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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA

IN RE CAPACITORS ANTITRUST  
LITIGATION

MDL Case No. [17-md-02801-JD](#)

Case Nos. 14-3264 (Flextronics' action);  
17-3472; 17-7046; 17-7047; 18-2657;  
19-1902

**ORDER RE MOTION TO EXCLUDE  
DR. LESLIE M. MARX**

MDL Dkt. No. 652

Among the many constituent cases in this multi-district antitrust litigation are six actions brought by companies that opted out of the direct purchaser class to pursue claims on their own. In those direct action plaintiff (DAP) cases, defendants filed a *Daubert* motion to exclude the opinions of Dr. Leslie M. Marx, an economist retained jointly as a testifying expert witness by the DAPs. Dkt. No. 652.<sup>1</sup> The Court held a concurrent expert proceeding, known informally as a “hot tub,” after which the parties filed supplemental briefs. Dkt. Nos. 1380, 1388, 1389. The request to exclude Dr. Marx is denied, with some limited exceptions.

**BACKGROUND**

The six DAP cases are: (1) Flextronics' case in *In re Capacitors Antitrust Litigation*, No. 14-3264; (2) *The AASI Beneficiaries Trust, by and through Kenneth A. Welt, Liquidating Trustee v. AVX Corp.*, No. 17-3472; (3) *Avnet Inc. v. Hitachi Chemical Co. Ltd.*, No. 17-7046; (4) *Benchmark Electronics Inc. v. AVX Corp.*, No. 17-7047; (5) *Arrow Electronics, Inc. v. ELNA Co., Ltd.*, No. 18-2657; and (6) *Jaco Electronics Inc. v. Nippon Chemi-Con Corp.*, No. 19-1902.

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<sup>1</sup> All docket number references are to the MDL docket, Case No. 17-md-02801-JD, unless otherwise specified.

1 All are constituent cases in the MDL that are separate actions proceeding individually. Direct  
2 action plaintiffs Flextronics, AASI, Avnet, Benchmark, and Arrow jointly engaged Dr. Leslie M.  
3 Marx to “determine the extent, if any, to which they were overcharged as a result of a conspiracy  
4 among suppliers of aluminum, tantalum, and film capacitors.” Dkt. No. 772-7 (Marx Report) ¶ 8.<sup>2</sup>  
5 Dr. Marx performed an analysis utilizing multiple regressions, and concluded that “the prices of  
6 capacitors were elevated relative to non-collusive levels as a result of Cartel Participants’  
7 conduct.” *Id.* ¶ 16. She quantified “the extent of this elevation using an econometric model of  
8 overcharges,” and found that AASI, Arrow, Avnet, Benchmark, and Flextronics had all been  
9 subject to overcharges for their capacitor purchases during the relevant time period, in the range of  
10 16.4% to 18.9%. *Id.* ¶¶ 16-17.

11 Some of the defendants in the DAP cases jointly filed a motion to exclude Dr. Marx’s  
12 opinion and testimony under Rules 104(a) and 702 of the Federal Rules of Evidence, and *Daubert*  
13 *v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). Dkt. No. 652. Defendants say that  
14 Dr. Marx’s econometric model is unreliable and invalid, and so is inadmissible for any use in the  
15 litigations. *Id.* They ask that Dr. Marx be excluded completely. *Id.*

16 After the motion was fully briefed, defendants proposed that the Court defer a decision on  
17 it and pending summary judgment motions to hold a hot tub featuring DAPs’ expert, Dr. Marx,  
18 and defendants’ experts, Dr. Laila Haider and Dr. Stephen Prowse. Dkt. No. 1276. The Court had  
19 conducted a similar hot tub of the economists testifying in the DPP class action. Dkt. No. 957.  
20 The DAPs did not object, and the Court set a hot tub modelled on the prior one, Dkt. No. 1279,  
21 and directed the experts to prepare a joint statement of the top five areas of disagreement ranked in  
22 descending order of importance. Dkt. Nos. 1317, 1365. As is the Court’s practice, the statement  
23 was to be prepared directly by the experts themselves, without involvement of the attorneys. Dkt.  
24 No. 1365. This was done because, in the Court’s experience, hot tubs are most useful when the  
25 opposing experts work and communicate directly with each other, free of attorney filtering.

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28 <sup>2</sup> Jaco did not engage Dr. Marx and was initially not a part of the *Daubert* motion briefing, but it  
later joined in the concurrent expert proceeding and supplemental briefing. Dkt. Nos. 1382, 1389.



1 (c) the testimony is the product of reliable principles and methods;  
and

2 (d) the expert has reliably applied the principles and methods to the  
3 facts of the case.

4 The Court’s obligation under Rule 702 is to “ensure that any and all scientific testimony or  
5 evidence admitted is not only relevant, but reliable.” *Daubert*, 509 U.S. at 589. There is no  
6 “definitive checklist or test” for this determination, and the “inquiry envisioned by Rule 702 is . . .  
7 a flexible one.” *Id.* at 593-94. The determination is made with the understanding that “[v]igorous  
8 cross-examination, presentation of contrary evidence, and careful instruction on the burden of  
9 proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Id.* at  
10 596.

11 The Court’s “gatekeeping” duty for admissibility under *Daubert* “applies not only to  
12 testimony based on ‘scientific’ knowledge, but also to testimony based on ‘technical’ and ‘other  
13 specialized’ knowledge.” *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 141 (1999). “[T]he  
14 test of reliability is ‘flexible,’ and *Daubert*’s list of specific factors neither necessarily nor  
15 exclusively applies to all experts or in every case.” *Id.* The Court has “considerable leeway in  
16 deciding in a particular case how to go about determining whether particular expert testimony is  
17 reliable.” *Id.* at 152.

18 Our circuit has identified “several non-exclusive factors that judges can consider when  
19 determining whether to admit expert testimony under Rule 702,” such as “whether the theory or  
20 technique employed by the expert is generally accepted in the scientific community; whether it’s  
21 been subjected to peer review and publication; whether it can be and has been tested; and whether  
22 the known or potential rate of error is acceptable.” *Wendell v. GlaxoSmithKline LLC*, 858 F.3d  
23 1227, 1232 (9th Cir. 2017) (quotations and citations omitted). The Court may “also consider  
24 whether experts are testifying ‘about matters growing naturally’ out of their own independent  
25 research, or if ‘they have developed their opinions expressly for purposes of testifying.’” *Id.*  
26 These factors are “illustrative, and they are not all applicable in each case”; the *Daubert* inquiry is  
27 “flexible,” and “Rule 702 should be applied with a ‘liberal thrust’ favoring admission.” *Id.*  
28 (quotations and citations omitted).

1     **II.     THE EXPERTS’ DISAGREEMENTS**

2             **A.     The Fisher Price Index**

3             Before getting to the experts’ disagreements, a word about Dr. Marx is in order.  
4     Defendants did not challenge Dr. Marx’s qualifications, and for good reason. She holds a B.S. in  
5     mathematics from Duke University and a Ph.D. in economics from Northwestern University.  
6     Marx Report ¶ 1. Since 2002, she has been a Professor of Economics at the Fuqua School of  
7     Business at Duke University, and she is also a partner at Bates White Economic Consulting, a  
8     professional services firm. *Id.* ¶¶ 1-2. Among other relevant experience, she was the Chief  
9     Economist for the Federal Communications Commission from 2005 to 2006, and has co-taught  
10    sessions on “Cartels” and “Agreement and Facilitation Practices” at the Antitrust Law &  
11    Economics Institute for Judges, which was co-sponsored by the ABA Section of Antitrust Law  
12    and the Law & Economics Center at George Mason University School of Law. *Id.* ¶¶ 2, 4.  
13    Dr. Marx has also taught “Advanced Merger Economics,” “Cartel Investigations,” “Proving  
14    Collusive Agreements,” and “Pleading and Proving Conspiracy” at the ABA Antitrust Section  
15    Masters Course. *Id.* ¶ 4. She is well qualified to provide expert opinions in the field of antitrust  
16    economics.

17             The main disagreement at the hot tub was about Dr. Marx’s use of a chained Fisher price  
18    index as the dependent variable in her regression analysis. In defendants’ view, this was highly  
19    unorthodox, “not generally accepted in the professional economics community,” and not  
20    “subjected to peer review.” Dkt. No. 652 at 8. At the hot tub, Dr. Prowse said there is “no support  
21    for [using] a price index as a dependent variable in [a] regression designed to calculate  
22    overcharges in the economics literature.” Dkt. No. 1382 at 20:7-9. He opined that the only  
23    “accepted method for constructing the dependent variable when there may be thousands of  
24    transactions for heterogenous products in each month, which it the case here,” is “to use panel  
25    data.” *Id.* at 23:17-21; *see also id.* at 25:22-24 (“panel data is overwhelmingly recommended for  
26    use by professional economists in the peer-reviewed economic literature to estimate overcharges  
27    in price-fixing matters.”).

28

1           The *Daubert* factors in play here are “whether the theory or technique employed by the  
2 expert is generally accepted in the scientific community,” and “whether it’s been subjected to peer  
3 review and publication.” *Wendell*, 858 F.3d at 1232. Additional relevant caveats are that “general  
4 acceptance” is not an “absolute prerequisite to admissibility,” and “peer review and publication”  
5 are also not “dispositive” considerations. *Daubert*, 509 U.S. at 588, 593-94.

6           Defendants have not demonstrated that Dr. Marx’s use of the Fisher price index as a  
7 dependent variable is so far beyond the pale as to warrant exclusion. As Dr. Marx stated at the hot  
8 tub, the “time series approach,” which includes using a price index as the dependent variable, is  
9 “put forward side-by-side with a panel regression approach in the ABA handbook.” Dkt.  
10 No. 1382 at 40:24-41:2; *see also* Dkt. No. 1389-4 (*Proving Antitrust Damages: Legal and*  
11 *Economic Issues*, 3rd ed. (Washington, DC: ABA Section of Antitrust Law, 2017)) at ECF p. 50  
12 (“Datasets can be composed of single observations over a period of time (a time series) or of a  
13 number of observations in [a] single time period (a cross section). In general, data sets consisting  
14 of both time series and cross-sectional observations are called cross-section time series data or  
15 panel data.”).

16           DAPs proffered other sources that validate Dr. Marx’s approach as within the range of  
17 accepted methodology in the field. *See, e.g.*, Dkt. No. 1389-3 (*Regression Estimates of Damages*  
18 *in Price-Fixing Cases*, Law and Contemporary Problems, Vol. 46; No. 4 (1983) by Finkelstein &  
19 Levenbach) at ECF pp. 22-25 (“The difficulty of constructing econometric models that satisfy  
20 theoretical requirements suggests that one might use more general methods that do not assume that  
21 the explanatory variables included in the equation have accounted for everything except random  
22 error. This point of view leads to various methods of time series analysis that have found  
23 widespread applications in recent years.”); “In the absence of a consensus, advocates of time series  
24 analysis argue that their methods should be preferred because of simplicity and directness.”); Dkt.  
25 No. 1389-9 (*A Practical Guide to Price Index and Hedonic Techniques (Practical Econometrics)*  
26 (2014) by Ana M. Aizcorbe) at ECF pp. 3-4 (potential application of price index and hedonic  
27 techniques includes determination of “how much prices deviated from this benchmark due to  
28 alleged anti-competitive practices”); Dkt. No. 1389-12 (*Estimating Overcharges in Antitrust*

1 *Cases Using a Reduced-Form Approach: Methods and Issues*, Journal of Applied Economics, by  
2 James Neiderberg) at ECF p. 17 (“time-series data frequently are used in econometric analyses  
3 related to antitrust issues”); Dkt. No. 1389-14 (*Quantifying Antitrust Damages: Towards Non-*  
4 *Binding Guidance for Courts (Study Prepared for the European Commission)*) at ECF p. 7  
5 (“comparator-based approaches” include “time-series comparisons (analyzing prices before,  
6 during, and/or after an infringement”).

7 DAPs also established that defendants’ own experts have used a time series approach, and  
8 in some cases, the Fisher price index itself, or have spoken of these approaches as being  
9 acceptable choices. *See, e.g.*, Dkt. No. 1387-8 (Expert Report of Dr. Darrell Williams) at ECF  
10 pp. 6-12 (multiple graphs using Fisher price index); Dkt. No. 1387-10 (Deposition Transcript of  
11 Dr. Warren-Boulton) at ECF pp. 5-6 (“There are multiple indexes that you can form. Each one  
12 has particular advantages and disadvantages. The two most common are the Fisher linked price  
13 index and what’s called the hedonic price index. Both are used routinely by the government for  
14 things like the Consumer Price Index. Some in -- in antitrust cases people will use the Fisher  
15 index. Sometimes they’ll use a hedonic.”; “I don’t have a strong opinion as to which one is  
16 better.”).

17 It may be that Dr. Prowse personally favors a panel data approach to a time series in his  
18 own work, *see* Dkt. No. 1382 at 23:21, but that does not detract from the validity of Dr. Marx’s  
19 method. There is more than one way to peel an onion, and the use of a different method is not  
20 automatically “junk science” or a “bogus” approach that warrants total exclusion. *Wendell*, 858  
21 F.3d at 1235-37. Based on the discussion at the hot tub and the parties’ briefing, the Court  
22 concludes that Dr. Marx’s analysis is sufficiently reliable and valid to be admissible under Rule  
23 702 and *Daubert*. Defendants will have ample opportunity at trial to test it through vigorous  
24 cross-examination, the presentation of counter-evidence, and instruction on the burden of proof.  
25 *See Daubert*, 509 U.S. at 596.

26 **B. The January Start Date**

27 The disagreement over Dr. Marx’s use of January as starting point for the annual cartel  
28 indicator variable in her regression analysis also is not a ground for disqualification of her

1 opinions. That is because Dr. Haider and Dr. Prowse ultimately pinned the starting month dispute  
2 to the price index method. When the Court asked, “what is the core problem in [Dr. Marx’s]  
3 methodology, in your view, that leads to this sensitivity for starting months,” Dr. Haider referred  
4 to the use of “time series econometrics.” Dkt. No. 1382 at 52:7-21; *see also id.* at 54:3-9 (“So it is  
5 -- just to sum up. She compresses it down to a single price line. And she said herself she chose a  
6 time series methodology because she thinks that’s the best way to go. Once she chose to go down  
7 that route and once she went down that route, there are certain statistical properties that the line  
8 may have.”). Dr. Prowse also identified “construction of Dr. Marx’s invalid Fisher price index on  
9 the left-hand side” as the main “core problem . . . generating this instability in Dr. Marx’s results  
10 month to month.” *Id.* at 69:16-21. Dr. Prowse added that, “if you take Dr. Marx’s model and all  
11 you do is change the dependent variable to be a panel data variable and use fixed effects, the  
12 instability that you see in the -- depending on which month you start, basically goes away.” *Id.* at  
13 69:25-70:2. In effect, the starting month dispute is a reprise of the disagreement over the use of  
14 the price index, and the Court declines to exclude Dr. Marx’s opinions for the same reasons.

15 Dr. Haider and Dr. Prowse also opined that the starting month instability in Dr. Marx’s  
16 analysis was a function of her decision to use a lagged dependent variable. Dkt. No. 1382  
17 at 52:22-24; 69:21-22. In response, Dr. Marx established that this was consistent with the  
18 accepted literature, *id.* at 56:22-57:16, and that her model stood up when she removed this  
19 variable. *Id.* at 58:17-61:11. The experts’ discussion at the hot tub indicated that this issue was  
20 more a dispute about weight, and consequently appropriate for cross-examination at trial, than of  
21 admissibility. *See In re Capacitors Antitrust Litigation (No. III)*, No. 17-md-02801-JD, 2018 WL  
22 5980139, at \*6 (N.D. Cal. Nov. 14, 2018) (observations about whether expert properly included  
23 all variables in regression analysis is “grist for a good cross-examination at trial, but they do not  
24 play a material role in deciding whether [expert’s] work should be admitted under Rule 702”).  
25 Defendants have not shown that Dr. Marx’s inclusion of a lagged dependent variable is akin to  
26 anything like junk science.

27 So too for defendants’ passing suggestion in a brief that Dr. Marx’s model “imposes an  
28 artificial pattern on the monthly overcharges of each year,” such that “for any given year, the



1 monthly overcharges will either always increase month to month, or always decrease month to  
2 month.” Dkt. No. 652 at 10-11. The experts did not identify this in their joint statement of  
3 disputed issues, and it was not discussed or even mentioned during the concurrent expert  
4 proceeding. Defendants did not develop the point otherwise in any way. It is not a basis for  
5 excluding Dr. Marx.

6 **III. OTHER PROPOSED TESTIMONY**

7 Defendants ask that any testimony by Dr. Marx based on Section III of her report be  
8 excluded “because her AVX/KEMET testimony is unsupported by the evidence and her remaining  
9 testimony is outside the scope of her expertise and adds nothing to the record.” Dkt. No. 652 at  
10 11-14. The parties agreed that this was a purely legal issue that should not be a part of the expert  
11 hot tub. Dkt. No. 1317 at 2.

12 In Section III, Dr. Marx states that she “review[s] the information available concerning the  
13 existence and operation of the capacitors cartel. This review serves two purposes. First, it  
14 supports the reasonableness of the assumption given to me by counsel that there was a cartel  
15 among capacitor manufacturers. Second, it supports the conclusion that the cartel was effective in  
16 elevating prices above what they otherwise would have been.” Marx Report ¶ 44. Dr. Marx also  
17 noted in a “scope of charge” section that “[c]ounsel instructed me to assume the existence of a  
18 capacitors conspiracy and to assume that the participants in the conspiracy included” certain  
19 defendants and other non-parties. *Id.* ¶ 9.

20 As a general proposition, the Court is not troubled by Dr. Marx’s summary of the  
21 background facts provided by counsel as the context of her econometric analysis. Her mention of  
22 strictly legal matters is a different matter. In a “summary of opinions,” Dr. Marx states: “The  
23 record in this matter, including guilty pleas, findings of government competition agencies  
24 worldwide, and contemporaneous documents, indicates that the Cartel Participants held hundreds  
25 of meetings and engaged in bi-lateral and multi-lateral communications over a period extending  
26 from at least as early as 1997 through early 2014. In these meetings and communications, the  
27 Cartel Participants exchanged competitively sensitive information and made statements regarding  
28 the legal risks of their conduct. Economically rational actors would not engage in such conduct

1 without deriving benefits from it. Indeed, my review of the record indicates that the cartel  
2 included the collusive structures -- pricing, allocation, and monitoring and enforcement structures  
3 -- known in the literature to facilitate effective collusion. This supports the conclusion that the  
4 cartel was effective in elevating prices above what they otherwise would have been.” Marx  
5 Report ¶ 15.

6 These comments are well outside Dr. Marx’s domain of antitrust economics. She will not  
7 be permitted to offer opinions along these lines at trial. Specifically, Dr. Marx may not testify  
8 about collusion, violations of antitrust law, or anticompetitive actions allegedly undertaken by  
9 defendants and non-parties in these cases. Those opinions are excluded under Rule 702, and  
10 because they would confuse and mislead the jury. FRE 402, 403.

11 **IT IS SO ORDERED.**

12 Dated: November 18, 2021



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JAMES DONATO  
United States District Judge

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