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Proving Damages for Lost Profits: The Before-and-After Method

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The before-and-after method is probably the most reliable method for proving lost profits as damages. Courts in nearly every jurisdiction have endorsed its use.¹ To make a before-and-after calculation, the analyst chooses a financial parameter such as net income, sales,² or gross margin.³ The analyst compares the parameter during two periods, one in which the parameter is impacted by the conduct complained of and one in which it is not. The period in which the parameter is impacted is often referred to as the “loss period” or the “damages period,” and the one in which the parameter is not affected is called the “benchmark period” or “the base period.”⁴ If there are any factors other than the defendant’s conduct that may have caused the difference between the two periods, the analyst makes appropriate adjustments. After the

¹ *Bigelow v. RKO Radio Pictures, Inc.*, 327 U.S. 251, 260, 66 S.Ct. 574, 90 L.Ed. 652 (1946) (applying the method in federal antitrust litigation); *In re Aluminum Phosphide Antitrust Litigation*, 893 F. Supp. 1497, 1500 (D. Kan. 1995) (“All parties agree that the ‘before and after’ model is well accepted within the field of economics”); *Kay Petroleum Corp. v. Piergrossi*, 79 A.2d 829, 832 (Conn. 1951); *Four Corners Ins. Co. v. Sun Publications of Fla., Inc.*, 5 So.3d 780, 783 (Fla. Dist. Ct. App. 2009); *Michigan Microtech, Inc. v. Federated Publications, Inc.*, 466 N.W.2d 717, 722 (Mich. Ct. App. 1991); *Mississippi Power & Light Co. v. Pitts*, 179 So. 362, 366 (Miss. 1938); *Sweirczynski v. Arnold Foods Co.*, 265 F. Supp. 2d 802, 811 (E.D. Mich. 2003) (applying New Jersey law); *AM/PM Franchise Assn. v. Atlantic Richfield Co.*, 584 A.2d 915, 922 (Pa. 1990); *Waggoner Motors, Inc. v. Waverly Church of Christ*, 159 S.W.3d 42, 59 (Tenn. Ct. App. 2004); *Southwest Battery Co. v. Owen*, 115 S.W.2d 1097, 1099 (Tex. 1938); *R.K. Chevrolet, Inc. v. Hayden*, 480 S.E.2d 477, 480 (Va. 1997).

² *Manpower, Inc. v. Insurance Co. of Pennsylvania*, Case No. 08C0085, 2011 BL 96090 (E.D. Wis. Apr. 11, 2011).

³ *B-K Cypress Log Homes, Inc. v. Auto-Owners Ins. Co.*, 2012 WL 1933766 at * 3 (N.D. Fla. May 25, 2012). Other parameters used include profit margin *B-K Cypress Log Homes, Inc. v. Auto-Owners Ins. Co.*, No. 1:09-cv-211 GRL, 2012 WL 1933766 (N.D. Fla. May 25, 2012), product prices (*In re Aluminum Phosphide Antitrust Litigation*, 893 F. Supp. 1497, 1500 (D. Kan. 1995)), labor costs (*El Fredo Pizza, Inc. v. Roto-Flex Oven Co.*, 261 N.W.2d 358, 364-66 (Neb. 1971)), average receipts less film rentals (*Bigelow v. RKO Radio Pictures, Inc.*, 327 U.S. 251, 260, 66 S.Ct. 574, 90 L.Ed. 652 (1946)).

⁴ Ideally, the analyst will use three periods rather than two. There will be a benchmark period prior to the loss period when the injured party is unaffected by the defendant’s actions, then a loss period when the injured party is affected by the defendant’s actions, and finally a second benchmark period when defendant’s actions no longer affect the plaintiff. This enables the analyst to interpolate, which is inherently more accurate than the extrapolating that must be done when there is only a single base period.

As the cases discussed below demonstrate, the data required for the two-benchmark-period model is seldom available. Nevertheless, when it is available, good practice requires its use. *See In re Aluminum Phosphide Antitrust Litigation*, 893 F. Supp. 1497, 1502 (D. Kan. 1995)

adjustments are made, difference in the parameter between the two periods is the loss suffered by the claimant.⁵

In *Bigelow v. RKO Radio Pictures, Inc.*,⁶ one of the classic and most-cited lost profits cases, the United States Supreme Court endorsed a simple application of the before-and-after method. The plaintiffs ran a movie theater. They claimed they had been damaged by a conspiracy that denied them access to the most current movies. By comparing their average receipts (less film rentals) for a five-year period beginning in July 1937 with their average receipts (also less film rentals) for the preceding four years, the plaintiffs were able to show they had lost \$125,000. Rejecting challenges to this damages calculation, the Supreme Court upheld an award of \$120,000.

Another court used the before-and-after method this way:

Thus, if prior to the [defendant's] manufacture of the defective gasoline the plaintiffs sold 100,000 gallons per month every month and then as a result of the manufacture of the defective gasoline they sold 60,000 gallons per month every month until [the defendant] ceased the manufacture of that gasoline, then the plaintiffs have lost the profits they would have received on 40,000 gallons per month for the three-year claimed period.⁷

Because the before-and-after method relies on verifiable data rather than projections and because this data comes from the claimant's own business, some courts have said that it is the most reliable method of calculating lost profits.⁸ In another of the classic lost profits cases, *Herman Schwabe, Inc. v. United Shoe Machinery Corp.*,⁹ Judge Friendly criticized the plaintiff for relying exclusively on another method when a before-and-after analysis could have been done.

Although the before-and-after method is arguably the most straightforward method of proving lost profits, it does require the expert to make judgments. If those judgments are not made in accordance with the accepted standards in the expert's profession and explained well, the expert's testimony may be excluded. While there are many published opinions in which a court allowed a plaintiff using the before-and-after method to recover even though they

⁵ This does not necessarily mean it is the damages the plaintiff is entitled to recover, however. For example, if the parameter measured is revenue, variable costs must be deducted from the lost revenue before the plaintiff's damages can be calculated.

⁶ 327 U.S. 251, 66 S.Ct. 574, 90 L.Ed. 652 (1946).

⁷ *AM/PM Franchise Assn. v. Atlantic Richfield Co.*, 584 A.2d 915, 922 (Pa. 1990).

⁸ *Waggoner Motors, Inc. v. Waverly Church of Christ*, 159 S.W.3d 42, 59 (Tenn. Ct. App. 2004). ("The best evidence of lost profits is a comparison of the injured party's own business before and after the wrongdoing."); Charles J. Faruki, *The Defense of Terminated Dealer Litigation: A Survey of Legal and Strategic Considerations*, 46 OHIO ST. L.J. 925, 991-92 (1985) (noting that the leading case (*C.A. May Marine Supply v. Brunswick Corp.*, 649 F. 2d 1049, 1053-54) expressed a preference for this method).

See also *Ingram Barge Co. v. Century Aluminum of W. Va., Inc.*, No. 3:10-cv-00110, 2012 BL 194032 (M.D. Tenn. Aug. 1, 2012) at * 12 (quoting *Waggoner Motors, supra*).

⁹ 297 F.2d 906, 910 (2d Cir. 1960).

presented minimal evidence, these tend to be older cases,¹⁰ or cases involving relatively small amounts of money.¹¹ As can be seen from sections 2-4 below, most (but by no means all) modern courts require careful analyses, fully explained in the expert's report. Courts will be especially demanding if a substantial amount of money is involved.

§ 1 Choosing the Proper Benchmark Period

To write a bulletproof report, the expert needs to choose the benchmark period very carefully. The standard is that the benchmark period should be a "reliable indicator" of what the plaintiff's performance would have been during the damages period if it had not been for the conduct complained of.¹²

In some situations, the proper benchmark period will seem obvious, for instance when the plaintiff was in business for a short time and then was put out of business. But even in such seemingly-straightforward cases, the expert should consider whether some part of the period was more representative of the plaintiff's prospects than was the entire period of operation. Whichever choice the expert makes, he or she needs to be able to defend it. If the expert chooses only part of the period of operation for their benchmark, they may be accused of cherry-picking the benchmark period.¹³ On the other hand, if they choose the entire period of operation when a shorter period would be more advantageous to the party that hired them, they may be doing that party a disservice.

Where there is a long period in which the defendant's actions did not affect the plaintiff's business, the same considerations apply, but the choice of the benchmark period is even more complex. In many businesses, potential measures of loss (revenues, profits, rates of growth, and the like) fluctuate considerably from quarter to quarter and year to year. Under these circumstances, a court will look carefully at the benchmark period to make sure it was chosen to be representative, rather than being chosen to make the numbers come out the way one party wanted.

[a] Length of the Benchmark Period

All other things being equal, the longer the benchmark period, the more reliable it is as an indicator of the way the plaintiff's business would have performed but for the defendant's conduct. This is particularly true when growth in the plaintiff's business is being factored into the calculation. As discussed in more detail in section 3, below, it is common for businesses to

¹⁰ See, e.g., *Poleski v. Polish-American Publishing Co.*, 235 N.W. 841, 842 (Mich. 1931) (plaintiff allowed to testify as to volume of business he did in the six months preceding libel and the six months following it).

¹¹ *Warren v. Derivaux*, 996 So.2d 729 (Miss. 2008). Two businessmen owned adjoining properties with a reciprocal easement for parking and to allow the plaintiff to erect a sign on the defendant's property. The defendant removed the plaintiff's sign and prevented the plaintiff's customers from parking. The Mississippi Supreme Court held that the plaintiff had sufficiently proven his lost profits when he showed the amount by which his gross and net income had declined in the period in which it was affected by the defendant's conduct. The lost profits damages awarded were \$14,580.

¹² IIA PHILLIP E. AREEDA, ET AL., *ANTITRUST LAW* ¶ 392E (3d ed. 2007).

¹³ See *infra* §1[b].

have short spurts of high growth rates, but uncommon for them to maintain these rates over long periods.

Sometimes, however, there is no choice but to use a short interval as the benchmark period. In a case in which the defendant's unfair competition began approximately 8 months after the plaintiff began to sell its product, one witness used a six-month benchmark period to calculate lost profits and a second used a one-year benchmark period. The Eleventh Circuit held that these were sufficient to satisfy the reasonable certainty requirement.¹⁴ Similarly, the Fifth Circuit held that a five-month benchmark period was sufficient to calculate losses over a damage period that lasted fifty months,¹⁵ and a California Court of Appeals allowed a three month-benchmark period to be used to measure damages over the life of a three-year contract.¹⁶ It should be noted, however, that in all of these cases there was no choice but to use these short benchmark periods. In each case, the plaintiff was a new business that had been nipped in the bud by the defendant's conduct. In each, the benchmark period began when the plaintiff's business got fully up and running and ended when the defendant's action began to have an effect on that business. These opinions cannot support the use of such a short benchmark period when the plaintiff's business has been in operation for a longer time.

Sometimes there will be no reliable benchmark period. This most often occurs when the plaintiff's business was not in operation long enough to establish a track record, but there may be other reasons as well. In these cases, the before-and-after method will not be appropriate and the analyst will need to choose another method to calculate the damages.¹⁷

[b] Cherry-Picking the Benchmark Period

Courts have given experts a fair amount of leeway in their choices of benchmark periods. Generally, when courts have rejected expert testimony on the grounds that the expert chose the wrong benchmark period, the court rejected the testimony not because it believed the expert had made an error in judgment, but because it believed the expert had chosen the benchmark period with an eye to enhancing damages. Here are some examples:

In a complex business case, the court rejected a before-and-after model where the plaintiff had two separate business lines it claimed had been damaged.¹⁸ To construct its damage model, the plaintiff's experts chose 1973 as the benchmark period for one line and 1974 as the

¹⁴ *Manufacturing Research Corp. v. Greenlee Tool Co.*, 693 F.2d 1037, 1042 (11th Cir. 1982).

¹⁵ *Heattransfer Corp. v. Volkswagenwerk, A.G.*, 553 F.2d 964, 983 (5th Cir. 1977) *cert denied* 434 U.S. 1087 (1978).

¹⁵ *See also Kay Petroleum Corp. v. Piergrossi*, 79 A.2d 829, 832 (Conn. 1951) (one year benchmark period used when loss period was 45 months).

¹⁶ *Shade Foods, Inc. v. Innovative Products Sales & Marketing, Inc.*, 93 Cal. Rptr. 2d 364, 393-94 (Cal. Ct. App. 2000).

¹⁷ *Coastal Fuels of Puerto Rico, Inc. v. Caribbean Petroleum Corp.*, 79 F.3d 182, 200 (1st Cir. 1996) ("We conclude that whether a yardstick record must be used [instead of a before-and-after] ultimately requires an appraisal of the reliability of a firm's track record, and the length of that track record is one factor to consider.").

¹⁸ *R.S.E., Inc. v. Pennsy Supply, Inc.*, 523 F. Supp. 954, 968 (M.D. Pa. 1981).

benchmark period for the other. In rejecting the model, the court noted that although each of the lines had been very profitable in the year chosen as its benchmark period, the business as a whole had lost money over the two-year period.

In a trademark infringement case, the court rejected the plaintiff's damages calculation, saying that its choice of a benchmark period was "suspect."¹⁹ The court said: "This period, not by happenstance, coincides with a period of rapidly increasing sales."²⁰ The court went on to point out that in the years prior to "this carefully bracketed period," the plaintiff had suffered "a severe diminution" in sales.²¹ The choice of benchmark periods was made even more suspect by the fact that the benchmark period was not contiguous with the loss period and the plaintiff used one benchmark period to compute lost sales and another to compute lost profits.

In a tort case, the Tennessee Court of Appeals held that the trial court had erred in basing its damages award on the testimony of the plaintiff's damages expert. Among the flaws the court found in this expert's testimony was that he used as his benchmark period the three calendar years immediately preceding the tort, rather than the 36 months preceding it. This, the court said, understated the downward trend in the plaintiff's overall performance during the 18 months preceding the tort.²²

In an antitrust case,²³ the court excluded the testimony of the plaintiff's expert because, among other things, "his analysis yields no scientific basis for adopting one [benchmark] period as opposed to any other."²⁴

Not all attacks on the choice of a benchmark period are successful, of course. In yet another antitrust case, the plaintiffs originally alleged that an antitrust conspiracy existed from 1999 through 2004.²⁵ When their expert's regression model showed more consistency if 2004 was treated as part of the benchmark period rather than as part of the loss period, the plaintiffs amended their pleadings to exclude 2004 from the loss period. The court rejected a challenge to the expert on the basis that he had chosen the benchmark period to enhance damages and make his model more consistent. The court noted that there were other facts that had come to light during discovery that justified the conclusion that the conspiracy had not affected prices during 2004.²⁶

In another complex business case, the plaintiff's expert chose a four-year period as his benchmark period. The defendant argued that the benchmark period should include the two

¹⁹ *Lindy Pen Co. v. Bic Pen Corp.*, 14 U.S.P.Q. 2d 1528, 1532 (N.D. Cal. 1989).

²⁰ *Id.*

²¹ *Id.*

²² *Waggoner Motors, Inc. v. Waverly Church of Christ*, 159 S.W.3d 42, 59-63 (Tenn. Ct. App. 2004).

²³ *In re Aluminum Phosphide Antitrust Litigation*, 893 F. Supp. 1497, 1501-03 (D. Kan. 1995).

²⁴ *Id.* at 1503.

²⁵ *In re Urethane Antitrust Litigation*, MDL No. 1616, Case No. 04-1616-JWL, 2012 BL 339064 (D. Kan. Dec. 21, 2012) at *5.

²⁶ *Id.* at *5-*7.

preceding years, but the court rejected that contention, noting that the model would show an even greater loss if the benchmark period were extended back even further.²⁷

§ 2 Correcting for Confounding Factors

It will seldom be the case that the defendant's conduct was the only reason the plaintiff's results varied between the two periods being compared. The sales and revenues of most businesses will be affected by changes in the industry and by changes in economic conditions generally, as well as by technological changes, personnel changes, and a myriad of other factors. In statistics, such factors are known as *confounding factors* or *confounding variables*. When a relationship between an independent variable (such as the defendant's conduct) and a dependent variable (such as the plaintiff's profits) has been misestimated because a model failed to include a confounding factor, statisticians refer to the relationship as a *spurious relationship*.

Some opinions have required that a party presenting a before-and-after analysis identify potential confounding factors and show that they did not affect the business.²⁸ Other opinions have been willing to allow the plaintiff to introduce bare-bones evidence of the difference in outcomes between the two periods in question. These opinions put the burden on the defendant to identify the confounding factors.²⁹

A leading antitrust treatise takes the position that a damages model using the before-and-after method or the yardstick method *must* account for any likely confounding factors:

Employment of [before-and-after and yardstick] methodologies virtually always requires the use of an expert economist or statistician, and a competent model typically requires the use of a multiple regression analysis, which not only estimates the extent of the plaintiff's poorer performance during the damages period, but also controls for other factors that differentiate the "before and after" or "yardstick" markets. *It would be a rare case in which such factors were not present.*³⁰

On the other hand, the Federal Judicial Center's *Reference Manual on Scientific Evidence* contains an example that strongly implies the plaintiff's model need not account for these factors and that it is up to the defendant not only to identify confounding factors, but also to prove their effect:

Example:

²⁷ *Cambridge Plating Co. v. NAPCO, Inc.*, 876 F. Supp. 326, 340 (D. Mass. 1995), *vacated on other grounds*, 85 F.3d 752 (1st Cir. 1996).

²⁸ See cases discussed in § 2[a], below.

²⁹ See cases discussed in § 2[b], below.

³⁰ IIA PHILLIP E. AREEDA, ET AL., *ANTITRUST LAW* ¶ 340 (3d ed. 2007) (emphasis supplied; footnote omitted).

The same treatise states a similar proposition at another point: "[T]he . . . performance of the plaintiff [during the damage period] can be caused by its own failings (i.e., managerial mishaps), the lawful behavior of the defendant, and changed market conditions. The plaintiff must control for these other causal factors in its damage calculations." *Id.* at ¶ 392e.

Real Estate Agent is wrongfully denied affiliation with Broker. Agent's damages study projects past earnings into the future at the rate of growth of the previous 3 years. Broker's study projects that earnings would have declined even without the breach because the real estate market has turned downward.

Comment:

The difference between a damages study based on extrapolation from the past, here used by Agent, and a study based on actual data after the harmful act, here used by Broker, is one of the most common sources of disagreement in damages. This is a factual dispute that hinges on the *broker* demonstrating that there is a relationship between real estate market conditions and the earnings of agents.³¹

This example and comment, which are neither explained nor supported by citation to any authority, would seem to imply (with respect to agent's damages model, at least) that a damages model may ignore obvious potential confounding factors and that the party propounding the model need only address those factors after the other party affirmatively proves those factors have an effect. While there is some case law to that effect,³² the overwhelming weight of the case law is to the contrary.³³ In many jurisdictions, a model that failed to account for market conditions would fail a Daubert challenge because the expert failed to use the same standards they used in their non-litigation practice.³⁴ Certainly a competent business valuation professional would take market conditions into account when valuing a real estate business.³⁵

[a] Opinions requiring the party using the before-and-after method to correct for potential confounding factors

The following are representative opinions holding that a before-and-after method must take into account potential confounding factors:

Isaksen v. Vermont Castings, Inc. 825 F.2d 1158 (7th Cir. 1987)

Judge Posner dismissed a before-and-after analysis that failed to account for factors other than the defendant's conduct:

Although [the plaintiff] may well have suffered losses during the period of [the defendant's] unlawful activity, he made no effort to establish how much of the loss was due to that activity as distinct from unrelated business factors. . . . All [the plaintiff] did to prove damages was to compare his average profits for several

³¹ Mark A. Allen, et al., *Reference Guide on Estimation of Economic Damages*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE, 425, 438 (Federal Judicial Center, ed. 3d ed. 2011).

³² See §2[b], below.

³³ See §2[a], below.

³⁴ In *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999), the Supreme Court stated that the objective of Daubert's gatekeeping requirement was "to make certain that an expert . . . employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field."

³⁵ See, e.g., SHANNON P. PRATT, VALUING A BUSINESS, CH. 3 (5th ed. 2008).

years before and several years during the period of unlawful activity. *Post hoc ergo prompther hoc* is not a valid methodology of damages calculation, especially when it is apparent that other causal factors are at work.³⁶

It should be noted that in this case Judge Posner may have been influenced by considerations that are not present in most cases. One is that the record apparently reflected the presence of obvious confounding factors. In a sentence omitted from the above quote, Posner points out that the market for the product (woodstoves) had become saturated and that a decline in oil prices had made woodstoves less attractive. Also, unlike the situation in many other antitrust cases, where the court openly acknowledges that it is bending over backwards to give the plaintiff the benefit of the doubt on damages issues,³⁷ Posner saw no reason to give this particular plaintiff a break. Early in the opinion, he states: “This is a rather sorry excuse for an antitrust case”³⁸ As I have explained elsewhere,³⁹ judges are more willing to find that damages have been proven with reasonable certainty when they feel the plaintiff has a strong case on liability, and especially when they feel the defendant’s conduct was morally wrong. Conversely, of course, when there is a weak case on liability, as the judge believed to be the case here, the plaintiff’s damages model is going to get extra scrutiny.

Schiller & Schmidt, Inc. v. Nordisco Corp., 969 F.2d 410 (7th Cir. 1992)

This is another Posner opinion. But in contrast to the previous case, where the court might not have been willing to give the plaintiff a break because its case on liability was so weak, in this case the defendant had committed an act that Posner described as “morally reprehensible.”⁴⁰ In spite of that, Posner turned his scorn on the plaintiff’s expert because his before-and-after analysis had attributed all of the losses to the defendant’s unlawful conduct when it should have been clear that another factor (the defendant’s lawful conduct) had played a big part in those losses:

For years we have been saying, without much visible effect, that people who want damages have to prove them, using methodologies that need not be intellectually sophisticated but must not insult the intelligence. *Post hoc ergo prompther hoc* will not do; nor the endowing of simplistic extrapolation and childish arithmetic with the appearance of authority by hiring a professor to mouth damages theories that make a joke of the concept of expert knowledge. The expert should have tried to separate the damages that resulted from the lawful entry of a powerful competitor—[the defendant]—from the damages that resulted from particular forms of misconduct committed by that competitor, of which the

³⁶ 825 F.2d at 1165.

³⁷ See, e.g., *Eastman Kodak Co. of N.Y. v. Southern Photo Materials Co.*, 273 U.S. 359, 379, 47 S. Ct. 400, 71 L.Ed. 684 (1927).

³⁸ *Id.* at 1611.

³⁹ See Robert M. Lloyd, *The Reasonable Certainty Requirement in Lost Profits Litigation: What It Really Means*, 12 TENN. J. BUS. L. 11, 39-48 (2010).

⁴⁰ 969 F.2d at 415.

theft of the mailing list, however morally reprehensible, was the slightest. No such effort was made.⁴¹

Coleman Motor Co. v. Chrysler Corp., 525 F.2d 1338 (3rd Cir. 1975)

The Third Circuit vacated a damages award and ordered a new trial where a before-and-after model failed to account for lawful competition, changes in the market, and the deteriorating character of neighborhood where the plaintiff's auto dealership was located.

Eastern Auto Distributors, Inc. v. Peugeot Motors of America, Inc., 795 F.2d 329 (4th Cir. 1986)

The Fourth Circuit upheld the exclusion of expert testimony where the expert, among other things, presented a before-and-after model that assumed the plaintiff's market share was the same during the loss period as it was during the benchmark period (which in this case came after the loss period). This assumption failed to account for several factors the court thought were important. These included the plaintiff having a more efficient sales force during the benchmark period and there having been a large increase in demand for the dealer's product during the benchmark period.

Blue Dane Simmental Corp. v. American Simmental Assn., 178 F.3d 1035 (8th Cir. 1999)

Upholding the district court's exclusion of expert testimony, the Eighth Circuit said:

Although [the expert] utilized a method of analysis typical within his field, that method is not typically used to make statements regarding causation without considering all independent variables that could affect the conclusion. We find no evidence in the record that other economists use before-and-after modeling to support conclusions of causes of market fluctuation.⁴²

Craftsmen Limousine, Inc. v. Ford Motor Company, 363 F.3d 761 (8th Cir. 2004)

The another Eighth Circuit panel vacated a damages award because trial court had failed to exclude the testimony of an expert who attributed all differences between the benchmark period and loss period to defendants' actions and failed to analyze whether increased competition or changed economic conditions had an effect.

Farley Transportation Co. v. Santa Fe Trail Transportation Co., 786 F.2d 1342 (9th Cir. 1985)

The Ninth Circuit reversed a jury verdict and remanded the case for a new trial on damages because the plaintiff's damages witnesses had failed to distinguish between losses caused by lawful competition and losses caused by unlawful competition.

In re Live Concert Antitrust Litigation, 863 F. Supp. 2d 966 (C.D. Cal. 2012)

⁴¹ *Id.* at 410.

⁴² 178 F.3d at 1040-41.

The court excluded the testimony of an economist who supported his before-and-after model with a regression analysis that accounted for no independent variables other than time. Relying on the United States Supreme Court's opinion in *Bazemore v. Friday*,⁴³ the court said that a model need not account for "all measurable variables," but it must, to be admissible, account for the "major factors."⁴⁴

First Savings Bank, F.S.B. v. U.S. Bankcorp, 117 F. Supp. 2d 1078, 1085 (D. Kan. 2000)

A United States District Court excluded an expert's testimony because he attributed all of the plaintiff's losses to the defendant's conduct in spite of six other identified factors, some of which the plaintiff's officers admitted had "negatively impacted" the plaintiff.

Penn Mart Supermarkets, Inc. v. New Castle Shopping, LLC, C.A. No. 20405-NC, 2005 BL 61522 (Del. Ch. Ct., Dec. 15, 2005)

A judge of the Delaware Chancery Court held that that a plaintiff had not met its burden of proving damages where it used a before-and-after method that failed to account for other potential causes of a dropoff in sales. The court characterized the analysis as "overly simplistic"⁴⁵ and awarded only nominal damages.

Internetshopsinc.com v. Six C Consulting, Inc., No. 1:09-CV-00698-JEC, 2011 BL 77369 (N.D. Ga. Mar. 24, 2011) at *4

The court granted the defendant a summary judgment because the plaintiff failed to produce evidence that raised a triable issue of fact. The affidavit of the plaintiff's president and CEO, which used the before-and-after method calculate damages, was insufficient because it did not consider other factors that might have contributed to the loss. The court said:

The . . . affidavit is not very helpful because [the affiant] offers no basis for determining whether any decline in sales was caused by [the defendant's] infringement, as opposed to some other or multiple other factors. Nor could she, as she readily admitted she is not an expert in the market factors that could cause such a decline. Rather, [the affiant] simply assumes that a decline in sales was caused by the defendant's activities because it coincided with them. [The affiant's] assumption is insufficient to withstand summary judgment.

In re Aluminum Phosphide Antitrust Litigation, 893 F. Supp. 1497 (D. Kan. 1995)

The court excluded part of the testimony of the plaintiffs' expert, supporting its decision with references to economics literature. The court said:

In applying the "before and after" model of damages, it is fundamentally necessary to explain the pattern of forces outside the [loss] period using factors that might have changed (*i.e.*, supply, demand, differences in competition) to

⁴³ 478 U.S. 385, 400, 106 S.Ct. 3000, 92 L.Ed.2d 315 (1986).

⁴⁴ 863 F. Supp. 2d at 978 (quoting *Bazemore*).

⁴⁵ 2005 BL 61522 at *16.

predict prices during the [loss] period. In this context, as in most economic problems, failure to keep “other things equal” is one of the known “pitfalls . . . in the path of the serious economist.” Samuelson, P. and Nordhaus, W.D., *Economics* (13th ed.) at p.7.⁴⁶

[The expert] claims that the “before and after” model “traditionally assumes” that “the conspiracy was the sole cause of the price difference between the [loss] period and the [base] period. This is not a scientifically valid assumption, and the economic literature on the “before and after” model conclusively refutes it. One of the basic principles of economics, as applied to the before and after model, is that changes in supply, demand, and competition affect prices, and one cannot properly assume that the sole cause of any price difference between the [loss] period and the [benchmark] period is the conspiracy itself. All of the literature on the “before and after” model . . . includes the essential elements of modeling how changes in supply, demand, and competition affect prices—so that an estimated non-conspiracy price can be predicted for the [loss period].⁴⁷

Stein v. Pacific Bell, No. C-00-2915 SI, 2007 BL 88768 (N.D. Cal. Mar. 19, 2007)

Holding that the plaintiff’s before-and-after model was so flawed that it did not raise a triable issue of fact, the court said: “Courts have consistently rejected ‘before-and-after’ models when experts failed to perform regression analysis or otherwise account for variables in the marketplace.”⁴⁸

Bracco Diagnostics v. Amersham Health, Inc., 627 F. Supp. 2d 384 (D.N.J. 2009)

The court excluded expert testimony that failed to distinguish between losses caused by tortious conduct and losses caused by non-tortious conduct.

Kahn v. State Oil Co., 907 F. Supp. 1201 (N.D. Ill. 1995)

An expert used as the benchmark period the time that a gas station was operated by a court appointed receiver, and the court rejected his before-and-after analysis because, among other things, the expert did not show that the receiver operated the station in the same manner as the plaintiff had operated it during the loss period.

HipSaver, Inc. v. Kiel, 984 N.E.2d 755 (Mass. 2013)

A manufacturer of hip protectors, a device intended to reduce the probability of hip fractures in the elderly, sued a Harvard Medical School professor who had published an article claiming that similar devices were ineffective. The trial court granted summary for the

⁴⁶ 893 F. Supp. at 1503.

⁴⁷ *Id.* at 1504.

⁴⁸ 2007 BL 88768 at *12.

defendant, and the Supreme Judicial Court of Massachusetts upheld the trial court decision. The plaintiff's experts had performed a before-and-after analysis purporting to show that the publication of the article had caused the plaintiff to lose \$578,830 during the period 2007 to 2009 and would cause the plaintiff to lose an additional \$3,716,625 from 2010 through 2014. The court held that the report was insufficient even to survive a summary judgment because

there is no opinion from these experts that such alleged lost profits are a direct and immediate result of the publication of the article, rather than any number of other factors that could have negatively affected the sales of HipSaver's product. In fact, [HipSaver's CEO] testified that no expert ever advised HipSaver that, in the expert's opinion, the publication of the article caused an adverse impact on HipSaver's sales.⁴⁹

It should be noted that the *HipSaver* opinion discussed at length the higher standard of proof required in commercial disparagement cases. The court said: "Typically, to establish special damages in a commercial disparagement action, a plaintiff must show, where feasible, a specific loss of sales to identifiable customers."⁵⁰

[b] Opinions Not Requiring the Model to Correct for Confounding Factors

R.K. Chevrolet, Inc. v. Hayden, 480 S.E.2d 477 (Va. 1997)

The Virginia Supreme Court held that the plaintiff had provided sufficient proof of the damages incurred when its used car manager resigned in breach of his contract. The plaintiff's CPA expert showed that during the loss period the dealership's used car department suffered a dramatic decline in profits while no similar declines were experienced by other dealerships, by other departments of the plaintiff dealership, or by the automotive industry in general.

MacNeil Automotive Products, Ltd, v. Cannon Automotive Ltd., Case No. 08 C 0139, 2012 BL 281070, 2012 WL 5306281 (N.D. Ill. Oct. 26, 2012)

A distributor of automobile floor mats claimed it had lost business because a manufacturer delivered it defective mats. Its expert calculated damages by comparing the plaintiff's sales before and after the problem with the defective mats. The opinion did not indicate he considered other possible causes of the reduction in sales, and documents filed in the case appear to confirm that he did not.⁵¹ The court held that this evidence afforded "a reasonable basis for the computation of damages" (the Illinois standard for proving damages with reasonable certainty) and therefore was sufficient to survive a motion for summary judgment.⁵²

B-K Cypress Log Homes, Inc. v. Auto-Owners Ins. Co., No. 1:09-cv-211 GRL, 2012 WL 1933766 (N.D. Fla. May 25, 2012)

⁴⁹ 984 N.E.2d at 774.

⁵⁰ *Id.* at 772.

⁵¹ See Defendant's Reply Memorandum in Support of Its Motion for Summary Judgment dated Aug. 24, 2012, 2012 WL 6040430 (pointing out that the expert's report attributed all of the plaintiff's losses to the actions of the defendant).

⁵² 2012 WL 5306281 at *10.

The plaintiff, B-K Cypress, manufactured and sold log homes. It was insured against product liability claims by the defendant, Auto-Owners. Auto-Owners allegedly failed to provide coverage when B-K Cypress was sued by dissatisfied customers. As a result, the principals of B-K Cypress were required to take time from their regular sales and management duties to investigate claims, negotiate settlements, participate in the defense of lawsuits, and the like. According to the expert's report, this drain on management time caused B-K Cypress's profit margin to drop from 26.1% to 22.6%, resulting in a loss of more than \$1.5 million. The expert's report assumed that the entire reduction in profit margin was attributable to the effect of the lawsuits. In response, the defendant argued that the expert's analysis was not of the type accepted by other experts in the field because it did not control for market conditions and other variables. In support of this it submitted the report of its own expert, a law professor with a Ph.D. in economics. This report said that the before-and-after method can reflect the damages caused by the defendant's actions "only if other possible causes are examined and eliminated."⁵³

The court rejected the defendant's Daubert challenge and admitted the testimony of the plaintiff's expert, saying the deficiencies pointed out by the defendant and its expert were matters for cross-examination.

Floorgraphics, Inc. v. News America Marketing In-Store Services, Inc., 546 F. Supp. 2d 155 (D.N.J. 2008)

The court rejected a motion to exclude the testimony of an expert who used the before-and-after method and for all practical purposes assumed that all of the differences between the benchmark period and the loss period were attributable to the acts of the defendant. Unlike most similar opinions, which simply ignore the arguments made by those courts that excluded such testimony, this court addressed them head on. It even quoted Judge Posner's statement about methodologies that insult the intelligence. The court then went on to say, however:

When challenging the admissibility of Plaintiff's expert testimony, a party must move beyond empty criticisms and demonstrate that a proposed alternative approach would yield different results. . . . The Court finds that Defendant, despite illustrating that [the expert] failed to take into account certain factors, has made no showing to quantify how those factors, such as "legal competition," mattered.⁵⁴

The court relied in part on the *Reference Manual on Scientific Evidence*, which, according to the court, "does not call for exclusion but rather for an adjustment if there is reliance on a standard methodology that omits a relevant factor."⁵⁵ The opinion also stated in connection with a challenge to another witness that the Third Circuit (in which that court was located) had a liberal policy with respect to the admission of expert testimony.⁵⁶

⁵³ 2012 WL 1933766 at *4.

⁵⁴ 546 F. Supp. 2d at 172.

⁵⁵ *Id.*

⁵⁶ *Id.* at 165.

What makes this opinion important is its statement that the defendant must make a “showing to quantify how those factors . . . mattered.” If taken at face value, it means the defendant must go beyond showing that plaintiff’s model ignores factors that must have contributed to the plaintiff’s reduced profits during the loss period; it means the defendant must prove (presumably to a reasonable certainty) the amount that they contributed. As authority for this proposition, the court cites *the plaintiff’s brief*. The plaintiff’s brief, however, does not provide any authority to support this proposition. It simply relies on the wrongdoer rule, which, as I have explained elsewhere, is simply an amorphous rule giving the court permission to apply a less rigorous standard of proof when it thinks justice would be served by doing so.⁵⁷

Nova Consulting Group, Inc. v. Engineering Consulting Services, Ltd., 290 Fed. Appx. 727 (5th Cir. 2008)

A Fifth Circuit panel shrugged off a defendant’s challenge to an expert who attributed all of the plaintiff’s losses to the defendant’s conduct, saying that “the claimed flaws potentially affecting [the plaintiff’s] expert’s reliability were presented by [the defendant] to the jury; and an expert’s calculation is not required to be exact.”⁵⁸

§ 3 Growth Rates

If the analyst assumes that but for the defendant’s conduct, the plaintiff’s profits during the subject period would have been the same as they were during the benchmark period, the analyst is in effect assuming that there is no growth in the plaintiff’s profits, not even growth attributable to inflation. For this reason, analysts will typically build into their models an assumption that the plaintiff’s profits are growing at a given rate. This rate will typically be the rate at which those profits grew during the benchmark period. But if the business was in the early stages of its development, this may not be a good assumption. Few businesses sustain high growth rates for very long.⁵⁹ As a highly-regarded business valuation treatise puts it: “Long-term growth rates exceeding the real growth in GDP plus inflation are generally not sustainable.”⁶⁰ Empirical data on growth rates of businesses can be found in the McKinsey & Co. book, *Valuation: Measuring and Managing the Valuation of Companies*.⁶¹

An expert who predicted a historical rate of growth in jewelry sales would continue but could not provide any support for the assumption other than his statement that that the

⁵⁷ See Robert M. Lloyd, *The Reasonable Certainty Requirement in Lost Profits Litigation: What It Really Means*, 12 TENN. J. BUS. L. 11, 39-48 (2010)

⁵⁸ 290 Fed. Appx. At 739 (internal quotations omitted).

⁵⁹ See MCKINSEY & CO, VALUATION: MEASURING AND MANAGING THE VALUE OF COMPANIES 153 (4th ed. 2005).

⁵⁹ The median real revenue growth rate for public companies between 1963 and 2003 was 6.3 percent. The nominal rate was 10.2%. *Id.*

“High growth rates decay very quickly. Companies growing faster than 20 percent (in real terms), typically grow at only 8 percent within five years and 5 percent within 10 years.” *Id.* at 154.

⁶⁰ SHANNON P. PRATT & ROGER J. GRABOWSKI, COST OF CAPITAL: EXAMPLES AND EXPLANATIONS 537 (3D ED. 2008)

⁶¹ MCKINSEY & CO, VALUATION: MEASURING AND MANAGING THE VALUE OF COMPANIES 153-58 (4TH ED. 2005).

assumption was “generally accepted” and that it was commonly used to predict the growth rates of “mom and pop,” restaurants had his testimony stricken because of his “unreliable methodology” and his reliance on insufficient data.⁶²

§ 4 Adequacy of the underlying data

Just as with any other method of calculating damages, the expert using the before-and-after method must not only make sure that the data they use is of the same quality as the data they would use in their non-litigation practice, but also make sure they can demonstrate that to the court.⁶³

§ 5 Use in Combination with Other Methods

The before-and-after method can be used in conjunction with other methods, and in fact it is more likely to be persuasive when it is used in conjunction with other methods. For example, in *Bigelow v. RKO Radio Pictures, Inc.*,⁶⁴ the Supreme Court was impressed by the fact that the damages computed by the before-and-after method correlated very closely with the damages calculated by the yardstick method.⁶⁵

One court even went so far as to imply that because there were many similar businesses that could be used as yardsticks, an expert’s before-and-after analysis was deficient because it was not supplemented with a yardstick analysis.⁶⁶

§ 6 A Cautionary Tale – The Before-and-After Method and Phantom Losses

In previous sections, I have discussed the need for damages models to account for potential confounding factors and to be scrupulous in their choice of benchmark periods, loss periods, parameters measured, and the like. This point was made very strongly by a study in which two economists, Jonathan Tomlin and David Merrell, demonstrate how a straightforward application of the before-and-after method can show losses even when there is no actionable conduct.⁶⁷

⁶² *R.F.M.A.S., Inc. v. So*, 748 F. Supp. 2d 244, 261, 268 (S.D.N.Y. 2010).

⁶³ In *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 119 S.Ct. 1167, 143 L.Ed. 2d 236 (1999), the Supreme Court stated that the objective of Daubert’s gatekeeping requirement was “to make certain that an expert . . . 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.

⁶⁴ 327 U.S. 251, 66 S.Ct. 574, 90 L.Ed. 652(1946).

⁶⁵ 307 U.S. at 260.

⁶⁶ *Kahn v. State Oil Co.*, 907 F. Supp. 1202, 1211 (N.D. Ill. 1995) (“The report turns entirely on the experience of one receiver who operated one gas station [the plaintiff’s] over a five-month period which occurred after the alleged antitrust violation. The court would expect an expert to also consider trustworthy data reflecting the experience of other, similarly situated stations in a demonstrably relevant market.”)

⁶⁷ Jonathan T. Tomlin and David R. Merrell, *The Accuracy and Manipulability of Lost Profits Damages Calculations: Should the Trier of Fact Be “Reasonably Certain?”* 7 TENN. J. BUS. L. 295 (2006).

Tomlin and Merrell began with annual (fiscal year) data from all publicly-traded companies for a ten-year period (1995-2004). After they eliminated firms that had experienced highly unusual fluctuations in revenue, their sample size ranged from 3,739 to 5,544 firms, depending on the date range and the model they employed.

In their most straightforward model, they assumed a lawsuit in which the damages period was the company's 2000 fiscal year. This was a year in which the subject companies could be expected to have performed decently. In calendar year 2000 (which for most of these companies coincided with its fiscal year) United States Gross Domestic Product grew by 5.47% before adjustment for inflation. The authors chose hypothetical benchmark periods and calculated the lost revenues that a simple before-and-after model would show for various choices of benchmark periods. This model assumed that but for the (nonexistent) defendant's wrongful act, the plaintiff's revenues in 2000 would have equaled the average of its annual revenues during the benchmark period. From a plaintiff's point of view, this would be a conservative model because it does not assume annual revenue growth. The authors calculated the hypothetical loss using as benchmark periods, the 2-year, 3-year, 4-year, and 5-year periods immediately preceding the damage period. Regardless of the benchmark period chosen, at least 16% of the sample firms showed the loss of 10% or more of their average revenues, and at least 8% showed the loss of more than 40% of their revenues.

When the benchmark period was changed to the years subsequent to the 2000 damage period, the hypothetical losses were even larger. Forty-six to fifty percent of the firms, depending on the benchmark period chosen, showed revenue losses greater than 10% of 2000 revenue, and 21-22 percent showed losses greater than 50%. When a linear trend model was used to incorporate a rate of growth during the benchmark period, the model showed even greater losses. And even when regression analysis was used without analysis of confounding factors, a quarter of the companies in the sample showed losses of more than 10% of 2000 revenues when the 1995-1999 benchmark was used and 10% of the companies showed losses of more than 50% of their projected revenues.

An article in the *Columbia Business Law Review* explains how a sophisticated statistical technique can be used to eliminate this problem.⁶⁸ Unfortunately, however, as the article notes, this technique is seldom, if ever, used in lost profits calculations.

⁶⁸ Dennis W. Carlton, *Using Economics to Improve Antitrust Policy*, 2004 COLUM. BUS. L. REV. 283, 304-06 (2004). The technique itself is explained at Jushan Bai & Pierre Perron, *Estimating and Time Testing Linear Models with Multiple Structural Changes*, 66 ECONOMETRICA 47 *1998.