

HOW U.S. ANTITRUST CAN BE ON TARGET: THE BRAND-NAME PRESCRIPTION DRUG LITIGATION

by

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I. INTRODUCTION

Many economists have an opinion regarding the merits of the price-fixing antitrust case brought by retail pharmacists against manufacturers of brand-name prescription drugs. One view is that brand-name drug manufacturers' pricing to retail pharmacies can be explained by independent, profit-maximizing decisions of sellers of brand-name drugs, and that retail pharmacies have brought this lawsuit to restrain competition from managed care.¹ However, in his opinion denying the defendants' motion for summary judgment, Judge Kocoras found that the evidence would be sufficient to establish an illegal conspiracy. While much of this evidence is factual and confidential, and cannot be analyzed here, in this article we address the economic theory offered by defendant drug companies as an explanation for their pricing practices.

Plaintiff retail pharmacies have alleged that manufacturers of brand-name pharmaceuticals colluded to keep prices to retail pharmacies high by, among other things, refusing to offer them discounts made available to hospitals, HMOs, mail order pharmacies, pharmacy benefit managers (PBMs), and other managed-care organizations.²

Roy Weinstein has been retained by counsel for certain supermarket and pharmacy plaintiffs in the *Brand-Name* litigation. His assignment includes consulting with counsel regarding the nature of defendants' conduct and damages, if any, experienced by plaintiffs. John Culbertson has assisted with this assignment. We wish to thank Danielle Caluwaerts, Chip Mahla, Nels Pearsall and Lisa Skylar for their comments.

According to plaintiffs, this pricing scheme arose from a series of agreements and understandings among drug manufacturers developed in response to the emergence of managed health care in the 1970s and 1980s. While drug manufacturers began discounting extensively on sales to favored buyers, they allegedly agreed not to discount to retail pharmacies.³

In response to these allegations, brand-name drug manufacturers argue that there is no direct evidence of collusion. They further assert that collusion cannot properly be inferred from their discriminatory pricing since this pricing reflects each seller's independent decision to give discounts in return for managed care shifting sales toward their products ("shift share"), and away from competitors' drugs. According to drug manufacturers, retail pharmacies cannot shift share, and it is this claimed inability to shift share that explains why retail pharmacies do not receive discounts.

Plaintiffs rely on evidence that competing manufacturers in fact agreed not to discount to retail pharmacies. Based on this evidence, Judge Kocoras denied the defendants' motion for summary judgment. According to Judge Kocoras, "[t]he record is replete with instances of collusive behavior, parallel conduct, uniformity of responses, mutual awareness of each other's policies and practices, and various incriminating quotes on the part of the defendants" (*Memorandum Opinion*, 1996, 36). Among other things, Judge Kocoras notes:

1. The fact that defendants engaged in a tiered pricing system is virtually undeniable (*Memorandum Opinion*, 1996, 16);

2. Requests by retail pharmacies to obtain similar discounts to those offered to favored buyers were met with uniform denials by the manufacturers (*Memorandum Opinion*, 1996, 18);

3. The uniformity of the Manufacturer Defendants' refusal to deal with retail pharmacies is striking (*Memorandum Opinion*, 1996, 19);

4. Both testimony and documents indicate that the defendants' frequent denials of retail pharmacists' requests for discounts were the result of concerted actions (*Memorandum Opinion*, 1996, 20);

5. Through a series of meetings, a continuous interchange of information, and an ultimate interchange of commitment, the defendants formed a cartel to prevent their discounting from spreading to the retail segment and made sure that nobody strayed from this course (*Memorandum Opinion*, 1996, 23-24);

6. Finally, that the defendants had the opportunity to conspire is unquestionable. The record is replete with evidence of seminars and trade association meetings which virtually every defendant attended at one time or another and a coordinated exchange of pricing and other competitive information shared among the manufacturers (*Memorandum Opinion*, 1996, 24).

While much of the evidence regarding conduct in this case is confidential, we can analyze defendants' theory that their pricing is the result of independently rational decisions, not collusion.

To set the stage for this analysis, we first explain why the structure of the pharmaceutical industry is conducive to price collusion. Next we summarize what is publicly known about the evidence of price discrimination. Finally, we analyze the shifting

share justification for price discrimination put forth by defendants, and explain why that theory cannot explain the near-uniform failure of drug manufacturers to discount prices to retail pharmacies.

II. COMPETITION IN THE SALE OF BRAND-NAME DRUGS

Given the structure of the brand-name pharmaceutical industry during the period of alleged collusion, there were powerful incentives for drug manufacturers to collude in order to prevent discounts that were offered to favored purchasers from spreading to all purchasers of pharmaceuticals. The relevant product market for most brand-name drugs is highly concentrated, generally with only a small number of competitors in each therapeutic class. Entry into a therapeutic class is costly and cannot be accomplished quickly. Reflecting the existence of collusion and an agreement not to discount to plaintiffs, prices for pharmaceutical products generally far exceed incremental costs. Price competition did occur with respect to certain favored purchasers. If this price competition had spread to retail pharmacies, profits of brand-name drug manufacturers would have been significantly reduced. Plaintiffs allege that brand-name drug manufacturers colluded to delay the spread of discounting to purchases by retail pharmacies, and thereby maintained wider price-cost margins on those sales.

The allegations in the brand-name litigation pertain to brand-name drugs. Sole-source drugs are drugs that are still under patent, so they are sold exclusively by the patent holder (or its licensees). While patent holders control sales of their patented drugs, there generally exist substitute drugs that have different chemical compositions but similar therapeutic actions. Generic drugs are chemically equivalent to brand-name drugs, and are sold in competition with brand-name drugs after patent expiration. Our understanding is that plaintiffs do not allege that illegal agreements among brand-name drug manufacturers extended to pricing for generic drugs.

Therapeutic classes or groups are relevant product markets for purposes of analyzing competition in brand-name pharmaceuticals (Comanor & Schweitzer, 1995, 186). Relevant product markets for brand-name drugs can be delineated on the basis of demand substitutability. For any given drug, there generally will be a small number of chemically-different drugs that have similar therapeutic action. While there may be performance differences among drugs within a therapeutic class, these drugs are relatively close substitutes for one another. A physician considering prescribing a drug in a therapeutic class likely would weigh the advantages and disadvantages of drugs within the therapeutic class --- in terms of efficacy, side effects, or price --- but would be unlikely to consider drugs outside the therapeutic class as reasonable substitutes.⁴ Supporting the conclusion that therapeutic classes are relevant product markets, there is some evidence that list-price increases for existing drugs were smaller in therapeutic classes with new entry (The Boston Consulting Group, 1993, 8).

H₂ antagonists for the treatment of ulcers, which include the drugs Pepcid, Axid, Tagamet, and Zantac, are one example of a therapeutic class ("Drugmakers", 1991, 48-63). While significant new drugs may initially have a monopoly in a newly-created therapeutic class, generally there will be more than one brand-name drug in each economically-significant therapeutic class as new drugs are introduced. Nevertheless, many therapeutic classes are highly concentrated, with the leading three or four sellers accounting for the vast majority of therapeutic-class sales.

Entry into therapeutic classes is both costly and time-consuming. New drugs that first entered human testing in the 1970s had reported capitalized after-tax R&D costs of between \$140 million and \$194 million per product, and costs to develop new drugs likely

have increased substantially since the 1970s (Comanor & Schweitzer, 1995, 180). In addition, brand-name drug manufacturers spend large sums to promote brand-name pharmaceuticals, especially products still protected by patents. The long delay to enter therapeutic classes is of even greater significance to competition than is the cost of entry. To effect entry into a therapeutic class, an entrant generally must invent a chemically new drug and obtain approval from the United States Food and Drug Administration (“FDA”) prior to selling that drug. Investments in new pharmaceuticals are risky, with only a small percentage of drugs investigated ultimately making it to market. Because of the exhaustive FDA regulatory process to assure the safety and efficacy of new pharmaceuticals, new drugs experience substantial delays before obtaining FDA approval. One measure of this delay is the reduction in effective patent lives for drugs. In the 1980s, pharmaceutical product patents had an effective life of less than 10 years (Comanor & Schweitzer, 1995, 190). However, the total time to develop a new drug and obtain FDA approval likely overstates the impact of this delay on competition within therapeutic classes since competitor drug companies frequently race to introduce significant new drugs. While the winner of this race will have a temporary monopoly, this monopoly may be relatively short-lived before the second-place competitor enters with its drug.

Historically, brand-name drug manufacturers have promoted their drugs heavily in an effort to differentiate them from substitute drugs in the same therapeutic class. This strategy was adopted in the context of their agreement not to discount to retail pharmacists. Rather than compete on price, promotion emphasized differences among products within a therapeutic class in terms of safety and efficacy. By emphasizing competition based on product differences, drug manufacturers were able to attenuate price

competition. This is consistent with the principle of differentiation in economics, i.e., firms will attempt to differentiate their products to soften price competition (Tirole, 1989, 286-87).

It is well known that physicians act as agents for their patients (Dranove & White, 1987, 25, 405-415), and provide medical services and advice regarding medical services so as to maximize patients' state of health. Drug companies provide promotional information to physicians intended to convince them of the therapeutic superiority of their drugs over alternatives drugs so that physicians, acting as agents, will more frequently prescribe their drugs.

In part reflecting promotional activity of brand-name drug companies and in part reflecting the physician's role as agent for his patients, unless otherwise instructed by patients physicians generally select drugs based largely on expected therapeutic performance, and may give relatively little consideration to price. With the growth of prescription drug coverage, many patients have their prescription costs paid by a third party, in part or whole, so they also have an incentive to choose drugs based on efficacy, not prices. As a result of promotional practices of drug companies discussed above and characteristics of demand for drugs, demand faced by brand-name drug manufacturers is relatively inelastic, even at prices substantially in excess of incremental cost. Drug manufacturers have been able to maintain wide margins on many drugs by agreeing to avoid price competition, and instead competing for prescriptions on the basis of product differences.

Managed-care organizations may have an economic incentive to purchase less expensive drugs and expertise to evaluate the therapeutic performance of drugs. Many managed-care organizations rely on the use of a formulary to influence drugs

prescribed by their affiliated physicians. A formulary is a list of drugs that are approved for routine prescribing by physicians affiliated with a managed-care organization. Physicians in these organizations generally have incentives to prescribe drugs included in the formulary, except under exceptional circumstances where a non-formulary drug with particular therapeutic performance is called for. Therefore, in therapeutic classes containing drugs manufactured by competing firms, managed-care organizations can credibly promise to increase sales of a manufacturer's drug in response to a discount. By treating drugs within a therapeutic class as relatively homogeneous, so the selection decision is based largely on price, and by playing sellers off against each other in what may be, in effect, one-time auction competition, managed-care organizations have been able to obtain very sizeable percentage discounts from list prices.

Confidential documents produced in this litigation contain comprehensive information regarding the discounts on sales to managed-care organizations. While we have analyzed these data exhaustively, confidentiality constraints prevent us from presenting the results of that analysis here. We can observe, however, that a public report concluded that average discounts from manufacturers' list prices had increased from 4 percent in 1987 to 16 percent in 1992 (The Boston Consulting Group, 1993, 2). It attributed this increase to an increase in the percentage of drugs sold through managed care and increases in discount percentages.

In summary, brand-name drugs are sold in highly concentrated markets, entry is neither quick nor easy, and historically drug manufacturers, when competing at all, have done so by promoting the characteristics and quality of their products, not price. Favored purchasers have been able to obtain discounts on purchases of brand-name drugs by

promising to increase sales of drugs from their formularies, thereby encouraging drug manufacturers to compete on price on those sales by giving discounts. Brand-name drug manufacturers had a powerful economic incentive to assure that these discounts were limited, and would not be available on purchases by retail pharmacies.

III. EVIDENCE OF COLLUSION

Given appropriate incentives, retail pharmacies could provide an important link between the selection of a brand-name drug (made by a physician) and the responsibility for payment (which rests with the patient). They are able to encourage physicians to shift to lower-cost drugs. The agreement not to discount to retail pharmacies prevented this from occurring. As a result, it is unfortunate that once price competition emerged on sales to managed care, price competition did not spread to sales to retail pharmacies. Defendant sellers of brand-name drugs assert that it is individually profitable for each drug manufacturer to offer discount prices to favored buyers because each seller benefits from “shifting share” in favor of its drugs as against competitors’ drugs. Defendant drug manufacturers claim that these discounts are conditional on sales or market share performance by favored buyers, and further claim that the reason that retail pharmacies have not received discounts is that each seller of brand-name drugs has recognized that all retail pharmacies --- including large, sophisticated pharmacy chains --- are incapable of shifting share.

As discussed below, this explanation does not square with the evidence. First, Judge Kocoras found that there was sufficient evidence “...of collusive behavior, parallel conduct, uniformity of responses, mutual awareness of each other's policies and practices, and various incriminating quotes...” (*Memorandum Opinion*, 1996, 36) from which

a jury could find that defendants' failure to discount to retail pharmacies was the result of illegal collusion. Second, we note that defendants' "shifting share" explanation cannot explain their conduct because (1) if it is profitable to offer discounts that are conditional on sales performance, it would be profitable to offer such discounts to all purchasers and (2) there is evidence that retail pharmacies can shift-share.

Plaintiffs have introduced "...ample circumstantial evidence to raise a reasonable inference that the Manufacturer Defendants engaged in collusive, anti-competitive conduct.... In support of their allegations that the Manufacturer Defendants entered into an agreement to maintain prices to the retail segment of the industry at artificially high levels, the plaintiffs point to the following: (1) parallel conduct among the Manufacturer Defendants; (2) interdependence between and among the defendants; (3) the existence of industry wide resale price maintenance-- i.e. the creation and maintenance of the chargeback system; (footnote omitted) and (4) frequent, formal communications among competitors-- i.e. an opportunity to conspire." (*Memorandum Opinion*, 1996, 15).

The jury can weigh some of this evidence without the assistance of expert economic analysis. However, the core question of whether the alleged parallel pricing, refusing to discount on sales to retail pharmacies, could be explained as non-collusive, profit-maximizing pricing is a proper subject for economic analysis. Plaintiffs will attempt to establish that the parallel pricing was the result of a collusive agreement (*Memorandum Opinion*, 1996, 18-26). Defendants will attempt to show that this evidence does not prove that an illegal agreement was entered into and, additionally, that their pricing can be plausibly explained as a proper business practice (*Memorandum Opinion*, 1996, 18-26).⁵

Defendant drug manufacturers explain that their decisions not to discount prices on sales to retail pharmacies simply reflect each drug manufacturer's independent⁶ (*Memorandum Opinion*, 1996, 26-30) economic incentive to discount prices on sales to managed-care organizations, but not on sales to retail pharmacies. These discounts generally are conditional on meeting certain sales or market share targets, and have been characterized as discounts for shifting share (*Memorandum Opinion*, 1996, 30-36). Defendant drug manufacturers argue that discounts for shifting share are individually profit maximizing since the additional revenue each seller realizes from having sales shifted to its products more than offsets its lost revenue from reduced prices.

There is evidence that retail pharmacies have the ability to shift share. In his *Memorandum Opinion*, Judge Kocoras specifically addressed the evidence regarding the ability of retail pharmacies to shift share. He found that the evidence showed that retail pharmacies have considerable power to shift share when they make the effort to do so. As cited in his *Memorandum Opinion*, the results of a nationwide survey indicated "...that 76.9 percent of physicians asked by a pharmacist to switch prescriptions consented to do so" (Muirhead, 1993, 12-13). He described the experience of a single pharmacist that effectively switched patients back and forth between Schering's Proventil and Glaxo's Ventolin. Based on this and other evidence, Judge Kocoras concluded, "In sum, the plaintiffs have demonstrated that, provided with proper incentives, the retail pharmacies can and do have some ability to move market share" (*Memorandum Opinion*, 1996, 36).

Moreover, the evidence regarding the ability of retail pharmacies to shift share likely is biased toward a finding that they cannot shift share since retail pharmacies have not had an economic incentive to invest in efficient methods for shifting share. Since

brand-name drug manufacturers have had a policy of not discounting to retail pharmacies, and have almost uniformly refused to discount to retail pharmacies, retail pharmacies have had no incentive to invest in new technologies for shifting share. Because of the no-discount policies of the drug manufactures, it would have been economically irrational for retail pharmacies to make investments in shifting share.

If retail pharmacies can shift share, why have defendant drug manufacturers refused to offer them discounts for shifting share? Defendant drug manufacturers concede that it is in their independent economic interest to give discounts for shifting share. It would be in the independent interest of each drug manufacturer to offer such discounts to retail pharmacies, and thereby gain sales at the expense of its competitors. Yet no defendant took advantage of this opportunity to increase its profits. It would have been profitable to offer these discounts even if sellers of drugs were uncertain regarding the ability of retail pharmacies to shift share. Since discounts were conditional on achieving shifting-share goals, so that prices would be reduced only to the extent that it would be profitable to do so, it would have been independently profit-maximizing for drug manufacturers to offer these same discounts to all purchasers. If, as now contended by the defendant drug manufacturers, retail pharmacies were unable to shift share, then they would not have qualified for conditional discounts. Since they would only qualify for discounts to the extent that they could prove their ability to shift share and satisfy the performance targets set forth in discount schedules, there would be little cost to the defendant drug manufacturers in extending these pricing schedules to retail pharmacies. To the extent that retail pharmacies were able to meet the targets, then any discounts that they would receive would, according to the drug companies' theory, be profit maximizing for the drug company

giving the discount since the revenues lost from this discount would be more than offset by additional revenue from additional sales induced by the rebate.

If retail pharmacies could not shift share, drug companies would not have had to give them discounts for shifting share, and would have continued to sell at undiscounted prices even if conditional price discounts were made available to retail pharmacies. Conversely, if retail pharmacies could shift share if they had an economic incentive to do so, then drug companies would have to give additional discounts on a sizeable portion of their sales. While shifting share may give an economic benefit to a single firm that has share shifted in its direction, drug manufacturers as a group do not benefit from shifting share since share shifted toward one firm is share shifted away from another. If discounts to retail pharmacies for shifting would have resulted in widespread discounting on sales to retail pharmacies, drug manufacturers as a group, not individually, had an economic incentive not to discount to retail pharmacies.

Thus, there are several logical deficiencies in the explanation put forth by the drug manufacturers as to why they did not make available to retail pharmacies the same opportunity to earn discounts that they made available to managed care. If discounts were given only when they would be profitable to sellers of brand-name drugs, sellers of brand-name drugs had no incentive to limit these discounts to managed care and exclude retail pharmacies. Furthermore, there would be no reason for drug companies to meet and agree on their discounting policies on sales to retail pharmacies, as alleged by the plaintiffs, if each firm were pursuing its independent best interest. In fact, it would be more profitable for any given drug companies to make these discounts available to retail pharmacies if

other brand-name drug companies did not, since then that company would be the sole beneficiary of any shifting-share activities by retail pharmacies.

IV. CONCLUSION

There is widespread agreement among economists that consumers benefit from strict enforcement of prohibitions against horizontal price-fixing under Section 1 of the Sherman Act. Plaintiffs in the brand-name drug case have alleged that defendant brand-name drug manufacturers entered into an illegal agreement not to discount to retail pharmacies. Judge Kocoras found that the plaintiffs have presented evidence from which a reasonable jury could find that there was an illegal price-fixing agreement. Of course Judge Kocoras' finding is limited in scope, and we do not know what the jury's ultimate decision will be on the price-fixing claim. However, in this article we explained why the theory advanced by defendant drug manufacturers ultimately fails as an explanation for their pricing policy. If we are correct, consumers would experience substantial benefit from the spread of price competition to retail pharmacies.

NOTES

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1. See, for example, the article by F. M. Scherer in this issue.
 2. Hereafter, for purposes of this article we will consider all of these to be favored buyers. Of course there are significant differences among them that likely affect their purchases of brand-name pharmaceuticals. For example, PBMs and some HMOs do not purchase drugs directly, but rather rely on retail pharmacies.
 3. The plaintiffs also allege that drug wholesalers were part of the illegal agreement and facilitated that agreement through the "chargeback system," which was one of the ways price discounting was effectuated.
 4. This discussion assumes that the therapeutic class is properly defined.
 5. Defendants also argue that their pricing was not parallel.
 6. We understand the use of the term independent by defendant drug manufacturers to mean that each firm is acting to maximize its own profits.

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