

**The Standards for Class-certification Expert Testimony After
*In re Hydrogen Peroxide Antitrust Litigation***

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I. INTRODUCTION

The Third Circuit’s remand of the class-certification decision in *In re Hydrogen Peroxide Litigation* and the consequent standard presented by the court continue a trend requiring more rigorous analysis of economic testimony to determine whether certifying a class is appropriate in an antitrust case. In this paper, I discuss the nature of the court’s inquiry with respect to economic evidence in the class-certification phase, and I highlight how courts may evaluate evidence differently after *Hydrogen Peroxide*.

II. THE FRAMEWORK OF RULE 23

The class-certification phase of civil litigation is procedural; simply put, the court must decide whether it is more efficient for the litigation to proceed as a class action or as a series of individual cases. In deciding whether to certify a class, the court must determine whether the standards in Rule 23 of the Federal Rule of Civil Procedure are met. Rule 23(a) has four requirements:

One or more members of a class may sue or be sued as representative parties on behalf of all members only if:

- (1) The class is so numerous that joinder of all members is impracticable,
- (2) There are questions of law or fact common to the class,

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(3) The claims or defenses of the representative parties are typical of the claims or defenses of the class; and

(4) The representative parties will fairly and adequately protect the interests of the class.¹

These four tests are known respectively as numerosity, commonality, typicality, and adequacy of representation. In addition to passing these tests, the claim must satisfy at least one prong of Rule 23(b). In the antitrust context, the focus of most antitrust class disputes is part 23(b)(3):

(3) 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 efficiently adjudicating the controversy.²

A useful construct when examining the question before the court is to analyze the nature of evidence that would be required if a case were to go to trial. If, as a trial proceeds, the evidence that would be used to try the case would largely be the same for all class members, then class-certification is likely appropriate. If, on the other hand, different evidence for individual members of a proposed class is needed to prove the case, then class-certification is likely inappropriate.

In an antitrust case brought under section 1 of the Sherman Act, an economic analysis of the standards of Rule 23 centers on two key principles: common impact and formulaic damages. An analysis of common impact involves determining whether common evidence and a common methodology can be used to demonstrate that all or substantially all customers were harmed by the alleged conspiracy. The notion of impact is binary: a customer is either injured by the alleged conspiracy, or a customer is not injured. In performing an analysis of Rule 23, an economist conducts the thought experiment in which he or she considers the type of economic evidence that the court would need to consider if the case were to go to trial. For example, in an economic study

1. FED. R. CIV. P. 23(a).

2. FED. R. CIV. P. 23(b).

of liability issues in a price-fixing case, could an economist use the same types of information about each class member to determine fact of injury, or would the economist need to analyze information specific to each class member? In making a decision to certify a class, many courts focus on impact arguments.³

The damages inquiry similarly focuses on methodology, asking whether formulaic approaches that are common across all class members exist. In other words, when one tries to calculate damages, can one use a method (ordinarily a regression model) that includes the same factors and evidence across class members, or must one use different models with different factors to estimate damages? Many times, plaintiff class-certification experts make a promise that the existing damage methodologies will work without demonstrating their appropriateness in a given case. Although it has been recognized that “damages in the antitrust context need not be proven with exact particularity, they may not be merely speculative.”⁴ Nonetheless, most of the attention in the class-certification phase is directed to the impact question.

Given the task at hand for the plaintiffs in an antitrust class action, one might think the burden is quite high to prove that a class is an appropriate procedural mechanism. The Plaintiffs face a “common proof paradox”. That is, one has to determine whether or not it is appropriate to rely only upon common evidence for the class, yet the only way to accomplish this task is to study the individual data.⁵ The problem, of course, is that if the individual inquiry has to be undertaken, then there is potentially no efficiency to be gained through the class-certification mechanism.

III. VIEWS OF ECONOMIC EVIDENCE BEFORE *HYDROGEN PEROXIDE*

3. See, e.g., *In re Linerboard Antitrust Litig.*, 203 F.R.D. 197, 212, 216-21 (E.D. Pa. 2001), *aff'd*, 305 F.3d 145 (3d Cir. 2002).

4. *Piggly Wiggly Clarksville, Inc. v. Interstate Brands Corp.*, 215 F.R.D. 523, 530 (E.D. Tex. 2003), *aff'd*, No. 03-40973, 2004 WL 1235275 (5th Cir. June 7, 2004). The court in this case denied class-certification on a damages issues, stating, “Although proof of an antitrust injury can be shown by the common proof that each was in fact injured by the alleged conspiracy, the amount of damages resulting from that injury will require some degree of investigation into facts specific to each Plaintiff and potentially facts specific to each Plaintiff’s numerous negotiations and transactions over the course of many years.”

5. John H. Johnson & Gregory K. Leonard, *Economics and the Rigorous Analysis of Class-certifications in Antitrust Cases*, 3 J. COMPETITION L. & ECON. 341 (2007).

What types of evidence have plaintiffs historically presented in antitrust class action cases to overcome the common proof paradox? The standard section 1 case involves allegations that the defendants conspired to fix, maintain, and stabilize the prices of the products at issue. An accepted approach, particularly in the Third Circuit, is for an economic expert to put forward a methodology that amounts to a set of industry characteristics that would provide the idealized set of conditions under which a class would be certified. These structural characteristics might include the commodity nature of the product, the availability of substitutes (or lack thereof), the extent to which customers can turn to producers not part of the alleged conspiracy or to other products not produced by the alleged conspirators, the market share of the defendants, and the nature of the technological capabilities of the defendants.⁶ These structural characteristics have historically been bolstered by some form of “empirical” analysis involving pricing movements and graphical analysis. The prototypical plaintiff argument asserts that the existence of the above economic characteristics coupled with common price movements is enough to infer that all, or substantially all, customers were injured by the alleged conspiracy.

Before *Hydrogen Peroxide*, many courts viewed this type of analysis quite favorably. The Third Circuit decision in *Bogosian v. Gulf Oil* provided a presumption of impact that could avoid the common proof paradox:

If, in this case, a nationwide conspiracy is proven, the result of which was to increase prices to a class of plaintiffs beyond the prices which would obtain in a competitive regime, an individual plaintiff could prove fact of damage simply by proving that the free market prices would be lower than the prices paid and that he made some purchases at the higher price.⁷

6. See, e.g., *In re Oriented Strandboard Antitrust Litig.*, 2007 WL 2253418, at *5 (E.D. Pa. 2007); *In re Foundry Resins Antitrust Litig.*, 242 F.R.D. 393, 409-10 (S.D. Ohio 2007).

7. *Bogosian v. Gulf Oil, Corp.* 561 F.2d 434, 455 (3d. Cir. 1977).

As a practical matter, *Bogosian Oil* implied that proof that some class members paid higher prices in the face of a conspiracy allowed a presumption that *all* class members suffered economic injury.⁸

The Third Circuit's decision in the *Linerboard Antitrust Litigation* further delineated a standard allowing both a presumption of impact and a more relaxed standard for satisfying the requirements of Rule 23. *Linerboard* involved allegations of price fixing of corrugated containers and corrugated sheets. The district court certified two classes of linerboard purchases. To do so, the court first reinforced *Bogosian*, stating: "Many courts have held that impact can be presumed upon proof of a conspiracy This is such a case."⁹ Further, the court specifically addressed the issue of competing economic evidence, stating that it was premature to make this determination:

At this point of the litigation, it would be improper to make a determination as to the likely success of using one of the identified methods . . . Rather, the court need only find that plaintiffs have identified a valid method for determining impact, which they have . . . In light of the conflicting expert evidence presented, and the detailed arguments of the parties, the court is of the belief that such arguments go to the weight of the testimony and must be resolved by the finder of fact."¹⁰

The Third Circuit affirmed stating that the district court "recogniz[ed] that the certification stage is early in the overall litigation process . . . Accordingly, we reject the contention that plaintiffs did not demonstrate that sufficient proof was available, for use at trial, to prove antitrust impact common to all the members of the class."¹¹

Citing *Linerboard*, some courts have emphasized that only a "threshold showing" is required to prove antitrust impact. For example, in response to expert testimony involving structural industry characteristics and pricing structure, courts certified classes

8. See, e.g., *In re Oriented Strandboard Antitrust Litig.*, 2007 WL 2253418, at *5 (E.D. Pa. 2007)

9. *In re Linerboard Antitrust Litig.*, 203 F.R.D. 197 217 (E.D. Pa. 2001).

10. *Id.* at 220.

11. *In re Linerboard Antitrust Litig.*, 305 F.3d 145 155 (3d Cir. 2002).

in which they found “. . . the plaintiffs have adduced sufficient evidence and a plausible theory to convince [them] that class-wide impact may be shown through generalized evidence common to the plaintiffs’ class.”¹² One court commended the plaintiffs’ expert for defending his opinions through “effectively utilized supporting data, including charts and exhibits.”¹³ In the *In re Catfish Antitrust Litigation*, upon examination of statistical analyses performed on computerized price data furnished by the defendants, the plaintiffs’ expert economist concluded that there was a structure to prices in the catfish processing industry.¹⁴ According to the plaintiff’s expert economist, catfish product prices are strongly related to one another over time, and there is a strong correlation between the prices of catfish products and the prices of live fish, sometimes referred to as the “bank price.”¹⁵ The court concluded:

Whether or not Dr. Beyer is correct in his assessment of common impact/injury is for the trier of fact to decide at the proper time. . . For now, the court is persuaded that for the purposes of a class-certification motion, plaintiffs have made a threshold showing that a price fixing conspiracy in the catfish processing industry, if proven, would have had a common impact for members of the proposed class.”¹⁶

Many courts refused to delve into evaluation of competing expert testimony in the class-certification phase. For example, in *In Re Mercedes Benz Antitrust Litigation*, the court did not conduct a preliminary inquiry into the merits of the plaintiffs’ case in the class-certification phase.¹⁷ Courts have also been careful to weigh the merits of these disputes in the class-certification phase; “The Court recognizes that there are significant differences as to the methods of analyses and conclusions offered by parties’ experts, however, these differences are not appropriately settled at the class-certification stage.”¹⁸

12. *In re Steel Extruded Graphite Antitrust Litig.*, No. 02-6030, 2006 WL 891362, at *13 (D.N.J. Apr. 4, 2006) [hereinafter *Steel Extruded Graphite*].

13. *In re Linerboard Antitrust Litig.*, 305 F.3d 145, 155 (3d Cir. 2002). *See also Steel Extruded Graphite* commending experts for providing “opinion from [] supporting data that is bolstered by charts and graphs.” *Id.*

14. *In re Catfish Antitrust Litig.*, 826 F. Supp. 1019, 1042 (N.D. Miss. 1993).

15. *Id.*

16. *Id.*

17. *In re Mercedes Benz Antitrust Litig.*, 213 F.R.D. 180, 2003 WL 25728171, at *190 (D.N.J. 2003).

18. *In re Vitamins Antitrust Litig.*, 209 F.R.D. 251, 267 (D.C. Cir. 2002).

Some courts have stated this refusal to weigh competing evidence even more explicitly; for example, *In re Foundry Resins Antitrust Litigation*, the court determined that it “need not entertain Defendants’ arguments that essentially question whether Plaintiffs’ expert is correct in his assessment of these market characteristics...”¹⁹

As a practical matter, many courts interpreted *Linerboard* to mean, at most, that a very limited weighing of competing economic evidence should occur in the class-certification phase. For many courts, the practical consequence was that theories could be put forward about the nature of the markets at issue, but the actual determination of whether such theories applied did not have to fully take place until a later time. (So, for example, the plaintiff’s and the defendant’s experts might have a genuine factual dispute over whether or not the product at issue was a homogeneous commodity product, but the court did not need to resolve this dispute for the purposes of certifying a class.)

IV. *HYDROGEN PEROXIDE* AND THE EVOLVING STANDARD FOR CLASS-CERTIFICATION

Although *Hydrogen Peroxide* is a noteworthy case for the change in the standard applied in the Third Circuit, it is only the latest in a series of cases which have demanded a more rigorous weighing of competing economic expert testimony. Presumptions of impact were viewed quite skeptically by the court in *Blades vs. Monsanto*. In this case alleging price fixing of genetically modified corn and soybean seeds, the court clearly stated that “I cannot ‘presume’ or ‘assume’ much less ‘conclude’ class-wide impact here because the evidence submitted during the class-certification hearing demonstrates that such a presumption would be improper.”²⁰ Similarly, the court in *Exhaust Unlimited, Inc. vs. Cintas*, a case about the linen supply industry allegedly charging environmental fees unrelated to the actual environmental costs, determined that class-certification was inappropriate when “impact could only be determined by engaging in literally hundreds of impact analyses for different charges from different defendants at different time periods in different markets.”²¹ In a price-fixing case involving agricultural chemicals,

19. *In re Foundry Resins Antitrust Litig.*, 242 F.R.D. 393, 410 (S.D. Ohio 2007).

20. *Blades v. Monsanto Co.*, 400 F.3d 562 ¶24 (8th Cir. 2005). It is important to note that the Court was also careful about the extent to which one could delve into the merits in the class-certification phase.

21. *Exhaust Unlimited, Inc. v. Cintas Corp.*, 223 F.R.D. 506, 511 (S.D. Ill. 2004).

the court found that the paradigm characteristics for class-certification were not present in the pesticide industry. The court determined that

consistent with economic theory, under such circumstances, there would be no impact on purchasers of Zeneca products—either because a price-fixing conspiracy would have been irrational in the first instance and therefore would not have occurred, or because the marketplace would have precluded the conspirators from artificially raising prices above competitive levels.²²

The Second Circuit’s decision in *In re IPO Securities Litigation* further clarified the nature of the inquiry that courts must apply in the class-certification phase. Although this was a securities case, the key elements of the decision were the need to show that all elements of Rule 23 were met and the need to weigh all evidence relevant to the class-certification inquiry.²³

It is against this backdrop that the *Hydrogen Peroxide* case was taken up by the Third Circuit Court of Appeals. In this case, manufacturers of hydrogen peroxide were alleged to have fix, maintained, and stabilized the prices of hydrogen peroxide sold in the United States. Plaintiffs’ expert economist put forward economic analysis of the structural characteristics of the hydrogen peroxide industry, stating that hydrogen peroxide is a commodity product, that the defendants have a high market share, and that no good substitutes exist.²⁴ The defendant’s expert economist rebutted the existence of these characteristics in the industry. Both experts also presented evidence on pricing relationships in the industry, including statistical analyses. The court certified the class,

22. *In re Agricultural Chemicals Antitrust Litig.*, No. 94-40216-MMP, 1995 WL 787538, at *8 (N.D. Fla. Oct. 23, 1995).

23. *In re IPO*, the Second Circuit

conclude[d] (1) that a district judge may not certify a class without making a ruling that each Rule 23 requirement is met and that a lesser standard such as “some showing” for satisfying each requirement will not suffice, (2) that all of the evidence must be assessed as with any other threshold issue, (3) that the fact that a Rule 23 requirement might overlap with an issue on the merits does not avoid the court’s obligation to make a ruling as to whether the requirement is met, although such a circumstance might appropriately limit the scope of the court’s inquiry at the class-certification stage...”

In re IPO Securities Litig., 471 F.3d 24, 27 (2d Cir. 2006).

24. *In re Hydrogen Peroxide Antitrust Litig.*, 240 F.R.D. 163, 172 (E.D. Pa. 2007).

specifically stating that “we are not permitted, in addressing defendants’ *Daubert* motion, to weigh the relative credibility of the parties.”²⁵

However, the Third Circuit found this conclusion “erroneous,” stating “[e]xpert opinion with respect to class-certification, like any matter relevant to a Rule 23 requirement, calls for rigorous analysis . . . It follows that opinion testimony should not be uncritically accepted as establishing a Rule 23 requirement merely because the court holds the testimony should not be excluded, under *Daubert* or for any other reason.”²⁶ The court focused on the issue of the appropriate standard for evaluation, clarifying that a higher standard is required for class certification, and that Rule 23 must be met by a preponderance of the evidence, not simply a “threshold showing.”²⁷ Specifically:

In its sound discretion, a district court may find it unnecessary to consider certain expert opinion with respect to a certification requirement, but it may not decline to resolve a genuine legal or factual dispute because of a concern for an overlap with the merits. Genuine disputes with respect to the Rule 23 requirements must be resolved, after considering all relevant evidence submitted by the parties.²⁸

In essence, the court’s decision stresses that class-certification is an evidentiary process and presents an obligation for the courts to determine how to weigh the plaintiff and defense testimony based on credibility. This emphasis on weighing the opinions provided departs from those previous class-certification decisions in which it was enough for the plaintiffs to put forward an expert that simply stated that the class should be certified.

V. STYLIZED EXAMPLES OF ECONOMIC ANALYSIS POST-HYDROGEN PEROXIDE

In light of *Hydrogen Peroxide*, courts will increasingly be required to weigh competing expert evidence in the class-certification phase. Three stylized examples of

25. *Id.* at 171.

26. *In re Hydrogen Peroxide Antitrust Litig.*, 552 F.3d 305, 322-23 (3d Cir. 2008).

27. *Id.* at 306.

28. *Id.* at 324.

the types of weighing of economic evidence that may occur under the new standard in the Third Circuit are illustrative.

Hypothetical 1: Plaintiff's class certification expert argues that the industry at issue exhibits several structural conditions; as a result, these conditions imply that all or substantially all members of the class were harmed by the conspiracy.

A frequently hypothesized methodology for determining whether common impact can be established using common evidence in antitrust class actions is the existence of a set of several industry conditions.²⁹ The intuition behind this theory is that, if an industry has these conditions, then any attempt to fix, raise, or stabilize prices would do so for all customers. Further, if these conditions exist, no customer could avoid the potential influence of the conspiracy by turning to alternative suppliers, etc.³⁰ In this idealized paradigm, it is argued, it is not necessary to consider any individual characteristics of customers to ascertain whether they were harmed or could have avoided the conduct alleged. Therefore, common proof is all that would be required to prove the Plaintiff's case.

One area of disagreement between economists is whether such a theory is actually sufficient to prove class wide impact. Opponents of such a theory suggest that the set of industry conditions must be quite exhaustive to ultimately draw the conclusion that all prices would have been affected by the alleged conspiracy. Further, there is some question about whether the theory focuses on the right question for class certification. The mere act of defining "characteristics" does not answer the question of whether common proof is sufficient to capture the diverse experiences of the customers. The appropriate inquiry must focus on whether all of the products and all of the customers actually exhibit the characteristics at issue, (i.e. Are all the products homogenous commodities? Is the underlying elasticity the same across all customers? Does each

²⁹ The set of industry characteristics often cited that includes that products are homogeneous commodity products, that there are barriers to entry, that there are few substitutes outside of the conspiracy for the product, that there is significant overlap in the geographic markets, and that manufacturers cannot switch their technology easily to produce the product at issue. (Surprisingly, in some cases, Plaintiffs have argued the reverse- that manufacturers can easily switch their technology to produce the product at issue.)

³⁰ It is exactly this type of theory that the court refers to in the *Foundry Resins Antitrust* decision, *supra* note 19.

customer face the same choices with respect to substitute products?). This is a subtle but important difference—one inquiry runs the risk of assuming the propriety of class certification; the other highlights for the court potential similarities and differences in the underlying economics which could be important to the ultimate injury and damages questions.

Whether the validity of the theory to the class certification question is ever considered in part depends on the standard applied to the economic analysis. Under a standard where there is no need to weigh competing economic theories, then the propriety of class certification is entirely decided based on the fact that an expert identified a methodology that he or she has deemed sufficient to demonstrate common impact. This approach implies that as long as any economist has some theory to present, then certification is very likely. Note this is in contrast to the academic standards which require rigorous testing and vetting of the validity of a theory before it is accepted by economists.

Under the alternative standard where theories are tested and assumptions are validated, the court would decide whether the theory espoused implies that class certification is appropriate. Economic testimony from both plaintiffs and defendants would be a part of this inquiry. If the court found that the theory implies that class certification is appropriate, the next step would be to see if it applies to the facts of the case. If, on the other hand, the court rejects the validity of the theory, then there is no basis to certify the class. The inquiry called for under the more rigorous standard has nothing to do with merits arguments—it is entirely focused on whether standards of Rule 23 are met.

Hypothetical 2: One of the conditions espoused as part of the “structural characteristics” is the product at issue has an inelastic demand. (A product with an inelastic demand is one for which consumers do not alter significantly their quantity demanded in response to changes in the price documents that suggest customers did not adjust their purchases when prices went up in the past.) The expert also cites an academic study which estimated the elasticity of demand in the widget industry as -1.5.

Assume for the purpose of illustration that, in fact, the theory of structural characteristics is accepted as a valid theory. The next step in the analysis would be a demonstration that these characteristics actually exist in the industry. How might this inquiry proceed differently under the various standards for class certification? If the court is not required to even consider the opposing expert's opinion (as in *Foundry Resins Antitrust Litigation*) with respect to the industry characteristics, then the only basis for the court is to judge whether the Plaintiff's argument is plausible on its face. Without a rigorous analysis to determine whether these assumptions are met, the potential for abuse is clear—an expert can simply assert on the basis of selective evidence that each condition is met, and can potentially gloss over key details and relevant facts that contradict the theory. In the most extreme case, as long as any seemingly qualified individual is put forward who is willing to state that the characteristics of a given industry are such that the class should be certified, a class will be certified in every antitrust matter by default.

If a more rigorous standard is applied, the court would also consider the opposing expert testimony in determining whether the industry has the characteristics that fit the theoretical paradigm. This is precisely the type of inquiry called for in the *Joiner* decision with respect to the model fitting the facts of the case.³¹ In our stylized example, what if, in fact, an industry consisted of several distinct groups of customers with difference elasticities of demand, as shown in Exhibit 4.

Exhibit 4

Hypothetical Demand Elasticities

<u>Customer</u>	<u>Elasticity of Demand</u>
Group A	-0.5
Group B	-.75
Group C	-1.25
Group D	-1.5

³¹ *General Elec. Co. v. Joiner*, 78 F. 3d 524 (11th Cir. 1996) (“Nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence which is connected to existing data only by the *ipse dixit* of the expert.”).

Now, as the court determines whether the demand in the industry is elastic, it considers both the Plaintiff's and Defendant's experts' positions to determine if the Plaintiff has met their burden under Rule 23. Here, the court is pointed to several documents that were ignored by the Plaintiff's economist showing that demand is highly responsive to price for certain types of widgets, but potentially not very responsive to price for other types of widgets. Further, upon critical review of the academic study, the Defendant's expert points out that an elasticity of -1.5 is actually in the elastic range of the demand curve.³²

In this hypothetical, the relevant inquiry with respect to class is whether the elasticity is the same across all of the customers proposed to be in the class. In our simple example, two groups of customers exhibit inelastic demand but two other groups of customers exhibit elastic demand. It turns out that customers exhibiting elastic demand are very price responsive because an alternative product, not alleged to be part of the conspiracy, is actually a good substitute. Any average elasticity is misleading. Also, Plaintiff's theory may well still hold for sets of customers and a class consisting of a smaller subset of customers may be appropriate here. Applying a rigorous standard does not *a priori* imply that classes will or will not be certified. In this simple context, and in light of other evidence, the finder of fact may determine that the evidence suggests that widgets have an inelastic demand, an elastic demand, or that the demand is elastic for some customers that buy certain widgets but not others. By allowing an actual inquiry into the class certification theory posited, the court is in a better position to reach the correct decision and also to insure that some minimum scientific standard is applied.

*Hypothetical 3: Plaintiff's expert puts forward a price structure analysis of the widget industry which it is argued demonstrates the prices all move together. The methodology put forward combines industry knowledge with the visual inspection of a series of average price graphs.*³³

³² This type of abuse where an expert cites to an industry report claiming it supports one's position only to find the study says the opposite is not a merely hypothetical example.

³³ See Johnson and Leonard, *supra* note 30.

Empirical analysis has a prominent role in antitrust, and has also found its way into the class certification discussion. One of the empirical issues that has been frequently determinative in class actions is the existence of a “price structure”.³⁴ Experts frequently posit that the existence of a price structure is another factor that an economist would consider in favor of class certification. Price structure is often defined by these experts as prices for different customers or products moving together over time. Many courts have accepted price structure as part of their certification of classes. The general intuition behind the theory is that if all of the prices move together, then a conspiracy to fix, maintain, or stabilize prices would do so for all customers.

A rigorous analysis of price structure would require some type of statistical test. Economists statistically test hypotheses in many contexts; the extensive reliance on statistical hypothesis testing is to insure first, that there is a clear definition of the evidence required to reject the hypothesis and to identify the standard for such rejection. Thus, it can be easily verified whether the underlying theory is accepted or rejected. Second, hypothesis testing allows for replication by other experts. Third, and most important, a hypothesis test provides an objective criterion by which other experts can also make a determination as to the validity of the theory.

A visual inspection analysis would not meet many, if any, of the Rand research standards. Visual inspection is subjective; in almost any real world case, experts could reasonably reach different conclusions regarding price structure- price structure is in the eye of the beholder. Visual inspection is not a method of analysis accepted in econometrics in isolation; many analysts start their analysis looking at a plot of the data, but such a method is never accepted as a basis for drawing a final conclusion. Instead, visual inspection must be followed by generally accepted econometric techniques, including statistical hypothesis testing. Most important, there is no ability to replicate the visual inspection approach. This type of analysis would not meet the minimal standard for peer reviewed publication in any credible economics journals.

³⁴ Price structure has been cited in several class certification decisions, including *Foundry Resins*.

What is the implication of the standard applied? If the standard does not require the consideration of competing testimony, then there is no testing of the claims of the expert who opines that impact and damages can be demonstrated on a class wide basis. Rather than focusing on analysis grounded in economics, experts can instead focus on analysis that is superficially appealing and beneficial to their case. There is another significant issue with this type analysis—merely accepting a theory of price structure is problematic given its lack of economic foundation. Even in the class certification phase, *Daubert* is the bare minimum standard that should be applied when testing the claims of the expert. If that standard is not applied, then there is potential for “junk science” to be pervasive and worse yet, determinative in the decision. Unfortunately, such a phenomenon appears to be occurring with respect to class certification in too many cases.

VI. CONCLUSIONS

How might courts respond to the *Hydrogen Peroxide* case in the future? First, rigorous analysis requires weighing the credibility of the Plaintiff and Defendant’s expert analysis. Second, weighing the economic analysis will require greater adherence to scientific principles. Postulation and speculation should be replaced with testing and thorough examination. For example, in the recent *In Re Graphics Processing Unit Antitrust Litigation*, the court carefully scrutinized expert testimony, denying class-certification after repeatedly referencing statistical evidence on correlations and a lack of comovement in the data.³⁵

Third, to the extent courts plan to more carefully weigh competing expert testimony, courts will likely need to apply *Daubert* standards during the class-certification phase. Although the rationale for *Daubert* is to prevent juries from being presented with junk science, the finders of fact can use *Daubert* as a guide for the minimal threshold that all expert testimony must surpass. Given that the validity of the competing expert testimony is likely being weighed, to the extent that improper or non-

35. *In re Graphics Processing Unit Antitrust Litig.*, 527 F. Supp. 2d 1011 (N.D. Cal. 2007).

scientific economic evidence is being put forward courts can rightly exclude such analyses.³⁶

Fourth, courts may require a far more detailed description of the damages methodology in the inquiry in the damages portion of the class-certification phase. For example, a simple statement of the existence of regression models is likely insufficient. Courts can ask experts, if not to fully test their models, at least to explain precisely the structure of the models, the exact datasets likely involved, the potential factors in the model, and an exploration of whether the size of the damage pool will be overstated as a result of averaging inherent in such models. Some courts may require experts to demonstrate the models will actually work in the case in question.

Finally, although courts may well delve into the merits to the extent they overlap with the Rule 23 inquiry, these courts may also require testimony to be more appropriately focused on the methodological question involving the nature of evidence to be studied, not the actual determination of impact itself. A careful focus on the standards of Rule 23, and on the methodology to demonstrate impact and damages, will allow the court to expediently deal with class-certification issues without having a full-fledged trial of the merits of the case.

No matter how courts interpret *Hydrogen Peroxide*, it is likely that economic evidence will continue to be at the forefront of the antitrust class-certification matters. The practical consequence of *Hydrogen Peroxide* is likely to be higher-quality economic testimony, more rigorous statistical and econometric analysis in the class-certification phase, and a more careful adherence to scientific principles.

36. See Johnson & Leonard, *supra* note 30.