart III.H.

[269] These adjustments minimize the defendant's attempted gains and maximize the defendant's payouts, thereby tending to produce a high ratio.

[270] This result is almost exactly equivalent to treble damages. If defendant simply overcharged by $1.00 and had to pay a total of $3.00, defendant would find itself with a net loss of $2.00. The $2.00/$1.00 ratio is essentially equivalent to the 2.01 calculated using the high range of adjustments. Lawyers can advise their clients that they might have to pay treble damages after all.

[271] These adjustments maximize the defendant's attempted gains and minimize the defendant's payouts, thereby tending to produce a low ratio.

[272] Even under this scenario crime does not pay. Under these assumptions a defendant that tried to overcharge by a dollar would have to pay back that dollar and also another 51 cents.

Table 5: Effects on Defendants

	Range of Adjustments	Effects of Low Adjustments on Defendants	Effects of High Adjustments on Defendants
I. Initial overcharge of $1.00			
A. No prejudgment interest	7.64% for 7 yrs. = 1.67; to 10.22% for 8 yrs. = 2.18	1.00 x 1.68 = 1.68	1.00 x 2.18 = 2.18
II. Litigation effects			
B. Attorneys' fees	.35% to .80% of the transfer	1.68 - .80 = .88	2.18 - .35 = 1.83
C. Other costs of pursuing case	.20% to .65% of the transfer	.88 - .65 = .23	1.83 - .20 = 1.63
III. Effects of tentative award of $3.00 plus "reasonable" attorneys' fees			
D. Tentative award	$3.00 plus (.30 to .60)	3.60	3.30
E. After effects of the statute of limitations	unrecoverable 10% to 30% of $3.00	3.60 - (10% of 3.00) = 3.30	3.30 - (30% of 3.00) = 2.40
F. Net effects of award		.23 - 3.60 = -3.37	1.63 - 2.40 = -.77

Ratio of Defendant's Total Expenditures to Attempted Gain:

Low Adjustments	-	Defendant is forced to pay 3.37/1.68 = 2.01 times its attempted gain.
High Adjustments	-	Defendant is forced to pay .77/2.18 = .35 times its attempted gain.
Mean Adjustment	-	Defendant is forced to pay (3.37 + .77)/(1.68 + 2.18) = 1.07 times its attempted gain.

V. CONCLUSIONS

Antitrust damage awards should be significantly greater than the actual damages caused by these violations to account for detection problems, proof problems, and risk aversion. It is difficult to determine what this multiplier should be because, as Judge Easterbrook has observed, "there is no right answer to the sanctions problem."[273]

Judge Easterbrook might have added, "We do not know the actual level of the current multiplier." Despite the apparent precision of some of the calculations in this Article, all of its estimates should be regarded only as first approximations. Additional research undoubtedly will refine these estimates by finding more precise approximations for quantities this Article has attempted to specify, and also for those that were omitted.[274] Each of this Article's estimates must be approached with extreme caution. For example, subpart IV(A) used a deterrence model to calculate a mean estimate that awarded damages are only sixty-eight percent of actual damages. This figure should not, however, lead one confidently to conclude that the "true" mean is sixty-eight percent, as opposed to forty-eight percent or eighty-eight percent. The data are far too uncertain to permit such precision. But even the rough data presented in this Article should lead one safely to conclude that awarded damages are much more likely to be the equivalent of actual damages than treble damages. This conclusion, moreover, is relatively robust.[275]

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[273] Easterbrook, *supra* note 3, at 448.

[274] For example, this Article has not separately analyzed the damages associated with different types of antitrust violations. Nor has it attempted to explore related issues such as the effects of the criminal antitrust provisions, or of various standing and contribution issues. Nor has it attempted to compare the net deterrence or compensation effects of antitrust damages with those for violations of other laws. See also *supra* notes 13, 75, 76, 82–84, 108, 114, 128, 130 and text accompanying notes 122–26 for reasons why this Article's analysis has generally been conservative and has overstated the apparent damages multiplier.

[275] Because this Article's analysis depends upon the cumulative effects of a large number of adjustments, even if a reasonable reader disagrees somewhat with one or two of the adjustments, this disagreement is unlikely to have a significant effect on the final conclusion. Suppose, for example, that one believed that while most of this Article's estimates were reasonable, the range for umbrella effects should be changed from an assumption of effects on a 10% to 30% fringe, to effects on a fringe of zero to 10%, and also that allocative inefficiency was probably 10% to 25% as large as the transfer, not 25% to 50%. The final mean estimate would change from average awarded damages of 75% of actual damages, to a revised figure of 95%. The Article's basic conclusion, that antitrust damages are currently not trebled, would still be true.

One could ask the significance of this Article's conclusion that antitrust damages are not currently trebled from plaintiff's or defendant's perspective. Surely few potential or actual plaintiffs or defendants ever perform a significant part of the analysis presented in this Article.[276] Because perceptions can be crucial if plaintiffs and defendants believe, contrary to the results of this Article, that damages actually are trebled, they probably behave accordingly a great deal of the time. Furthermore, the most important attribute of antitrust damages could be their uncertainty rather than their actual level or even the perception of their average level. The uncertainty could be more important to many plaintiffs and defendants than a damage claim's expected value.[277]

The level and nature of the discussion of antitrust damages in recent years[278] implies, however, that many do care about the "actual" overall level of damages. Important policy analysis is predicated in part upon the assumption that antitrust damages currently are, on the whole, at the threefold level. This Article's conclusion that this assumption is at best unproven and most likely is significantly in error, has several important implications.

First, some treble damage reform proposals of recent years are misguided. Because damages levels appear to be at most singlefold, Congress should not pass legislation that would lower the damages awarded for rule of reason or relatively public antitrust violations. Instead, a crucial question is whether

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[276] Each party might have a rough idea of the probable length of its antitrust case, so each might adjust somewhat for the lack of prejudgment interest, and perhaps for the value of lost corporate time and attorneys' fees as well. The other factors, however, are less likely to be considered.

[277] Suppose a firm is contemplating participation in an undertaking that could be considered either an illegal horizontal arrangement or a desirable joint venture, and that legality is a close question. Suppose the firm's CEO asks his or her lawyers to describe the possible damages that could flow from the arrangement. The lawyer might say that, because legality is highly uncertain and depends upon many factors at present unknown, damages could be zero or enormous. The contribution rules, moreover, mean that if the arrangement is judged to be illegal, the firm could be liable for all of the resulting damages, or few, or anywhere in-between. Just as the CEO starts to become exasperated, the lawyer adds that all antitrust damages are automatically trebled. What does this last piece of news add to the CEO's analysis?

Potential plaintiffs would hear similar advice, along with war stories about unpredictable and biased judges and juries. Are plaintiffs' decisions to spend enough money to enable them to "roll the dice" affected significantly by their belief that damages are trebled? If the damages in a specific instance had an expected value of $1,000,000 before trebling, the fact that an irrational jury could award nothing or $10,000,000 might be more important than the trebling factor.

[278] *See supra* notes 3, 5, 6, 10, 11 and 12 and the sources cited therein.

"hardcore" violations are adequately deterred by criminal penalties. If not, Congress should consider raising the damages levels for these offenses. Moreover, even relatively public rule of reason violations often are difficult to prove, so all antitrust violations should give rise to awards that really are in excess of actual damages. Higher awards might be appropriate for all types of antitrust cases. A relatively noncontroversial first step that almost certainly would lead to the imposition of more nearly optimal damages would be for Congress to pass a law awarding prejudgment interest for antitrust violations.

Second, *Illinois Brick* repealers make more sense. The specter of sixfold or higher damages for civil antitrust violations seems remote. If federal or state *Illinois Brick* repealers led to effective double damages for antitrust violations, this would almost certainly more nearly be optimal than the current situation. Moreover, *Illinois Brick* repealers are almost certainly the best way to compensate consumers who are indirect purchasers of supracompetitively priced items. Potentially overlapping state antitrust and tort laws are also more likely to be in the public interest because their combined effects are likely only to increase awarded damages to the twofold level, rather than the sixfold level.

Third, judges should realize that awarded antitrust damages probably are at most equivalent to the single damages level. Judges should fight any conscious or unconscious tendency to award defendants close decisions out of a reluctance to "over-punish" defendants or "over-reward" plaintiffs. Because awarded damages are not as severe as some might believe, judges should also be more generous when they decide standing issues or compute the amount of damages to award.

Finally, even if antitrust damages levels should be raised so that they do result in the effective treble damages necessary to insure optimal deterrence of anticompetitive conduct, one could ask whether the existing situation is significantly worse than that involving many other areas of law. While some of the factors this Article has analyzed are relatively unique to antitrust,[279] others are not, including the adjustments for lack of prejudgment interest, statute of limitations problems, attorneys' fees, corporate costs for plaintiffs to pursue the case, and costs to the judicial system.[280] This Article's analysis shows that antitrust violations probably give rise to single damages at most, but an analysis of tort and contract cases might show that tort and contract suits produce even

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[279] Umbrella effects of monopoly power, for example, would not occur for most other types of violations.

[280] Violations of other laws could also give rise to adjustments not relevant to antitrust that were not considered in this Article.

less recovery on the average. Even if true, such a showing is no reason not to correct the antitrust damages multiplier.

This Article does not assert that the antitrust damages situation is unique, or even that it is more egregious than that involving other areas of the law. The primary purpose of this Article has been to advance the discussion within the antitrust community about the true relative levels of damages and recovery. Scholars in other fields should undertake a similar inquiry.