

Rigorous Analysis of Economic Evidence on Class Certification in Antitrust Cases

BY DONALD HAWTHORNE AND MARGARET SANDERSON

THE CASE LAW ON ANTITRUST CLASS certification standards continues, with occasional exceptions, to move toward requiring courts to engage in a rigorous, fact-based analysis of whether issues common to the class predominate over individual issues and whether a class action is superior to individual claims. This increasing demand for rigor has underscored the importance of expert evidence for both those seeking and those opposing class certification. Most federal courts now require that plaintiffs' experts submit more than just a description of "possible" methodologies to demonstrate that the fact of injury can be proven with evidence common to all class members and that other Rule 23 requirements are satisfied. In recent successful certifications, plaintiffs' experts have actually applied proposed methodologies using evidence from the case and weighed such evidence against rebuttal reports submitted by defendants' economists.

This article explores the implications of these evolving standards for the type and quality of evidence required of economic experts presenting testimony on class certification motions in antitrust damages cases.

The Emerging Consensus on Rigorous Analysis of Class Certification Motions

Federal antitrust class actions generally seek class-wide damages and are brought under Rule 23(b)(3) of the Federal Rules of Civil Procedure. This rule provides that a class can be certified only if, among other things, "the court finds that the questions of law or fact common to class members predominate over any questions affecting only individual members, and that a class action is superior to other available

methods for fairly and effectively adjudicating the controversy."¹ The U.S. Supreme Court has ruled that class certification is proper only "if the trial court is satisfied, after a rigorous analysis, that the prerequisites" of Rule 23 are met.² The Court has also stated, however, that Rule 23 does not give a court "any authority to conduct a preliminary inquiry into the merits of a suit in order to determine whether it may be maintained as a class action . . ."³

These pronouncements have led to divergent interpretations in lower courts over the showing that a plaintiff must make to prevail on a class certification motion. Some courts, influenced by their reading of the Supreme Court's *Eisen* decision, have held that plaintiffs need only offer a "valid" or "colorable method" by which they can prove common impact at trial⁴ and that, in ruling on a class certification motion, courts must refrain from determining the merits or deciding "duels" between opposing experts.⁵

Courts that follow this deferential approach engage in less scrutiny of expert evidence on the class certification motion. For example, the plaintiffs in *In re Nifedipine Antitrust Litigation*⁶ challenged an arrangement between drug manufacturers that allegedly delayed entry of a generic product. The plaintiffs' experts relied on academic and government studies and internal analyses of average prices by the defendants as support that impact could be demonstrated by common evidence. The defendants' experts, arguing that individual issues predominated, submitted rebuttal evidence that individual customers paid widely different prices and that some actually paid more after the defendants terminated the arrangement.⁷ The district court ruled that such arguments were "premature" because plaintiffs "need only demonstrate a *colorable* method by which they intend to prove class-wide impact."⁸ The court acknowledged that "a jury may ultimately find defendants' methodology (i.e., calculating price change on an individualized rather than aggregate basis) more compelling," but it ruled that such a determination "is for the finder of fact" and that "at this stage in the proceedings" the court would "not choose between dueling studies."⁹

A majority of federal courts of appeals no longer follows this deferential approach but now requires a rigorous assessment of expert evidence and merits-related issues, supported by findings of fact to explain why class certification is or is not warranted.¹⁰ In the majority view, the determination that Rule 23 requirements have been met "can be made only if the judge resolves factual disputes relevant to each Rule 23 requirement and finds that whatever underlying facts are relevant to a particular Rule 23 requirement have been established."¹¹ These courts accept that, "in ruling on class certification, a court may be required to resolve disputes concerning the factual setting of the case," including "the resolution of expert disputes concerning the import of evidence."¹²

The Third Circuit's recent decision in *In re Hydrogen Peroxide Antitrust Litigation*¹³ signals a key shift by a formerly certification-friendly circuit to require rigorous scrutiny of

Donald W. Hawthorne is Counsel in the Litigation Department of Debevoise & Plimpton LLP. Margaret Sanderson is Vice President and Practice Leader of Antitrust and Competition Economics at Charles River Associates.

expert methodology and case facts in deciding whether to certify a class in antitrust cases.¹⁴ Previously, district courts in the Third Circuit had with some frequency adopted the view that courts could not decide “battles of the experts” on class certification.¹⁵ In *Hydrogen Peroxide*, the Third Circuit disagreed, ruling that “the decision to certify a class calls for findings by the court, not merely a ‘threshold showing’ by a party, that each requirement of Rule 23 is met.”¹⁶ The court further held that, in making these findings, “the court must resolve all factual or legal disputes relevant to class certification, even if they overlap with the merits,” and that “the court’s obligation to consider all relevant evidence and arguments extends to expert testimony, whether offered by a party seeking class certification or by a party opposing it.”¹⁷

The Third Circuit rejected the propositions that plaintiffs need only make a “threshold showing” that the element of impact would predominantly involve common issues of proof¹⁸ and that courts are not permitted to analyze expert evidence on this issue: “Weighing conflicting expert testimony at the certification stage is not only permissible; it may be integral to the rigorous analysis that Rule 23 demands.”¹⁹ Nor is it enough for a court to find that plaintiff’s expert opinion meets the *Daubert* test. The court cautioned that “neglecting to resolve disputes between experts amounts to a delegation of juridical power to the plaintiffs, who can obtain class certification just by hiring a competent expert.”²⁰ The court vacated the class certification ruling and remanded the case to give the district court the opportunity to conduct a more detailed assessment of conflicting expert evidence. It advised that the district court must resolve any disputed expert issue, even a dispute that “might appear to implicate the ‘credibility’ of one or more experts.”²¹

Federal courts of appeals may not yet be unanimous in adopting the rigorous class certification standards embraced by the Third Circuit in *Hydrogen Peroxide* and other circuit courts. The D.C. Circuit recently rejected an interlocutory appeal of the grant of class certification in *In re Nifedipine Antitrust Litigation*. The court refused to decide between “dueling” expert opinions and observed that “the propriety of a district court’s refusal to scrutinize the probative value of evidence proffered to demonstrate that the requirements of Fed. R. Civ. P. 23 are satisfied is well settled.”²² This ruling suggests that forum-shopping opportunities still may exist for antitrust plaintiffs who seek a more deferential approach on class certification. These options are increasingly limited, however, and the discussion that follows focuses on the standards applied by courts that engage in a “rigorous analysis” of expert evidence before certifying a class.

Expert Evidence on Class Certification Motions

Parties in antitrust class actions may offer expert evidence on any of the requirements of Rule 23(a)—i.e., numerosity, commonality, typicality, and adequacy. In many cases, however, the most important role for experts is to show whether common issues predominate over individual issues under

Rule 23(b)(3). Such evidence may focus on any element of an antitrust claim, including market definition, market power, anticompetitive effect, and even in some cases damages.²³ The focus of the discussion that follows is expert economic evidence on whether the plaintiff has offered a reliable method by which to prove fact of injury by common evidence or “common impact.”

Traditional Approach of Plaintiffs’ Experts to Show Common Impact. Under the more deferential class certification standard, the plaintiffs filed class certification motions early in the case and without the benefit of significant merits discovery. District courts did not weigh opposing expert evidence at the class certification stage, which permitted or encouraged the plaintiffs’ economic experts to submit reports based on limited analysis of case facts. Instead, these reports typically relied on a description of industry characteristics to support the conclusion that data and analytical tools were available to prove that all class members suffered a common anticompetitive effect or injury from the alleged antitrust violation. Expert reports of this kind typically asserted some or all of the following:²⁴

- The product or service is undifferentiated, so purchasers choose suppliers primarily based on price.
- Defendants sell most product variations or are able to do so, which means there is a high degree of supply-side substitution and hence that suppliers would compete on the basis of price in the absence of the alleged cartel.
- Defendants sell in most geographic areas or are able to do so, which means that all or nearly all purchasers would benefit from greater price competition in the absence of the alleged cartel.
- The industry is characterized by barriers to entry, there are no good substitutes for the defendants’ products, and the defendants jointly have a high market share, which means that purchasers could not avoid paying higher prices achieved by the alleged cartel.
- Defendants announce price changes in advance, which are meant to cover all product variations and all purchasers.
- A pricing “structure” exists. This means that changes in supply and demand conditions affect prices for all product variations and geographic areas in a similar way, such that the alleged cartel would increase prices to all purchasers even if many different prices exist at a given point in time due to differences in product variations, purchaser negotiating ability, and requirements based on volume, frequency of purchase, or other factors.

Plaintiffs’ experts often submitted “price structure” evidence in the form of graphs showing price levels over time for different product variations or geographic areas but without statistical analyses of whether transaction-level prices move together over time.²⁵

The End of Price Graphs and Limited Factual Analysis by Plaintiffs’ Experts. These strategies often served plaintiffs well in the past.²⁶ In courts that now engage in a rigorous and

fact-based analysis of Rule 23 requirements, however, such evidence is not likely to prove persuasive if defense experts submit rebuttal evidence based on detailed analysis of pricing data and other case facts. Such evidence may show that prices are individually negotiated and vary substantially, are derived from complex pricing models, or are based on distinct pricing mechanisms for different types of class members.²⁷ The defendants' evidence might show that some class members suffered no injury or even benefited from the challenged conduct.²⁸

The Third Circuit's remand of the class certification ruling in *Hydrogen Peroxide* illustrates the new demands that plaintiffs' economic experts confront in showing how common impact can be proven. The plaintiffs' expert claimed that hydrogen peroxide, sodium perborate, and sodium percarbonate were fungible and undifferentiated commodity products even though they were sold in multiple grades and concentrations, indicating that prices were the most significant aspect of competitive rivalry among suppliers.²⁹ As proof of the defendants' market power, the expert submitted evidence that a small number of manufacturers held a large share of the market, that barriers to entry were high, and that there were no close substitutes for some or all of the products.³⁰ The expert also submitted evidence that the defendants' geographic markets overlapped and that an industry-wide pricing structure existed³¹ as proof that the alleged cartel would have raised prices for all purchasers.³²

The district court concluded that this evidence was sufficient to show how common impact could be proven at trial, but the Third Circuit examined the expert evidence more closely. In particular, the court noted that, although the plaintiffs' expert had access to transaction-level data for hydrogen peroxide sales over an eleven-year period, the expert performed quantitative analysis using average prices across many different grades and concentrations and only showed that such average prices for different manufacturers moved similarly over time.³³ In contrast, the defendants' expert analyzed data on individual sales and showed that similarly situated customers paid different prices and did not face price increases for the same products.³⁴ The expert also showed that similarly situated customers were equally likely to experience an increase or decrease in prices, and some customers experienced no change in price, even for a single producer for a given year and for sales of only the two most common grades and three most common concentrations.³⁵

The defendants' expert submitted evidence rebutting the assertion that the products at issue were fungible, showing that various grades and uses of hydrogen peroxide were subject to different supply and demand conditions. The expert also challenged whether the alleged cartel raised prices to all purchasers at all times based on evidence of prolonged periods of increasing capacity, increasing production, and declining prices with stable or increasing production costs.

The Third Circuit did not decide which expert's evidence was entitled to greater weight, but it concluded that the dis-

trict court had not sufficiently considered the opinions of the defendants' experts. The appeals court made clear on remand that the district court must weigh this evidence against the "price structure" evidence on which the plaintiffs' expert relied to demonstrate common impact.

Use of Correlation and Regression Analysis to Show Common Impact. Plaintiffs' economic experts now more frequently provide correlation and regression analyses as evidence that pricing for all class members is affected by alleged anticompetitive conduct.³⁶ Such studies represent an advance on "price structure" evidence, but courts engaging in a "rigorous analysis" of the evidence for certification may not be persuaded by the mere potential for such methods to prove common impact. Rather, courts are requiring that experts actually apply these methods to sales and pricing data, and they are closely weighing potential deficiencies in the data and methodology the experts use.

A useful case study is the recent decision denying class certification in *In re Graphics Processing Units Antitrust Litigation*.³⁷ The case involved an alleged price-fixing cartel for sales of graphics processing units (GPUs). GPUs are used in computer graphics chips and graphics cards and sold to a variety of customers through numerous distribution channels. Over 99 percent of GPUs were purchased by wholesalers that engaged in individual negotiations with suppliers on price, volume, and other terms of supply. The court found that a variety of factors influenced these negotiations, including purchase volumes, the wholesale customer's negotiating power, the extent of product customization, the specific market for which chips or cards were designed, the performance level of the chips or cards, the degree of customer support, and the representations and warranties in sales contracts.³⁸

The court ruled that the plaintiffs did not meet the typicality requirement under Rule 23(a)(3), which was sufficient in itself to deny certification.³⁹ The court also analyzed economic evidence on proof of common impact and found that the plaintiffs had not satisfied the predominance requirement under Rule 23(b)(3).⁴⁰ The court acknowledged that econometric and statistical analyses may have value in showing that common proof of impact is possible. Nonetheless, it cautioned that the methods advanced must be reliable and tailored to case facts and that "certification is not automatic every time counsel dazzle the courtroom with graphs and tables."⁴¹

The plaintiffs' expert relied on correlation analyses of pricing data to conclude that "significant relationships in prices exist across product types and customer types, and *for this reason*, the impact from the Defendants' alleged anticompetitive behavior can be analyzed on a common, class-wide basis."⁴² The expert performed three correlation analyses, comparing: (i) average prices paid by individual customers for graphics cards purchased online from ATI (one alleged co-conspirator) to average prices paid by all other direct purchasers of graphics products sold by ATI; (ii) average prices paid by OEM customers for different product categories of

defendant Nvidia to average prices paid by retail customers for different Nvidia product categories; and (iii) average prices paid by OEM customers for different product categories of ATI to average prices paid by retail customers for different ATI product categories. For each, the expert calculated correlations for average prices across a mix of products and customers but did not compare prices paid for a particular graphics card by individual retail customers and by large wholesale customers, such as Best Buy. The defendants' expert performed correlation analyses using disaggregated data for specific products and particular direct customers and showed numerous negative or statistically insignificant correlations for various products and purchasers of each defendant.

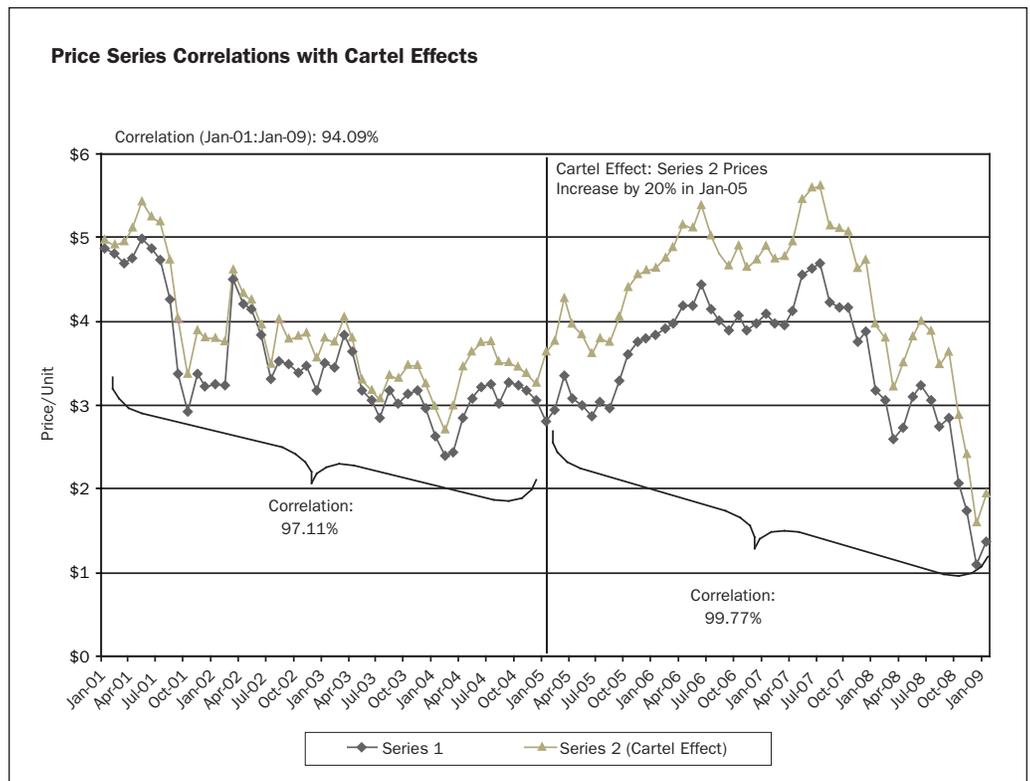
Plaintiffs' expert also performed regression analyses, again using average prices across direct purchasers. The regression models included some explanatory or control variables, but the court expressed concern that important explanatory variables were missing, making it "impossible to account for the diversity in products and purchasers . . ." ⁴³ The court found that plaintiffs' econometric methods were "grossly lacking and do not suffice," and it ruled that the plaintiffs "failed to meet their burden under Rule 23 to provide a viable method for demonstrating class-wide injury based on common proof." ⁴⁴

Limitations of Correlation Analysis. The court in *Graphics Processing* faulted the plaintiffs' expert for using data on average prices across different products and customers. But price correlation analysis has more fundamental deficiencies

as evidence of common impact. Consider the following stylized example based on two fictional price series depicted below for a product sold to two different customer groups that require different product specifications. Series 1 shows sales to large customers under written contracts at set prices, while Series 2 shows sales to customers who purchase on a spot basis with no price protection. Suppose that Series 2 has been subjected to a cartel overcharge of 20 percent part way through the period, but Series 1 has not. Finally, suppose that there is evidence of cartel activity, but it is not clear whether all buyers have been affected.

The two series have similar changes in prices over time. Indeed, the correlation coefficients for the two series are high for all time periods: 97.11 percent for the pre-cartel period, 99.77 percent for the cartel period, and 94.09 percent for the entire time period of the study. Based solely on the high correlation coefficient for the cartel period, one might conclude that there was evidence of an industry "price structure" showing that the alleged cartel would raise prices to all or virtually all purchasers. An analysis of price levels over the entire period, of course, would reveal the change in the relative prices paid by the two groups at the outset of the cartel, indicating that other evidence would be needed to determine whether the cartel encompassed both groups, which (by assumption) it did not. The fallacy of the price correlation reasoning is that, as in this example, the prices charged to each group might be highly correlated because of common underlying demand and cost conditions that result in simi-

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lar price movements whether or not both sets of customers are subject to an illegal overcharge. In short, a high correlation coefficient is not sufficient to show that all or virtually all purchasers suffered antitrust injury caused by cartel conduct.

Rigorous Analysis of Class Certification in Exclusionary Conduct Cases

Courts have engaged in rigorous analysis of expert evidence on common impact to deny class certification in exclusionary conduct cases. In *Allied Orthopedic Appliances*,⁴⁵ the plaintiffs claimed that Tyco had suppressed competition from potential generic suppliers and elevated prices in the market for pulse oximetry sensors and cables.⁴⁶ The plaintiffs challenged a variety of alleged exclusionary conduct. These included “market share discounts” based on the percentage of a customer’s needs purchased from Tyco, “sole-source contracts” that provided discounts to group purchasing organizations that agreed to purchase products exclusively from Tyco, and Tyco’s introduction of a new product line that was incompatible with generic supplies.⁴⁷ The plaintiffs sought certification of a class of all purchasers of Tyco’s sensors and cables.

The plaintiffs’ expert submitted evidence on common impact that was based on the assumption that average prices would have been lower if generic products had entered the market (i.e., the but-for world). The court rejected the expert’s focus on average prices, which ignored the wide variety of prices in both the actual and but-for worlds, and the likelihood that, even if average prices were lower, some purchasers in the but-for world would have paid the same or higher prices. For example, Tyco’s market-share discounts provided small hospitals with lower prices than they would have paid only with volume discounts. The court observed that “[w]hether any such hospital was injured by higher average prices in the actual world turns on individualized evidence: would the particular factors affecting the given hospital’s bargaining power, in conjunction with any market-wide, downward pressure on price from enhanced generic competition, enable that hospital to negotiate pricing equal to or more favorable than that obtained under the challenged contracts?”⁴⁸

The plaintiffs also ignored the fact that Tyco’s product line involved a great variety of products at different price points: Tyco sold dozens of types of pulse oximetry consumables ranging in price from \$9.50 to \$275 per unit.⁴⁹ There was no evidence that a generic product would have supplanted each of these numerous products, some of which are highly specialized. Given these facts, the court found no basis to accept the conclusion of the plaintiffs’ expert that the average price of generic products was a proper but-for price for virtually all purchasers of Tyco sensors.

The plaintiffs’ expert also concluded that all prices would be affected by generic competition on the basis that sensors are fungible products for which customers make purchase

decisions primarily based on price. The court rejected these characterizations, citing evidence that at least some purchasers had non-price preferences and a lack of any evidence such as purchaser interviews to support the expert’s characterizations.⁵⁰ The court rejected the expert’s “heavy reliance” on internal Tyco planning documents that he “cherry-pick[ed]” to support his opinions as an inadequate substitute for “meaningful market analysis.”⁵¹

The court concluded that but-for prices could not be established on a class-wide basis using common evidence but instead would require individualized inquiries taking into account numerous factors for individual hospitals. Relevant factors would include hospital size, location, bargaining power, mix of pulse oximetry consumables purchased, access to and preference for technology of Tyco’s rivals, membership in group purchasing organizations (GPOs), and whether Tyco’s marketing practices would exist in the but-for world.⁵² The court also concluded for similar reasons that the plaintiffs had not shown that damages could be established on a class-wide basis, and it stated that it was “simply not enough that Plaintiffs merely promise to develop in the future some unspecified workable damage formula.”⁵³

How Plaintiffs’ Experts Are Addressing the Demand for Rigorous Analysis

Even where a market has characteristics that may permit proof of impact by common evidence, the success of plaintiffs and their experts in convincing a court to certify a class will depend significantly on the care that plaintiffs have taken to analyze case facts without relying on unsubstantiated presumptions or easily challenged hypotheses. For example, *Southeast Missouri Hospitals*⁵⁴ involved a claim of exclusionary conduct broadly similar to the claims in *Allied Orthopedic Appliances*, but the plaintiffs and their expert succeeded in convincing the court that common issues predominated.⁵⁵ Like *Allied Orthopedic Appliances*, the case involved allegations of anticompetitive exclusive dealing and exclusionary contracts in a market for hospital supplies. The proposed class included all hospitals in the United States that purchased urological catheters directly from defendant Bard pursuant to the terms of contracts and pricing schedules negotiated with group purchasing organizations. The plaintiffs alleged that certain terms of these contracts—including sole and dual-source requirements, volume-based incentive discounts, and market share maintenance requirements—raised costs for rival suppliers of urological catheter products by denying them economies of scale and increasing their selling expenses, thereby permitting Bard to increase its prices to all customers.

The plaintiffs’ experts offered two methods to estimate the prices that would have existed but for Bard’s alleged anticompetitive practices: (i) an empirical estimation of the relationship between prices and seller concentration ratios based on “new empirical industrial organization methods”; and (ii) an estimate of prices “in a but-for world” based on reduc-

tions in rivals' costs in the absence of Bard's conduct.⁵⁶ Bard contended that individualized inquiries would be needed because pricing was determined by such factors as whether the purchaser was a rural hospital, a prestige hospital, or a hospital whose staff preferred Bard products and were insensitive to price.⁵⁷ The plaintiffs responded, and ultimately the court agreed, that these issues were not fatal to certification because prices to hospitals were actually determined by a tiered pricing structure, under which any member of a GPO who purchased a particular product at a particular tier level paid the same price, thereby eliminating the need for individualized inquiries.⁵⁸ The court certified the class.⁵⁹

In another recent case, the Eastern District of Pennsylvania, despite relying on *In re Hydrogen Peroxide*, certified a class of consumers of baby products purchased from retailer Babies "R" Us (BRU).⁶⁰ The plaintiffs alleged that BRU coerced baby-product manufacturers into adopting resale price maintenance restraints by threatening not to carry their products unless the manufacturers agreed to prevent competing Internet retailers from discounting them. The court rejected the defendants' arguments that BRU might not have reduced all or some prices in the face of competition from Internet discounters, and it also concluded that even BRU's discounted prices were proportional to its list prices and hence would have been artificially elevated if BRU's list prices were increased as a result of the alleged anticompetitive conduct.

Tactical Implications for Defense Counsel

Defense counsel also have to adjust their strategies to respond to the courts' demands for rigorous proof on the class certification motion. Early retention of experts is one obvious imperative, but there are other, less obvious implications for defendants. For example, in a recent price-fixing class action, the defendants moved to bifurcate discovery, deferring full-blown merits discovery until after class certification was decided.⁶¹ The plaintiffs, arguing that merits-based evidence was intertwined with the certification decision, sought to put off the certification motion until the conclusion of fact discovery.⁶² Anomalously, the defendants, in support of their ultimately unsuccessful motion, argued that only a threshold showing (and accordingly limited discovery) is required to move for class certification, while the plaintiffs argued that class certification is intertwined with the merits and, accordingly, requires full merits-based discovery.⁶³

Conclusion

There is growing consensus among courts on the need for rigorous analysis of economic evidence on common injury and other merits issues relevant to class certification. This trend presents a potentially formidable hurdle for plaintiffs seeking to certify classes in antitrust damages cases. Most courts now require that plaintiffs' economic experts submit more than a visual inspection of price graphs or a preliminary analysis of market characteristics that suggests an industry-wide "pricing

structure." Nor will correlation or regression analyses necessarily suffice if based on data or methodologies that fail to account for individual factors influencing prices and price variances for class members.

Although courts have dealt potentially fatal setbacks to putative class representatives in recent decisions, these decisions obviously do not sound a death knell for antitrust class actions. The trend toward greater rigor should, however, refocus the class certification arguments and discovery plans of plaintiffs, defendants, and their experts on the issues that properly determine whether an antitrust case should be tried as a class action, including, most significantly, whether antitrust impact can be proved by common evidence. ■

¹ FED. R. CIV. P. 23(b)(3).

² See *Gen. Tel. Co. of the Sw. v. Falcon*, 457 U.S. 147, 161 (1982); see also *In re Hydrogen Peroxide Antitrust Litig.*, 552 F.3d 305, 309 n.5 (3d Cir. 2008) ("Although the Supreme Court in the quoted statement addressed Fed. R. Civ. P. 23(a), there is 'no reason to doubt' that the language 'applies with equal force to all Rule 23 requirements, including those set forth in Rule 23(b)(3).'" (quoting *In re Initial Pub. Offering Sec. Litig.*, 471 F.3d 24, 33 n.3 (2d Cir. 2006))).

³ See *Eisen v. Carlisle & Jacquelin*, 417 U.S. 156 (1974) (vacating district court ruling that Rule 23 notice requirements could be satisfied by requiring the defendant to bear most of the cost of notice due to plaintiff's likelihood of success on the merits).

⁴ See, e.g., *In re OSB Antitrust Litig.*, No. 06-826, 2007 U.S. Dist. LEXIS 56584, at *6 (E.D. Pa. Aug. 3, 2007).

⁵ See, e.g., *In re Cardizem CD Antitrust Litig.*, 200 F.R.D. 297, 311 (E.D. Mich. 2001).

⁶ See generally 246 F.R.D. 365 (D.D.C. 2007).

⁷ *Id.* at 370.

⁸ *Id.*

⁹ *Id.* at 370–71.

¹⁰ See, e.g., *Gariety v. Grant Thornton, LLP*, 368 F.3d 356, 366 (4th Cir. 2004) ("The factors spelled out in Rule 23 must be addressed through findings, even if they overlap with issues on the merits.").

¹¹ See *In re Initial Pub. Offerings Sec. Litig.*, 471 F.3d 24, 41 (2d Cir. 2006).

¹² See *Blades v. Monsanto Co.*, 400 F.3d 562, 575 (8th Cir. 2005); see also *Dukes v. Wal-Mart, Inc.*, 509 F.3d 1168 n.2 (9th Cir. 2007) ("we recognize that courts are not only 'at liberty to' but *must* 'consider evidence which goes to the requirements of Rule 23 [at the class certification stage] even [if] the evidence may also relate to the underlying merits of the case.'") (citation omitted); *Unger v. Amedisys, Inc.*, 401 F.3d 316, 319 (5th Cir. 2005) ("a careful certification inquiry is required and findings must be made"); *Rodney v. Northwest Airlines*, 146 Fed. App'x 783, 785 (6th Cir. 2005) ("a court performing a 'predominance' inquiry under Rule 23(b)(3) may consider not only the evidence presented in the plaintiff's case-in-chief but the defendant's likely rebuttal evidence"); *Tardiff v. Knox County*, 365 F.3d 1, 3–4 (1st Cir. 2004) ("a court has the power to test disputed premises" at the class certification stage); *Szabo v. Bridgeport Machs., Inc.*, 249 F.3d 672, 676 (7th Cir. 2001) ("a judge should make whatever factual and legal inquiries are necessary under Rule 23," even if "the judge must make a preliminary inquiry into the merits").

¹³ 552 F.3d 305 (3rd Cir. 2008).

¹⁴ See *id.*; *Bogosian v. Gulf Oil Corp.*, 561 F.2d 434 (3d Cir. 1977).

¹⁵ See, e.g., *In re Pressure Sensitive Labelstock Antitrust Litig.*, No. 3:03-MDL-1556, 2007 WL 4150666, at *7 (M.D. Pa. 2007).

¹⁶ 552 F.3d at 307.

- ¹⁷ *Id.*
- ¹⁸ *Id.*
- ¹⁹ *Id.* at 323.
- ²⁰ *Id.* (quoting *West v. Prudential Sec., Inc.*, 282 F.3d 935, 938 (7th Cir. 2002)).
- ²¹ *Id.* at 324.
- ²² *In re Nifedipine Antitrust Litig.*, No. 08-8014, 2009 U.S. App. LEXIS 3643 (D.C. Cir. 2009) (*per curiam*) (citing *Eisen v. Carlisle & Jacquelin*, 417 U.S. 156 (1974)).
- ²³ For example, where defendants have shown that relevant markets may be limited to individual states or local areas, court have denied certification of national classes because trial of the case may require separate proof for each geographic market. See *Heerwagen v. Clear Channel Commc'n*, 435 F.3d 219, 233 (2d Cir. 2006) (relevant geographic markets for concert tickets were local and proof specific to class members in different geographic markets would predominate over common proof for proposed nationwide class); *Rodney v. Northwest Airlines*, 146 Fed. App'x. 783, 785 (6th Cir. 2005) (common issues did not predominate where court rejected plaintiffs' market definition of all non-stop flights in and out of Northwest Airlines hubs; each of 74 individual routes comprised a separate market and proof of impact and damages would require separate mini-trials for each route); *In re Agricultural Chemicals Antitrust Litig.*, No. 94-40216-MMP, 1995 WL 787538, at *5-8 (N.D. Fla. Oct. 23, 1995) (markets for agricultural chemicals were local). Courts have also denied certification where the plaintiff failed to show how damages could be computed for all class members based on a common methodology. See, e.g., *Rodney*, 146 Fed. App'x. at 791 (plaintiff failed to show a common means for proving damages where it would be required to offer "benchmark" prices for 74 different routes, each of which could be contested by defendant); *Piggly Wiggly Clarksville v. Interstate Brands Corp.*, 100 Fed. App'x. 296, 300 (5th Cir. 2004) (rejecting evidence of plaintiff's expert on how damages could be proven with common evidence, where expert proposed using regression analysis to analyze pricing but did not offer a "reliable formula" for same; court found that even if bidding began with a list price, factors such as negotiation and geographic market differences could affect prices, and expert did not show how the effect of such variables could be quantified).
- ²⁴ The following discussion is based on an article by John C. Beyer, *The Role of Economics in Class Certification and Class-Wide Impact*, 3 CAN. CLASS ACTION REV. 325 (2006). Dr. Beyer has frequently appeared as an expert for plaintiffs on antitrust class certification motions. See, e.g., *In re Hydrogen Peroxide Antitrust Litig.*, 552 F.3d 305, 312 (E.D. Pa. 2009).
- ²⁵ Plaintiffs' experts may supplement price charts with more rigorous statistical tests of the claim that prices move together, such as correlation or cointegration analysis, but such evidence was not common under the traditional approach described here. For a discussion of these analyses in the context of antitrust, see Jonathan L. Rubin, *Cointegration and Antitrust: A Primer*, 4 ECONOMICS COMMITTEE NEWSL. (ABA Section of Antitrust Law), No. 1, Spring 2004.
- ²⁶ See, e.g., *In re Linerboard Antitrust Litig.*, 305 F.3d 145 (3d Cir. 2004).
- ²⁷ See *In re New Motor Vehicles Can. Export Antitrust Litig.*, 522 F.3d 6, 29 (1st Cir. 2008) (individual negotiation); *Windham v. American Brands, Inc.*, 565 F.2d 59, 68-69 (4th Cir. 1977) (prices set at auction).
- ²⁸ See, e.g., *Valley Drug Co. v. Geneva Pharms., Inc.*, 350 F.3d 1181, 1189-91 (11th Cir. 2003).
- ²⁹ *In re Hydrogen Peroxide Antitrust Litig.*, 552 F.3d 305, 312, 315 (3d Cir. 2008).
- ³⁰ *Id.* at 312-13.
- ³¹ *Id.* at 313.
- ³² *Id.*
- ³³ *Id.* at 314.
- ³⁴ *Id.*
- ³⁵ *Id.*
- ³⁶ See *In re Static Random Access Antitrust Litig.*, 2008 WL 4447592 (N.D. Cal. 2008); *In re Graphic Processing Units Antitrust Litig.*, 253 F.R.D. 478 (N.D. Cal. 2008).
- ³⁷ *In re Graphic Processing Units*, 253 F.R.D. at 478.
- ³⁸ *Id.* at 481.
- ³⁹ See *id.* at 480-81 (explaining that the named plaintiffs were online retail customers, but most purchases were by large wholesale customers, such as Dell, Microsoft, and Apple).
- ⁴⁰ *Id.* at 490.
- ⁴¹ *Id.* at 491.
- ⁴² *Id.* at 493.
- ⁴³ *Id.* at 496. In econometric terms, a regression analysis that omits important explanatory variables may create "omitted variable bias," which misstates the relationship between the dependent variable (here prices) and explanatory variables which are part of the regression model, such as an indicator variable for the cartel period. See, e.g., JEFFREY M. WOOLDRIDGE, *ECONOMETRIC ANALYSIS OF CROSS SECTION AND PANEL DATA* (2002) (discussing the implications of omitted variables).
- ⁴⁴ *Id.* at 497 (certifying a small class of direct retail purchasers but denying certification for a class of indirect purchasers who purchased graphic cards or chips in personal computers and other consumer products).
- ⁴⁵ *Allied Orthopedic Appliances, Inc., v. Tyco Health Group L.P.*, 247 F.R.D. 156 (C.D. Cal. 2007).
- ⁴⁶ See *id.* at 157-58 (finding also that plaintiffs had failed to show an absence of conflicts between members of the class or that their claims were typical of the class).
- ⁴⁷ *Id.* at 159.
- ⁴⁸ *Id.* at 169.
- ⁴⁹ *Id.* at 166.
- ⁵⁰ *Id.* at 171-72.
- ⁵¹ *Id.* at 165, 173.
- ⁵² *Id.* at 173-74.
- ⁵³ *Id.* at 176-77.
- ⁵⁴ *Southeast Missouri Hosp. & St. Francis Med. Ctr. v. C.R. Bard, Inc.*, No. 1:07cv0031 TCM, 2008 U.S. Dist. LEXIS 71841 (E.D. Mo. Sept. 22, 2008).
- ⁵⁵ The different results also may be due to differences in the standards that the courts applied in each case. The court in *Southeast Missouri Hospital* stated that the question on class certification is "not the weight to be given the respective experts but whether [the plaintiff] has made a threshold showing of how [it] intend[s] to prove impact using generalized evidence on a class-wide basis." *Id.* at *6 n.14 (citation omitted). This standard suggests something between a pleading rule and a factual finding and may be less "rigorous" than the Third Circuit's requirement of "findings by the court, not merely a 'threshold showing' by a party, that each requirement of Rule 23 is met." *In re Hydrogen Peroxide Antitrust Litigation*, 552 F.3d 305, 307 (3d Cir. 2008); cf. *Allied Orthopedic Appliances, Inc. v. Tyco Health Group L.P.*, 247 F.R.D. 156, 172 (C.D. Cal. 2007) (finding that plaintiff's expert failed to address "salient factors not attributable to the defendant's alleged wrongdoing that may have caused the harm alleged") (citation omitted).
- ⁵⁶ *Southeast Missouri Hosp.*, 2008 U.S. Dist. LEXIS 71841, at *21.
- ⁵⁷ *Id.* at *19.
- ⁵⁸ *Id.* at *23-*24.
- ⁵⁹ *Id.* at *27.
- ⁶⁰ *McDonough v. Toys "R" Us, Inc.*, No. 06-0242, 2009 WL 2055168, at *25 (E.D. Pa. July 15, 2009).
- ⁶¹ *In re Rail Freight Fund Surcharge Antitrust Litig.*, 258 F.R.D. 167, 169 (D.D.C. 2009).
- ⁶² *Id.* at 171.
- ⁶³ *Id.* at 176.