

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND

IN RE: TITANIUM DIOXIDE ANTITRUST \*  
LITIGATION \*  
\* \* \* \* \* \* \* \* CIVIL ACTION No.: RDB-10-0318  
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THIS DOCUMENT RELATES TO: \*  
ALL ACTIONS \*  
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**MEMORANDUM OPINION**

This class action concerns an alleged price-fixing conspiracy in the market for titanium dioxide.<sup>1</sup> Plaintiffs Haley Paint Company and Isaac Industries, Inc., and Intervening Plaintiff East Coast Colorants, LLC d/b/a Breen Color Concentrates (collectively, “Plaintiffs”) claim that Defendants E.I. du Pont de Nemours & Co., Huntsman International LLC, Kronos Worldwide Inc., and Millennium Inorganic Chemicals, Inc. (collectively, “Defendants”) engaged in an unlawful conspiracy in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1, to fix, raise, or maintain the price of titanium dioxide in the United States. Plaintiffs allege that as a consequence of the unlawful conspiracy, Defendants were successful in charging artificially inflated prices for titanium dioxide products.

Presently pending before this Court is the Defendants’ Motion to Exclude Expert Testimony (ECF No. 408) of the Plaintiffs’ three proposed experts, Professor George L. Priest, Dr. Bruce W. Hamilton, and Dr. Russell L. Lamb. The parties’ submissions have

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<sup>1</sup> Titanium dioxide is a “dry chemical power that is the world’s most widely used pigment for providing whiteness, brightness, and opacity . . . to many products, particularly paints and other coatings.” *See* Mem. Op. Granting Mot. for Class Certification 2, ECF No. 337 (internal quotation omitted).

been reviewed and a hearing was held on April 17, 2013. For the reasons articulated below, Defendants' Motion to Exclude Expert Testimony (ECF No. 408) will be GRANTED IN PART and DENIED IN PART. Specifically, the Plaintiffs' proposed rebuttal expert, Professor Priest, will be EXCLUDED because his testimony is inadmissible under Rule 702 of the Federal Rules of Evidence and the Supreme Court's holding in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). The testimony of the Plaintiffs' proposed experts Dr. Hamilton and Dr. Lamb will not be excluded, and the Motion will be DENIED as to those two witnesses.

#### BACKGROUND

The facts of this case are fully set forth in the Memorandum Opinion issued on August 28, 2012 (ECF No. 337). An abbreviated factual summary is repeated here to introduce the pending motion.

Plaintiffs Haley Paint Company and Isaac Industries, Inc., and Intervening Plaintiff East Coast Colorants, LLC d/b/a Breen Color Concentrates (collectively, "Plaintiffs") claim that Defendants E.I. du Pont de Nemours & Co., Huntsman International LLC, Kronos Worldwide Inc., and Millennium Inorganic Chemicals, Inc. (collectively, "Defendants"), who are the market leaders in the production of titanium dioxide, conspired to fix, raise, maintain, and stabilize the price of titanium dioxide when demand for the product declined. The conspiracy is alleged to have occurred from February 1, 2003, through the present (the "class period").

On February 9, 2010, the Plaintiffs filed suit, and they submitted an Amended Complaint (ECF No. 51) on April 12, 2010, initiating this class action lawsuit. The

Plaintiffs' Amended Complaint alleges a price-fixing conspiracy in violation of the Sherman Act, 15 U.S.C. § 1. On August 28, 2012, this Court issued a Memorandum Opinion (ECF No. 337) certifying a class of titanium dioxide purchasers who are alleged to have sustained injury when they paid artificially inflated prices for the product. The class is defined as “[a]ll persons and entities who purchased titanium dioxide in the United States directly from one or more Defendants or Tronox,<sup>2</sup> or from any predecessors, parents, subsidiaries, or affiliates thereof, between February 1, 2003, and the present.” Order Granting Mot. Certify 2, ECF No. 338.

Defendants have now moved to exclude the testimony of the Plaintiffs' three proposed experts, Professor George L. Priest, Dr. Bruce W. Hamilton, and Dr. Russell L. Lamb. They invoke this Court's gatekeeping function under Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), insisting that the proposed testimony of these experts must be excluded, because it is directed improperly to the ultimate legal issue in the case and is based on methods that are neither scientific nor reliable. For the reasons stated below, the Defendants' Motion to Exclude Expert Testimony (ECF No. 408) is GRANTED IN PART, specifically as to Professor Priest, and DENIED IN PART, as to Dr. Hamilton and Dr. Lamb.

#### STANDARD OF REVIEW

Rule 702 of the Federal Rules of Evidence provides that an expert witness may testify in the form of an opinion or otherwise if “(a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a

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<sup>2</sup> Tronox is an alleged co-conspirator who filed for Chapter 11 bankruptcy protection in January 2009, and is therefore precluded from being named as a defendant.

fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.” Fed. R. Evid. 702. In applying Rule 702, a court acts as a gatekeeper, excluding unreliable expert testimony. *Daubert*, 509 U.S. at 600.

*Daubert* set forth a non-exclusive checklist for trial courts to use in assessing the reliability of scientific expert testimony. The specific factors a court may consider include:

- (1) whether the particular scientific theory can be (and has been) tested;
- (2) whether the theory has been subjected to peer review and publication;
- (3) the known or potential rate of error;
- (4) the existence and maintenance of standards controlling the technique’s operation; and
- (5) whether the technique has achieved general acceptance in the relevant scientific or expert community.

*United States v. Crisp*, 324 F.3d 261, 266 (4th Cir. 2003) (quoting *Daubert*, 509 U.S. at 592-94).

The same analysis applies where the expert testimony relates to matters of technical, rather than scientific, expertise. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141 (1999).

“Rather than provide a definitive or exhaustive list, *Daubert* merely illustrates the types of factors that will bear on the inquiry.” *United States v. Prince-Oyibo*, 320 F.3d 494, 498 (4th Cir. 2003) (internal citations omitted); *see also Crisp*, 324 F.3d at 266-67. In determining whether proffered expert testimony is reliable, the district court has broad discretion to consider whatever factors bearing on validity that the court finds to be useful; the particular factors will depend upon the unique circumstances of the expert testimony involved, and no single factor is necessarily dispositive. *See Kumho Tire*, 526 U.S. at 152-53. “The court, however, should be conscious of two guiding, and sometimes competing, principles: (1) ‘that

Rule 702 was intended to liberalize the introduction of relevant expert evidence’; and (2) ‘that due to the difficulty of evaluating their testimony, expert witnesses have the potential to be both powerful and quite misleading.’” *Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 261 (4th Cir. 1999).

The proponent of expert testimony bears the burden of production to come forward with evidence to support its contention that an expert’s testimony would be both reliable and helpful. *See Bourjaily v. United States*, 483 U.S. 171 (1987). Evaluating an expert’s testimony under *Daubert* does not involve a determination that the testimony “is irrefutable or certainly correct.” *Westberry*, 178 F.3d at 261. Indeed, the Court in *Daubert* reminded district courts that “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” 509 U.S. at 595.

#### ANALYSIS

The Defendants ask this Court to exclude the entire testimony of the Plaintiffs’ proposed experts on two grounds. First, the Defendants argue that each expert’s testimony is improper under Rule 704 of the Federal Rules of Evidence, because it is directed to the ultimate legal issue in this case. Second, they contend that the experts’ opinions are based on principles or methods that are neither scientific nor reliable, and thus are inadmissible under Rule 702 and the Supreme Court’s holding in *Daubert*. The Plaintiffs, in response, insist that Rule 704 permits each expert to opine that the conduct of the Defendants during the class period was consistent with collusion and inconsistent with competition. Moreover, the Plaintiffs maintain that their experts used methodologies that are reliable under *Daubert* and

have been employed by economists in price-fixing cases<sup>3</sup> for decades. This Court first addresses the Defendants’ argument under Rule 704 and then turns to Defendants’ *Daubert* challenges.

### **I. Admissibility of Expert Opinions Concerning the Existence of a Cartel**

The Defendants first argue that the Plaintiffs’ three experts intend to testify regarding the ultimate legal issue in this case—whether the Defendants were members of a cartel that fixed the prices of titanium dioxide—and that such testimony is prohibited by Rule 704 of the Federal Rules of Evidence. Rule 704 permits the admission of expert testimony that “embraces an ultimate issue to be decided by the trier of fact.” Fed. R. Evid. 704(a). In other words, “questions of fact that are committed to resolution by the jury are the proper subject of opinion testimony.” *United States v. McIver*, 470 F.3d 550, 561 (4th Cir. 2006). Testimony that “states a legal standard or draws a legal conclusion,” however, is inadmissible. *Id.* at 561-62.

In drawing the line between “a permissible legal opinion on an ultimate issue” and “an impermissible legal conclusion,” the Fourth Circuit in *McIver* assigned great importance to whether “the terms used by the witness have a separate, distinct and specialized meaning in the law different from that present in the vernacular.” *Id.* at 562 (quoting *United States v. Barile*, 286 F.3d 749, 760 (4th Cir. 2002)). It is for that reason, the Fourth Circuit explained, that courts have deemed inadmissible testimony that a dog bite constituted “deadly force,”

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<sup>3</sup> Among the practices that may be challenged under the Sherman Act is an alleged price-fixing conspiracy. An agreement among competitors to raise, fix, or stabilize the price of a commodity is “illegal per se” under the Sherman Act. *United States v. Soc’y of Indep. Gasoline Marketers of Am.*, 624 F.2d 461, 465 (4th Cir. 1979) (quoting *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 223 (1940)).

or that a product was “unreasonably dangerous.” *Id.* (citing *Miller v. Clark Cnty.*, 340 F.3d 959, 963 n.7 (9th Cir. 2003) and *Strong v. E.I. DuPont de Nemours Co.*, 667 F.2d 682, 685-86 (8th Cir. 1981)).

The three experts in this case intend to opine, based on their economic analyses, that the Defendants’ behavior is “consistent with collusion and inconsistent with competition.” Pls.’ Opp’n 5, ECF No. 413. This testimony is admissible under Rule 704(a), because it does not state a “legal standard or draw[] a legal conclusion.” *McIver*, 470 F.3d at 562. Nor does it use terms with “distinct and specialized meaning in the law.” *Id.* Instead, these experts intend to explain whether economic indicia of collusion were present during the class period. These opinions are not “determination[s] of purely legal issues”; rather, they are admissible “testimony concerning mixed questions of fact and law.” *U.S. Info. Sys. v. Int’l Bhd. of Elec. Workers Local Union No. 3, AFL-CIO*, 313 F. Supp. 2d 213, 240 (S.D.N.Y. 2004).

Courts regularly admit expert testimony regarding “whether conduct is indicative of collusion.” *Id.* (citing *In re Polypropylene Carpet Antitrust Litig.*, 93 F. Supp. 2d 1348, 1355 (N.D. Ga. 2000) (finding that an expert’s testimony that market factors were consistent with a conspiracy would be helpful to the trier of fact)); *see also In re Urethane Antitrust Litig.*, No. 04-1313-JWL, MDL No. 1616, 2012 WL 6681783, at \*3 (D. Kan. Dec. 21, 2012) (allowing expert testimony that “certain events are consistent with collusion”). The Defendants cite two cases for the proposition that the expert testimony at issue is inadmissible because it embraces the legal conclusion that a cartel existed. In the first case, *City of Tuscaloosa v. Harcros Chemicals, Inc.*, 158 F.3d 548, 565 (11th Cir. 1998), the U.S. Court of Appeals for the Eleventh Circuit found that testimony “regarding the existence of a conspiracy” was

inadmissible because the trier of fact was capable of making that determination without an expert's assistance. The Eleventh Circuit's decision, however, hinged not on a violation of Rule 704 but on a determination that the expert's assertions were "outside his competence as a statistician." *Id.* Thus, the holding in *City of Tuscaloosa* is inapposite with regard to the Defendants' argument that Rule 704 prohibits the experts' testimony at issue.

The second case cited by the Defendants, *Ohio ex rel. Montgomery v. Louis Trauth Dairy, Inc.*, 925 F. Supp. 1247, 1254 (S.D. Ohio 1996), in fact supports the admissibility of the Plaintiffs' expert testimony. In *Louis Trauth Dairy*, the District Court for the Southern District of Ohio ruled that a party's experts were permitted to testify as to "how their analysis are consistent with . . . evidence of conspiracy," but could not state "in the form of a legal conclusion" whether an illegal conspiracy existed. *Id.* Likewise, the Plaintiffs' experts in this case may testify as to certain indicia of collusion and cartel behavior. Such testimony does not fit the category of "legal conclusions" barred by the Fourth Circuit in *McIver*, 470 F.3d at 562, but is directly on point with the testimony found admissible in *Louis Trauth Dairy*.

The Defendants also challenge two other sets of testimony by the Plaintiffs' experts—namely, testimony regarding whether the Defendants violated Section 1 of the Sherman Act, 15 U.S.C. § 1,<sup>4</sup> and whether the Defendants' behavior during the class period

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<sup>4</sup> See, e.g., Defs.' Ex. 6, Hamilton Mar. 1, 2013 Dep. 404:19-22 ("Hamilton Mar. 2013 Dep."), ECF No. 410-6 ("My opinion as an economist with some expertise in antitrust is that participation in the [global statistics program] by itself is a Section 1 violation.").



was pretextual.<sup>5</sup> This testimony is NOT admissible. The first set—in which the experts state that the Defendants violated the Sherman Act—runs afoul of the Federal Rules of Evidence. As the Advisory Committee Notes to Rule 704 explain, “opinions which would merely tell the jury what result to reach” are inadmissible. *See* Fed. R. Evid. 704 advisory committee’s note. This testimony falls squarely into the category of inadmissible testimony that would tell the jury the result to reach because it “draws a legal conclusion.” *McIver*, 470 F.3d at 561-62; *see also Louis Trauth Dairy*, 925 F. Supp. at 1254 (“[T]he State’s experts may not express an opinion in the form of a legal conclusion regarding the existence of an illegal conspiracy.”). Accordingly, specific testimony with respect to whether Defendants violated the Sherman Act will not be admitted at trial.

The second set of testimony regarding the Defendants’ possible pretext is also not admissible. This testimony, if admitted, would impinge upon the jury’s function to determine the truthfulness and credibility of the Defendants. *See, e.g., Holiday Wholesale Grocery Co. v. Philip Morris Inc.*, 231 F. Supp. 2d 1253, 1289 (N.D. Ga. 2002) (deeming inadmissible expert’s testimony that he found it “hard to credit” the defendants’ justifications for certain conduct, because that testimony encroaches on the credibility question assigned only to the trier of fact). The Plaintiffs have not made any attempt to defend this testimony as admissible under Rules 702 and 704. Indeed, at the hearing held on April 17, 2013, the Plaintiffs agreed with the Defendants that this testimony may not be admitted. *See* Transcript of Apr. 17, 2013 Motions Hearing (“Hr’g Tr.”) 40:9-14, 58:3-5.

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<sup>5</sup> *See, e.g.,* Defs.’ Ex. 1, Priest Rebuttal Report ¶ 28, ECF No. 410-1 (“That the individual Defendants announced the effect date of the price change at different times . . . is most likely, from an economic standpoint, pretextual.”).

Because only the fact finders may delve into questions of truthfulness and credibility, *Holiday Wholesale Grocery*, 231 F. Supp. 2d at 1289, and considering that the parties are in agreement on this issue, this Court deems this particular testimony inadmissible.

In summary, Rule 704 permits the Plaintiffs' proposed experts to testify that the Defendants' behavior is consistent with collusion and inconsistent with competition. In keeping with the Federal Rules of Evidence, the experts may not testify that the Defendants violated the Sherman Act or that particular actions the Defendants took were a pretext for collusive behavior. Accordingly, these latter sets of testimony will not be admitted at trial.

## **II. *Daubert* Challenges to the Plaintiffs' Proposed Experts**

The Defendants' chief argument in their Motion to Exclude Expert Testimony is that the testimony of the three Plaintiffs' experts is unreliable and therefore may not be admitted under Rule 702 of the Federal Rules of Evidence and the Supreme Court's decision in *Daubert*. This Court addresses the challenges to each expert and finds that while Professor Priest's testimony must be excluded as unreliable, the testimony of Dr. Hamilton and Dr. Lamb is reliable and may be admitted at trial.

### **A. Professor Priest**

Professor Priest is a professor of law and economics at Yale Law School,<sup>6</sup> where he has taught since 1980. Defs.' Ex. 1, Priest Rebuttal Report ("Priest Report") ¶ 1, ECF No. 410-1. Though Professor Priest holds no advanced degree in economics, he has written extensively on antitrust topics and testified numerous times in state and federal courts. *Id.* ¶¶

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<sup>6</sup> The legal field of "law and economics" views legal theories through an economic lens. *See* Anita Bernstein, *Whatever Happened to Law and Economics?*, 64 Md. L. Rev. 303, 308-318 (2005) (describing the basic precepts of law and economics). Despite its application of economic principles to the law, including the use of empirical data, law and economics is distinct from the field of economics.

2-3, 14. In this matter, Professor Priest spent over 100 hours in formulating his report. Pls.’ Opp’n 19. He relied on documents prepared both by the Plaintiffs’ other experts, Dr. Hamilton and Dr. Lamb, and the Defendants’ experts, Dr. Robert Willig and Dr. Kevin M. Murphy, as well as on economic literature regarding cartels. Pls.’ Opp’n 20. Professor Priest’s report and deposition testimony reflect his opinion that the Defendants’ conduct is more consistent with collusion than with competition. *See, e.g.*, Priest Report ¶ 21; Pls.’ Ex. 10, Mar. 19, 2013 Deposition of George L. Priest (“Priest Dep.”) at 305:4-8, ECF No. 413-10. Specifically, Professor Priest opines that a pattern of near simultaneous price increase announcements is not explained by unilateral action, but rather indicates cartelization. *See, e.g.*, Priest Report ¶¶ 25-26; Priest Dep. 316:11-14.

At the hearing held on April 17, 2013, the Plaintiffs stated that they plan to call Professor Priest as a rebuttal witness for the specific purpose of addressing the testimony of the Defendants’ expert witnesses. Hr’g Tr. 32:20-22; 24-25. Specifically, Professor Priest’s opinion will be offered to rebut the expected testimony by the Defendants’ expert witnesses that certain titanium dioxide price increases did not occur simultaneously, and that any simultaneity can be attributed to unilateral action by each Defendant. *Id.* at 33:13-25; 34:11-25; 35:1-25, ECF No. 444. The Plaintiffs argue that this proffered testimony is within Professor Priest’s expertise. Pls.’ Opp’n 18-19.

Under Federal Rule of Evidence 702 and the *Daubert* framework, “[e]xpert testimony may be admitted into evidence if: (1) the expert is qualified to testify competently regarding the matters he intends to address; (2) the methodology by which the expert reaches his conclusions is sufficiently reliable as determined by the sort of inquiry mandated in *Daubert*;

and (3) the testimony assists the trier of fact, through the application of scientific, technical, or specialized expertise, to understand the evidence or to determine a fact in issue.” *City of Tuscaloosa*, 158 F.3d at 562. Though Professor Priest will not give scientific or technical testimony, his expertise is in antitrust law, a specialized area of knowledge that is beyond the ken of the average layperson. To be admissible, his testimony must be deemed reliable under *Daubert*. See *Kumho Tire*, 526 U.S. 137 (holding that *Daubert* applies not only to scientific testimony but to all expert testimony).

The Defendants argue that Professor Priest must be excluded on the basis that he offers only legal opinions under the guise of economic testimony. Further, the Defendants argue that Professor Priest’s opinion should be excluded because it is not based on any discernible methodology. In support of their contentions, the Defendants point out that Professor Priest only reviewed data prepared by other experts, compiling none of his own, and that Professor Priest’s opinions are based on his subjective and undefined concept of simultaneity. The Defendants also contend that Professor Priest’s economic and legal opinions are one and the same, based on his statement that the economic test for whether a cartel exists is indistinguishable from the legal test. Priest Dep. 218:15-219:6. The Plaintiffs maintain that Professor Priest will not offer his opinion on purely legal matters, but will testify, based on his economic expertise, only in rebuttal of the Defendants’ experts’ specific economic opinions. Pls.’ Opp’n 23 n.34.

As a general matter, expert opinions that are purely legal conclusions are not admissible. *McIver*, 470 F.3d at 561-62; see also *Good Shepherd Manor Found. v. City of Mommence*, 323 F.3d 557, 564 (7th Cir. 2003) (affirming exclusion of law professor’s testimony that city’s

actions violated the Fair Housing Amendments Act). Indeed, Professor Priest's testimony has been excluded by this Court in a recent criminal antitrust case, on the basis that his proffered opinion concerned a legal issue, the resolution of which was reserved for the Court. *United States v. Nusbaum*, No. JFM-09-0328, 2009 WL 4738075 (D. Md. Dec. 4, 2009) (granting motions *in limine* to exclude Professor Priest's proffered testimony on proffered single entity defense).

As a general matter, this Court does not accept the Defendants' argument that testimony that certain conduct is more consistent with collusion than competition should be excluded as a purely legal conclusion.<sup>7</sup> While testimony that the Defendants' alleged conduct is more consistent with collusion than competition may be an admissible economic opinion, the issue before this Court is whether Professor Priest is the right expert to give that opinion. This Court concludes that he is not. The admissibility of an expert opinion regarding the existence of a cartel may turn on the source of the opinion, as opposed to the opinion itself. *City of Tuscaloosa*, 158 F.3d at 565. In *City of Tuscaloosa*, the court affirmed the exclusion of a portion of an expert statistician's testimony on the ground that his opinions that a price-fixing conspiracy existed, and that evidence of certain bids were "signals" to co-conspirators, were "outside of his competence as a statistician." 158 F.3d at 565. In the same vein, Professor Priest is not the proper source to testify that the conduct of the Defendants was more consistent with collusion than with competition. Indeed, the Plaintiffs have retained two economists to opine on this economic matter.

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<sup>7</sup> See Section I *supra*.

In regard to the Plaintiff's proffer that Professor Priest will only provide specific rebuttal testimony, this Court concludes that he is unqualified to do so—the Defendants' experts are economists, Professor Priest is not.<sup>8</sup> Therefore, his proffered rebuttals of the defense experts' testimony are outside his competence as a law professor. *See United States v. Taylor*, 704 F. Supp. 2d 1192, 1195-96 (D.N.M. 2009) (excluding testimony of criminal justice professor on accuracy of government's firearms identification expert, and firearms and toolmark identification in general, despite professor's extensive research and writing on the topic). Accordingly, this Court concludes that Professor Priest must be excluded because he is not qualified to opine reliably on the economic evidence presented in this case.

Even if Professor Priest was qualified to rebut specific statements by the Defendants' experts, Professor Priest must also be excluded because his testimony will not assist the jury. *City of Tuscaloosa*, 158 F.3d at 562 (listing requirement that expert testimony assist the jury under Rule 702 and *Daubert*); *Liberty Media Corp. v. Vivendi Universal, S.A.*, 874 F. Supp. 2d 169, 172 (S.D.N.Y. 2012) (“[E]xpert testimony is inadmissible when it addresses lay matters which [the trier of fact] is capable of understanding without the expert’s help”) (citation and internal quotation marks omitted). To understand this case, the jury will require expert economic testimony, which Professor Priest is not qualified to give. As a law professor, and not an economist, Professor Priest’s testimony, even if offered only to rebut specific testimony of the Defendants’ experts, will not help the jury determine the factual issues

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<sup>8</sup> The Plaintiffs cite *Fleischman v. Albany Medical Center* for the proposition that Professor Priest will give economic, not legal, testimony, and should be permitted to testify based on “economic theories published in various economic journals.” 728 F. Supp. 2d 130, 153-54 (N.D.N.Y. 2010). That case concerned the testimony of an economist. Moreover, the expert in *Fleischman* did “not opine on the existence of a conspiracy.” *Id.* The expert in *Fleischman* is easily distinguished from Professor Priest, and the reasoning of that court is thus unavailing to the Plaintiffs.

regarding the Defendants' alleged cartel activity. A jury is perfectly capable of assessing the economic expert testimony—from economists—that will be offered by both sides, and determining what weight to give to each. *City of Tuscaloosa*, 158 F.3d at 565.

Finally, courts have often noted that expert witness testimony has “the potential to be both powerful and quite misleading.” *See, e.g., Westberry*, 178 F.3d at 261 (quoting *Daubert*, 509 U.S. at 595). As this Court has recently noted, “expert testimony that is more likely ‘to mislead [the trier of fact] than to enlighten should be excluded under [Federal Rule of Evidence 403].” *Casey v. Geek Squad® Subsidiary Best Buy Stores, L.P.*, 823 F. Supp. 2d 334, 341 (D. Md. 2011) (quoting *Westberry*, 178 F.3d at 261). Professor Priest’s status as a law professor is likely to mislead the jury when he purports to give a strictly economic and not legal opinion. In addition, the risk of unfair prejudice to the Defendants substantially outweighs the limited probative value of Professor Priest’s testimony. For those reasons, Rule 403 mandates his exclusion.

In sum, Professor Priest’s testimony must be excluded. As a law professor, he is not qualified to rebut the economic testimony of the Defendants’ expert witnesses, and Professor Priest’s proffered testimony in this regard will not assist the jury.

#### B. Dr. Hamilton

Dr. Hamilton is a professor emeritus in the Department of Economics at Johns Hopkins University; he formerly served as chair of that department. He received his Ph.D. in economics from Princeton University. At Johns Hopkins, Dr. Hamilton has taught a course on the “economics of antitrust” for the last fifteen to twenty years. *See* Nov. 5, 2012 Deposition of Hamilton (“Hamilton Nov. Dep.”) 333-34, ECF No. 413-2. As a proposed

expert for the Plaintiffs, Dr. Hamilton intends to opine, after evaluating the discovery record and “well-established economic considerations,” that the Defendants’ conduct was “inconsistent with competition and could be rationally explained only by collusion.”<sup>9</sup> *See* Pls.’ Opp’n 7. Dr. Hamilton’s economic considerations are set out in the form of a “multi-factor guide,” which he developed prior to reviewing the record in this case. *See* Defs.’ Ex. 3, Hamilton Aug. 3, 2012 Report, ECF No. 410-3; Hamilton Nov. Dep. 334-35.

The Defendants challenge Dr. Hamilton’s proposed testimony on several grounds. They argue that his testimony is not based on reliable statistical or empirical analysis but on Dr. Hamilton’s subjective interpretation of a limited sample of the discovery record selected by Plaintiffs’ counsel. The Defendants also assert that Dr. Hamilton blindly relied on the work of another expert, Dr. Lamb. In addition, the Defendants argue that Dr. Hamilton used his own multi-factor guide for cartel spotting, which was developed solely for the purposes of litigation and was not subject to peer review. Finally, the Defendants emphasize that Dr. Hamilton rejected out of hand the equally plausible explanation for the Defendants’ behavior: conscious parallelism.<sup>10</sup> *See* Defs.’ Mot. 15-26, ECF No. 410.

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<sup>9</sup> In addition to their more particular objections, the Defendants challenge Dr. Hamilton’s ability to give any expert testimony in this case, because he supposedly lacks expertise in “cartel detection.” *See* Defs.’ Reply 10. This argument is easily dispatched, considering that Dr. Hamilton has nearly two decades of experience teaching the economic principles of antitrust and has previously been accepted as an expert in antitrust cases. *See* Hamilton Dep. 333-34. Dr. Hamilton does not rely on generalized skill in the area; rather, he uses his advanced economics degree and accumulated knowledge of antitrust to opine on this matter.

<sup>10</sup> Conscious parallelism, in simple terms, is “the independent responses of a group of competitors to the same set of economic facts.” Donald F. Turner, *The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal*, 75 Harv. L. Rev. 655, 663 (1962). Conscious parallelism is itself lawful. Indeed, the Supreme Court explains that conscious parallelism is “a common reaction of ‘firms in a concentrated market [that] recogniz[e] their shared economic interests and their interdependence with respect to price and output decisions.’” *Bell Atl. Corp. v. Twombly*, 550 U.S.



When reviewing a *Daubert* challenge, the pertinent issue is the expert’s reliability. As the Supreme Court explained in *Kumho Tire*, the *Daubert* gatekeeping requirement makes certain “that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” 526 U.S. at 152. Importantly, an analysis under *Daubert* does not require a determination that the testimony “is irrefutable or certainly correct.” *Westberry*, 178 F.3d at 261. Where an expert’s methodology, though reliable, is debatable for other reasons, “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking” the evidence. *Daubert*, 509 U.S. at 595.

#### 1. Dr. Hamilton’s Review of the Record

At the outset, this Court finds that some of the Defendants’ challenges do not go to the reliability of Dr. Hamilton’s expert testimony. Instead, they are the type of objections that may be introduced on cross-examination or through the presentation of contrary evidence. *See id.* Specifically, the Defendants may probe Dr. Hamilton at trial regarding the amount of the discovery record that he reviewed. They may also introduce the fact that Plaintiffs’ counsel selected—or in the Defendants’ words, “cherry-picked”—the portions of the record that Dr. Hamilton evaluated. *See* Defs.’ Mot. 16. This Court notes that the court in the *Urethane* case found that “the extent to which [an expert] considered the entirety of the evidence in the case is a matter for cross-examination.” 2012 WL 6681783, at \*3. Such facts, however, do not warrant Dr. Hamilton’s exclusion, because they fail to challenge the

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544, 553 (2007) (quoting *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 227 (1993)).

reliability of his method. In this case, where there are over fourteen million pages of documents in the discovery record, Pls.' Opp'n 14, the experts cannot be expected to review all of the materials. If important portions of the record were overlooked, then the Defendants may address that issue at trial.

Moreover, while the Defendants accuse Dr. Hamilton of reviewing only those documents "cherry-picked" by Plaintiffs' counsel, without performing any independent investigation of the facts, these arguments hold no weight. The Plaintiffs have adequately countered that Dr. Hamilton, rather than being "spoon-fed" the information he was to consider as alleged by the Defendants, in fact performed independent review of the record, "with essentially no guidance from counsel." *See* Hamilton Nov. Dep. 40:2-12. The Defendants suggest that Dr. Hamilton's failure to conduct further investigation of the facts is a proper basis on which to exclude him. However, most of the cases the Defendants cite involve experts who relied not on the record that counsel provided but on "summarizations" or "outlines" of what the record supposedly revealed. *See, e.g., Obrycka v. City of Chicago*, 792 F. Supp. 2d 1013, 1025-26 (N.D. Ill. 2011) (finding that an expert's uncritical reliance on outlines of the issues prepared by counsel was not "sound methodology"); *Sommerfield v. City of Chicago*, 254 F.R.D. 317, 321 (N.D. Ill. 2008) (rejecting expert testimony based on counsel's summary of depositions). Because Dr. Hamilton did not rely on summaries on the information prepared by Plaintiffs' counsel, this Court does not find these cases persuasive.

While the Defendants may draw attention to the thoroughness of Dr. Hamilton's review of the record, and emphasize that Dr. Hamilton looked only to the portions of the

record that Plaintiffs’ counsel selected, these facts do not call into question the reliability of Dr. Hamilton’s methodology. Accordingly, they do not warrant his exclusion from the case.

## 2. The Remaining *Daubert* Challenges to Dr. Hamilton’s Testimony

The remaining arguments marshaled by the Defendants do require review under *Daubert*. First, the Defendants challenge Dr. Hamilton’s “blind reliance” on the work of Dr. Lamb in opining on a particular issue. Defs.’ Mot. 16. Second, they contend that he based his opinions on his own multi-factor guide, which was produced solely for litigation and was not subject to peer review. *Id.* at 25-27. Third, they contend that Dr. Hamilton rejected alternative, lawful explanations for the Defendants’ behavior—most importantly, conscious parallelism.<sup>11</sup> *Id.* at 22. None of these arguments warrants Dr. Hamilton’s exclusion under *Daubert*.

### a. *Dr. Hamilton’s Reliance on the Work of Dr. Lamb*

Dr. Hamilton relied on Dr. Lamb’s opinion regarding two issues—the interchangeable nature of different grades of titanium dioxide, and the prices of titanium dioxide before and during the class period. *See* Defs.’ Mot. 23-24; Pls.’ Opp’n 16. The Defendants argue that this reliance renders Dr. Hamilton’s own opinions unhelpful and unreliable. However, the cases upon which the Defendants rely—*TK-7 Corp. v. Estate of Barbouti*, 993 F.2d 722, 732 (10th Cir. 1993), and *In re TMI Litigation*, 193 F.3d 613, 715 (3d Cir. 1999)—are inapt. In *TK-7 Corp.*, an expert was excluded for his reliance on another individual, “believed to be an expert,” whose opinions were not going to be introduced at trial. 993 F.2d at 732. Moreover, the excluded expert had no “familiarity with the methods

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<sup>11</sup> For an explanation of conscious parallelism, see *supra* note 10.

or reasoning used by [the nontestifying expert] in arriving at his projections.” *Id.* In this case, this Court is reviewing the reliability of both Dr. Hamilton’s and Dr. Lamb’s proposed expert testimony. Unlike the court in *TK-7*, this Court has no reason to be concerned that an expert who is unknown to the fact finders and whose methodology has not received review under *Daubert* will influence the evidence presented at trial. Furthermore, the Defendants have not suggested that Dr. Hamilton is unfamiliar with the methods used by Dr. Lamb in reaching his conclusion on the interchangeable nature of titanium dioxide grades. The holding in *TK-7* therefore bears little weight.

Similarly, *In re TMI Litigation* involved a challenge to an expert whose conclusions, in total, were based on the opinions of other experts and “ignored his own stated principles.” 193 F.3d at 715. The Defendants have made no similar claims in this case. Dr. Hamilton relied on Dr. Lamb’s work for two specific issues and otherwise performed his own analysis of the record. Moreover, the Defendants do not suggest that Dr. Hamilton, in his reliance on Dr. Lamb, betrayed his own economic principles.

This Court finds the decision in *In re Urethane Antitrust Litigation* to be more on point. 2012 WL 681783, at \*4. In *Urethane*, the court found no defect with an expert who relied in part on the work of another expert in the same field. *Id.* As the court explained, the challenged expert did not “merely adopt opinions formed by an expert outside his field of expertise.” *Id.* Because the experts were in the same field, and there was no contention that their economic theories were inconsistent, the *Urethane* court was assured that the challenged expert could understand the work he was relying on, and therefore found no basis for exclusion. *Id.*

Following the reasoning of the *Urethane* court, Dr. Hamilton is permitted to rely on Dr. Lamb's opinion. Dr. Hamilton and Dr. Lamb are experts in the same field, and there is no contention that their economic theories are inconsistent. If the Defendants believe that the opinions on which Dr. Hamilton relied are erroneous, then they may introduce that issue at trial, but the Defendants offer no basis for finding that Dr. Hamilton's entire testimony, or his specific opinions based on the work of Dr. Lamb, must be excluded as unreliable.

b. *The Reliability of Dr. Hamilton's Multi-Factor Guide*

The Defendants also challenge Dr. Hamilton's methodology—in particular, his “multi-factor guide”—as unreliable. This guide is set out in Dr. Hamilton's August 3, 2012 report. *See* Defs.' Ex. 3, Hamilton Report Aug. 3, 2012 ¶¶ 39-72, ECF No. 410-3. In that report, titled “Inferring the Presence (or Absence) of Cartels,” Dr. Hamilton analyzed two questions: What types of industries are “ripe” for cartel formation, and what types of firm behavior are “most plausibly explained by invoking the presence of a price-fixing conspiracy?” *Id.* ¶ 8. For each question, Dr. Hamilton set forth a group of factors to consider. The first group of factors are seven market conditions conducive to the formation of a cartel: (1) that the number of “major players” in the industry not be too large or too small; (2) that the cartel members be able to monitor each other's sales volumes; (3) that the cartel members be able to punish each other for quota violations; (4) that entry into the industry be difficult; (5) that the product be “fairly homogenous”; (6) that the buyer-side of the market not be highly concentrated; and (7) that the product not have close substitutes. *See id.* ¶¶ 39-48. The second group of factors illustrate eight types of firm behavior indicative of a cartel: (1) simultaneous price adjustments; (2) stability of market shares; (3)

sales to competitors; (4) excess capacity; (5) evidence of private channels of communication; (6) price discounts and price discrimination; (7) actions to respect rivals’ “rights” to customers; and (8) high prices when the cartel is in effect. *Id.* ¶¶ 53-72. In a later report, Dr. Hamilton applied the two sets of factors to this case. *See* Defs.’ Ex. 4, Hamilton Report Oct. 1, 2012, ECF No. 410-4.

The Defendants argue that Dr. Hamilton’s multi-factor guide is unreliable because it was created solely for litigation and has not been subjected to peer review. The Supreme Court in *Daubert* found that a court could consider whether the expert’s method has been subjected to peer review. *See* 509 U.S. at 593. Moreover, some courts have concluded that methodologies developed for litigation purposes are less likely to be deemed reliable. *See, e.g., Daubert v. Merrell Dow Pharms., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995) (reasoning that expert testimony “based directly on legitimate, preexisting research unrelated to the litigation provides the most persuasive basis for concluding that the opinions” were reliable).<sup>12</sup>

Although Dr. Hamilton’s own multi-factor guide was developed for litigation and has not been subjected to peer review, the guide consists of the standard economic factors that economic experts often consider in antitrust cases. Courts have found that the sort of factors in Dr. Hamilton’s first set—market conditions conducive to cartel behavior—are reliable. In *U.S. Information Systems*, for example, the court admitted expert testimony regarding whether the “climate of a specific market was consistent with conspiracy.” 313 F. Supp. 2d at 340; *see also In re Polypropylene Carpet Antitrust Litig.*, 93 F. Supp. 2d at 1355

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<sup>12</sup> On remand from the United States Supreme Court, the U.S. Court of Appeals for the Ninth Circuit addressed the expert issues in *Daubert* and offered its “guidance on the application of the *Daubert* standard.” 43 F.3d at 1315.

(holding that expert testimony that “the climate of the polypropylene market during the relevant time period was consistent with a finding [of] a conspiracy to fix prices” would be helpful to the trier of fact).

Likewise, Dr. Hamilton’s second set of factors, regarding firm behavior that would otherwise be contrary to the firm’s self-interest, have been deemed reliable by other courts. The court in *U.S. Information Systems* permitted an economic expert to “point to factors that would tend to show anticompetitive conduct in a market.” 313 F. Supp. 2d at 240; *see also Fleischman*, 728 F. Supp. 2d at 151-54, 159-60 (discussing an expert’s analysis of factors including nature, frequency and scope of information sharing; behavior tending to show anticompetitive conduct in a market; and other plus factors indicating a collusive agreement).

In prior opinions in this case, this Court has permitted argument using the types of factors present in Dr. Hamilton’s multi-factor guide; these factors are often referred to as “plus factors.” *See* Mem. Op. Granting Mot. for Class Certification 18-26, ECF No. 337 (analyzing the Plaintiffs’ evidence of “oligopolistic tendencies in the [titanium dioxide] market” that facilitate collusion); Mem. Op. Denying Mot. to Dismiss 10-12, 10 n.4, ECF No. 101 (describing “plus factors” alleged by the Plaintiffs, including market conditions that favor collusion, opportunities to agree and collude, and parallel price increases announced and implemented by the Defendants). An expert’s analysis of plus factors focusing on market conditions and firm behavior finds its roots in the extensive antitrust literature. *See* Hamilton Dep. 74-75, 149-50 (Dr. Hamilton acknowledging that his analysis is consistent with literature in the antitrust field, including the work of Richard A. Posner, Joseph E. Harrington, and W. Kip Vicusi, as well as the Handbook of Antitrust Economics); *see also*

Richard A. Posner, Antitrust Law 55-93 (2d ed. 2001) (identifying fourteen “plus factors”); William E. Kovacic et al., *Plus Factors and Agreement in Antitrust Law*, 110 Mich. L. Rev. 393, 405-06, 415 (2011) (noting five “chief plus factors” applied by courts, and citing Posner, Antitrust Law). Considering the antitrust case law and literature on the topic of collusion, this Court finds that Dr. Hamilton’s multi-factor guide is consistent with those factors that experts in the field have long considered and that courts have long accepted as reliable. This finding mitigates the concern that Dr. Hamilton’s guide was developed solely for litigation, since the contents of the guide are not fledgling theories of collusion and cartel behavior, but well-accepted, standard principles. For these reasons, Dr. Hamilton’s multi-factor guide is reliable and cannot be a basis on which to exclude Dr. Hamilton’s testimony.

c. *Whether Dr. Hamilton Accounted for Alternative Explanations*

Finally, the Defendants argue that Dr. Hamilton’s economic analysis disregarded alternative explanations for the Defendants’ behavior. *See* Defs.’ Mot. 22. The Defendants are especially concerned with conscious parallelism, a theory that would explain the Defendants’ simultaneous price increases and other cartel behavior as the result of unilateral and not collusive conduct.<sup>13</sup> They believe that Dr. Hamilton’s testimony should be rejected on this basis alone because, as one court has held, the failure to test for “obvious and significant alternative explanations renders [the expert’s] analysis ‘essentially worthless.’” *In re Wireless Tel. Servs. Antitrust Litig.*, 385 F. Supp. 2d 403, 428 (S.D.N.Y. 2005).

In general, an expert need not account for every possible explanation before reaching an opinion on the matter. *See, e.g., U.S. Info. Sys.*, 313 F. Supp. 2d at 238-39 (“An

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<sup>13</sup> *See supra* note 10.



expert is not required . . . to categorically exclude each and every possible alternative cause.”). Rather, the court in *U.S. Information Systems* aptly reasoned that an expert “need only demonstrate that he has ‘adequately accounted’ for alternative explanations.” *Id.* (citing Fed. R. Evid. 702 advisory committee’s note). Moreover, an expert “does not need to prove that his opinions are in fact more likely than the suggested alternatives.” *Id.*

In this case, Dr. Hamilton adequately accounted for the possibility that the Defendants’ behavior was unilateral rather than collusive. In Dr. Hamilton’s August 2012 report, he analyzed a group of factors illustrating the sorts of firm behavior “that cannot be plausibly explained by a non-collusive model of firm behavior.” *See* Hamilton Report Aug. 3, 2012 ¶ 52. Thus the purpose of Dr. Hamilton’s multi-factor analysis was to identify the market conditions and firm behavior that may lead one to infer collusion rather than competition. Standing alone, these factors do not prove the existence of a cartel, nor do they disprove the possibility of non-collusive behavior. Such showings, however are not necessary. *See Fleischman*, 728 F. Supp. 2d at 152 (rejecting a *Daubert* argument that an expert failed to rule out lawful behavior where the opinion, finding that plus factors suggested collusion rather than competition, would be helpful to the jury); *see also City of Tuscaloosa*, 158 F.3d at 564 (holding that expert testimony “need not prove the plaintiffs’ case by themselves; they must merely constitute one piece of the puzzle that the plaintiffs endeavor to assemble before the jury”).

The Defendants suggest that Dr. Hamilton should have applied specific non-collusive models to the evidence he reviewed in order to account for alternative explanations. However, Dr. Hamilton’s failure to do so does not render his opinion unreliable. While his

factors serve as “red flags” indicating the possibility of a cartel, *see* Hamilton Report Aug. 3, 2010 ¶¶ 51, 73, they do not indicate definitively whether a cartel occurred. This testimony, as this Court explained more fully in Section I of this Memorandum Opinion, is in line with the sort of testimony often admitted in antitrust cases. *See, e.g., U.S. Info. Sys.*, 313 F. Supp. 2d at 213 (“Economists often explain whether conduct is indicative of collusion.”); *see also Urethane*, 2012 WL 6681783, at \*3; *In re Polypropylene Carpet Antitrust Litig.*, 93 F. Supp. 2d at 1355. If the Defendants believe that Dr. Hamilton neglected some crucial piece of evidence, or that a non-collusive model would have convinced Dr. Hamilton that the Defendants were behaving lawfully, then they may raise those issues at trial. *See Daubert*, 505 U.S. at 595 (“Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”).

### C. Dr. Lamb

Dr. Lamb is an econometrician; he previously served as a Senior Economist at the Federal Reserve Bank. He has a Ph.D. in economics from the University of Pennsylvania. Dr. Lamb has provided economic analysis in many antitrust cases, including at the class certification stage of this case. *See* Defs.’ Ex. 9, Lamb Report Oct. 1, 2012 (“Lamb Report”), ¶¶ 1-3, ECF No. 410-9. The Plaintiffs intend to call Dr. Lamb to testify on both the liability of the Defendants and the damages calculation. Specifically, Dr. Lamb intends to opine that (1) evidence in this matter is consistent with cartel behavior and inconsistent with competition; (2) that all or nearly all members of the certified class paid artificially inflated prices for titanium dioxide because of the cartel; and (3) that the Plaintiffs suffered an

overcharge ranging from \$2.1 to \$2.7 billion. *See* Lamb Report ¶ 164; Pls.’ Opp’n 24. These opinions are based in part on his statistical analysis known as multiple regression analysis.<sup>14</sup> The Defendants challenge Dr. Lamb’s opinions on both liability and damages.

1. The Reliability of Dr. Lamb’s Opinions Regarding the Defendants’ Alleged Cartel Behavior

Dr. Lamb intends to opine that evidence in the record suggests that the Defendants were engaging in cartel behavior. The Defendants argue that this opinion is unreliable because it is based on evidence that cannot reliably, or in some cases conclusively, prove a conspiracy. *See* Defs.’ Mot. 28-33. In particular, the Defendants highlight the five specific bases for Dr. Lamb’s opinions—his multiple regression analysis; the simultaneity of parallel price increase announcements; the Defendants’ announcement of price increases during a period of declining demand; various market conditions during the class period; and the existence of the Titanium Dioxide Manufacturers’ Association’s (“TDMA”) global statistics program.<sup>15</sup> *See id.* at 28-33. None of these bases, the Defendants argue, evidence a conspiracy, and so Dr. Lamb’s testimony must be excluded.

The Defendants’ argument largely rests on the incorrect assumption that each piece of evidence relied on by an expert must, standing alone, be definitive evidence of collusion. On the contrary, while the expert’s opinions must be reliable, they need not prove the Plaintiffs’ entire case. *See, e.g., City of Tuscaloosa*, 158 F.3d at 564 (holding that experts’ “data

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<sup>14</sup> Multiple regression analysis is a statistical tool used to understand the relationship between two or more variables. It is often employed in the analysis of data about competing explanations for the relationships among a number of explanatory variables. Daniel L. Rubinfeld, *Reference Guide on Multiple Regression*, in Reference Manual on Scientific Evidence 305 (Fed. Judicial Ctr., 3d ed. 2011).

<sup>15</sup> The global statistics program (“GSP”) is a confidential program organized by the TDMA that allowed the Defendants to share statistics regarding sales, production, inventory levels, and other information.

and testimony need not prove the plaintiffs' case by themselves; they must merely constitute one piece of the puzzle that the plaintiffs endeavor to assemble before the jury"). In other words, each basis for an expert's opinion need not be a silver bullet.

In this case, Dr. Lamb properly evaluated multiple factors—among others, market conditions conducive to cartel behavior; economic incentives to conspire; behavior by the Defendants that was contrary to their economic self-interest; opportunities to conspire; and multiple simultaneous price increases. *See* Lamb Report ¶¶ 11-27. Based on his analysis of all of these factors in combination, he reached a conclusion regarding whether market conditions and firm behavior were suggestive of collusion. *See id.* For this reason, this Court rejects the Defendants' argument that Dr. Lamb's "heavy reliance" on his multiple regression analysis is improper. *See* Defs.' Mot. 29. The Defendants correctly state that "[s]tatistical analysis cannot directly demonstrate the existence of an agreement." *Louis Trauth Dairy*, 925 F. Supp. at 1253. Yet the court in *Louis Trauth Dairy* explained in the very next sentence that "[s]uch a conclusion does not necessarily mean that regression analysis is unhelpful in determining whether illegal conclusion occurred." *Id.*

Likewise, the Defendants' contention that Dr. Lamb relies too heavily on evidence of market conditions and the existence of the TDMA global statistics program is unfounded. As to both pieces of evidence, the Defendants fault Dr. Lamb for not presenting evidence that the Defendants "*actually* formed a cartel." Defs.' Mot. 31-32. Yet Dr. Lamb does not suggest that he has actual direct evidence of a cartel. Rather, he reached an opinion after analyzing the record for economic factors that may indicate collusion. This sort of expert analysis is proper in antitrust cases. *See U.S. Info. Sys.*, 313 F. Supp. 2d at 240 (holding that an

expert could “point to factors that would tend to show anticompetitive conduct in the market” and “indicate whether he believed those factors existed [there], and what the economic significance of those factors would be”). Dr. Lamb’s testimony need not prove the Plaintiffs’ entire case. *See City of Tuscaloosa*, 158 F.3d at 564.

The Defendants also lodge two particular objections to Dr. Lamb’s analysis. First, they argue, as they did with Dr. Hamilton’s testimony, that Dr. Lamb’s evaluation of simultaneous price increases fails to account for alternative explanations. *See* Defs.’ Mot. 29-30. Second, they contend that Dr. Lamb erred in his analysis of the demand for titanium dioxide during the class period. The Defendants insist that Dr. Lamb’s theory rests on the false premise that demand is measured solely by United States—and not international—consumption. *See id.* 30-31. They also argue that Dr. Lamb failed to consider the impact of rising raw material and energy costs on demand. *Id.*

Neither argument warrants Dr. Lamb’s exclusion from this case. Like Dr. Hamilton, Dr. Lamb evaluated plus factors that tend to indicate collusive behavior. Expert testimony based on plus factors has been admitted in countless antitrust cases. *See, e.g., Urethane*, 2012 WL 6681783, at \*3-4; *U.S. Info. Sys.*, 313 F. Supp. 2d at 240; *Polypropylene*, 93 F. Supp. 2d at 1355. Moreover, these plus factors are meant to rule out the possibility of conscious parallelism or competitive behavior; thus, they do not ignore the alternative explanations for Defendants’ behavior. *See Fleischman*, 728 F. Supp. 2d at 152 (rejecting argument that an expert opinion based on plus factors failed to rule out lawful behavior).

The Defendants’ objections to Dr. Lamb’s analysis of the demand for titanium dioxide likewise fail to justify Dr. Lamb’s exclusion. The Supreme Court in *Bazemore v.*

*Friday*, 478 U.S. 385, 402 (1986), addressed a similar argument regarding an expert who had failed to include specific variables in his regression analysis. The Court explained that “[w]hile the omission of variables from a regression analysis may render the analysis less probative than it otherwise might be, it can hardly be said” that the analysis must be deemed inadmissible. *Id.* Indeed, the Court explained, “[n]ormally, failure to include variables will affect the analysis’ probativeness, not its admissibility.” *Id.*

Moreover, the Plaintiffs adequately address the Defendants’ objections. The Defendants believe that Dr. Lamb should have analyzed global, rather than domestic, demand for the product. *See* Defs.’ Mot. 30. Yet the Plaintiffs counter that Dr. Lamb did consider global demand but determined that domestic demand was a more reliable measure. *See* Lamb Report ¶¶ 49-58. The Plaintiffs also argue, contrary to the Defendants’ contention, that Dr. Lamb’s analysis considered rising costs during the class period. While the parties dispute specific variables in Dr. Lamb’s analysis, this dispute does not reveal Dr. Lamb’s opinions to be unreliable. Rather, they are the sort of arguments to be made at trial because they may affect the testimony’s “probativeness, not its admissibility.” *Bazemore*, 478 U.S. at 402. The Defendants are free to cross examine Dr. Lamb on these points, but there is no basis to exclude the entire testimony of Dr. Lamb.

## 2. Dr. Lamb’s Damages Calculation Using Multiple Regression Analysis

Finally, the Defendants challenge Dr. Lamb’s multiple regression models used to calculate the average overcharge to the members of the class. The Defendants claim that this damages measurement is both irrelevant and unreliable. First, they argue that aggregate overcharge is not a permissible measure of damages in an antitrust class action. *See* Defs.’

Mot. 34. Second, they claim that Dr. Lamb’s regression models are “so defective in critical respects that no reasonable economist would rely on them.” *Id.* Neither argument has merit.

As to the Defendants’ first argument, they correctly state the law in the Fourth Circuit—that an award of average or aggregate damages is not appropriate in the class action antitrust context. In its previous Memorandum Opinion granting the Plaintiffs’ motion to certify a class, this Court quoted the Court of Appeals for the Fourth Circuit, which explained in *Windham v. American Brands, Inc.*, 565 F.2d 59 (4th Cir. 1977), that “[t]he language that Congress used in [the Antitrust statute] . . . leaves no room for awarding damages to some amorphous ‘fluid class’ rather than, or in addition, to one or more actually injured persons. It likewise does not permit any person to recover damages sustained not by him, but by someone else who happens to be a member of such class.” *See* Mem. Op. Granting Mot. for Class Certification 44 (quoting *Windham*, 565 F.2d at 66 (quotations and citation omitted)).

Yet the holding in *Windham* does not preclude the Plaintiffs from presenting testimony on the aggregate or average overcharge for the members of the class. Other courts have permitted similar aggregated damages calculations in class litigation. *See, e.g., In re Polyester Staple Antitrust Litig.*, MDL No. 3:03CV1516, 2007 WL 2111380, at \*28-30 (W.D.N.C. July 19, 2007) (stating that regression analysis is often used to measure damages, and finding no fault with an aggregate damages calculation); *In re TFT-LCD (Flat Panel) Antitrust Litig.*, MDL No. 1827, 2012 WL 253298, at \*5 (N.D. Cal. Jan. 26, 2012) (finding that “the use of aggregate damages in antitrust cases has been approved numerous times”).

Particularly relevant to this case, a leading treatise on class actions explains one possible procedure for determining damages in this context: “It has been settled that classwide proof of the measure of damages suffered by class members generally is proper, especially in price-fixing cases, followed by a Phase II stage of litigation to determine amounts of damages for each.” W. Rubenstein, et al., Newberg on Class Actions § 10.7 (2012). In its previous Memorandum Opinion concerning class certification, this Court likewise recognized options for determining individual damages, including appointing a special master or magistrate judge to preside over post-trial individual damages proceedings. *See* Mem. Op. Granting Mot. for Class Certification 37-38 (citing *In re Visa Check/MasterMoney Antitrust Litig.*, 280 F.3d 124, 141 (2d Cir. 2001) (citations omitted)).

If the Defendants are found liable, then it may be appropriate for this Court to appoint a special master or Magistrate Judge of this Court, who could oversee the apportionment of individual damages. As W. Rubenstein explains, that proceeding may involve “little more than an application of the damages formula found by the jury” at trial. *See* W. Rubenstein, § 10.7. At this stage, however, this Court need not make a final decision on how individual damages could potentially be awarded in this case. It suffices to say that the Plaintiffs, in keeping with the holding in *Windham*, are not precluded from using Dr. Lamb’s multiple regression analysis to determine an average overcharge to the class as a whole.

The Defendants also challenge Dr. Lamb’s multiple regression models, arguing that while these models are generally reliable, they have been applied unreliably in this case. They maintain that the models suffer from multicollinearity, meaning that they are extremely



sensitive to minor changes; that they produce economically implausible results; and that they fail to account for the Defendants' full costs of production. Defs.' Mot. 37-48.

The Defendants suggest that these defects render the models unreliable. However, the Supreme Court in *Bazemore* found that inadequacies in a multiple regression analysis normally "affect the analysis' probativeness, not its admissibility." 478 U.S. at 400. In addition, the Court of Appeals for the Ninth Circuit in *Hemmings v. Tidyman's Inc.*, 285 F.3d 1174, 1188 (9th Cir. 2002) reasoned that "[i]n most cases, objections to the inadequacies of a study are more appropriately considered an objection going to the weight of the evidence rather than its admissibility." The Ninth Circuit's reasoning in *Hemmings* is particularly persuasive. Echoing *Daubert*, that court explained that exclusion in such circumstances would be improper; instead, "[v]igorous cross-examination of a study's inadequacies allows the jury to appropriately weigh the alleged defects and reduces the possibility of prejudice." *Hemmings*, 285 F.3d at 1188; *see also Daubert*, 509 U.S. at 595. In sum, this Court finds that the Defendants' objections to Dr. Lamb's multiple regression models go to their weight and not their reliability.

Moreover, the Plaintiffs adequately respond to the Defendants' objections. While the Defendants believe that Dr. Lamb's models are far too sensitive to slight changes, the Plaintiffs counter that Dr. Lamb took steps to ensure that multicollinearity did not adversely affect his models. *See* Defs.' Ex. 10, Lamb Rebuttal Report Feb. 18, 2013 ("Lamb Rebuttal Report") ¶¶ 62-63, 72, ECF No. 410-12. The Plaintiffs also rebut the Defendants' concern that Dr. Lamb's models produce implausible results. As Dr. Lamb explained in his Rebuttal Report, when a model is designed to measure the totality of the effects of several variables,

“coefficients may not conform to what is expected from a structural econometric approach.”  
*Id.* ¶ 75. Finally, where the Defendants argue that Dr. Lamb used inaccurate data for the Defendants’ production costs, the Plaintiffs point to Dr. Lamb’s explanation that the cost data he used was appropriate in this circumstance and did not understate the Defendants’ actual costs. *See id.* ¶¶ 36-37 (noting that the defense expert Dr. Rubinfeld considered Dr. Hamilton’s cost variables appropriate and adequate in capturing the costs of the Defendants).

In short, this Court finds that the Plaintiffs offer sufficient explanations for the alleged inadequacies in Dr. Lamb’s multiple regression models. The Defendants put forward no reason to deem the models unreliable. Instead, the Defendants’ objections would be more suitably raised at trial, because they go to the models’ probative value and not their admissibility. *See Bazemore*, 478 U.S. at 400; *Hemmings*, 285 F.3d at 1188.

#### CONCLUSION

For the reasons stated above, the Defendants’ Motion to Exclude Expert Testimony (ECF No. 408) is GRANTED IN PART and DENIED IN PART. Specifically, the Plaintiffs’ proposed rebuttal expert, Professor George L. Priest, SHALL BE EXCLUDED because his testimony is inadmissible under Rule 702 of the Federal Rules of Evidence and the Supreme Court’s holding in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). The testimony of the Plaintiffs’ proposed experts Dr. Bruce W. Hamilton and Dr. Russell L. Lamb will not be excluded, as their opinions are admissible.

