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What It's Worth

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Evolving Issues in Proving Lost Profits in Commercial Litigation

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In business litigation, damages experts are often engaged to provide an opinion of economic damages arising from the actions or inactions of a defendant or asked by defense counsel to rebut the opinion of plaintiff's damages expert. The field is challenging and evolving.¹ Here are a few issues for the economic expert to consider, including a formal model of lost profits, special focus on measurement of expenses in lost profits analysis, how "time" as a factor impacts lost profits analysis, and special efforts the expert needs to make to reduce the chances of failing a *Daubert* challenge.² Final comments focus on assisting the commercial damages expert, not to offer pure opinion testimony and be prohibited from testifying due to a *Daubert* challenge, now used by federal courts and most state courts.

Specific Economic Factors That Account for Lost Profits

Profits are defined and measured as revenue (sales) less those costs and expenses incurred in generating those sales in the business. This is a very general expression, and the damages expert needs to carefully consider the facts of the case to know which factors affect the estimated lost profits. To an economist, revenue (R) can be expressed as price (P) times quantity (Q) sold. Costs (C) can be expressed as fixed costs (F) and variable costs (V). Variable costs vary directly with quantity (Q), whereas practitioners often assume fixed costs (F) are unaffected by small changes in quantity (Q) sold, which is equivalent to assuming no change in scale of production.

In addition, some situations involving a business interruption may involve the incurrence of extraordinary expenses, E.

(1) Profits (Π) = P * Q - V - F - E

It is important to note that profit can vary with a variation in P, Q, V, F, or E. However, often damages experts who assess lost profits damages due to business interruption tend to ignore price and cost considerations, mistakenly focusing only on lost sales quantity (Q) using the following expression:

(2) Lost profits = Lost revenue - avoidable variable costs (lost revenue is driven entirely by quantity change or lost unit sales)

¹ The formal part of this note is taken from a prior paper, Stephenson et al. (2012), available at litigationeconomics.com/PDF/Computing_Lost_ Profits_JBVELA_May_2012.pdf.

² It is assumed that the expert has already addressed essential factors such as causation, reasonable certainty, and foreseeability and that new business (or not) and need for plaintiff to mitigate losses have already been considered. See Dunitz and Farmer (2018).

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Equation (2) ignores fixed costs entirely, leading the expert to focus on various ways of computing lost revenue, analyzing variable costs, and using measures before and after the event causing the interruption. Yet, this is a specialized case of a more general model of lost profits in which changes in P, V, and F (or various combinations), not just Q, should be explicitly considered. The point is that key factors cannot always be expected to stay the same, i.e., unaffected by the harmful event.

As Foster and Trout noted, "Courts have generally agreed with economists on this proposition, and fixed costs (or overhead expenses in accounting terms) are nearly always ignored in measuring lost profits."³ While relatively straightforward, there are some underlying assumptions made when using this expression, viz., prices do not change, only quantity sold falls, overhead costs do not change, cost structures do not change, and no new costs are incurred because of the disruption. A goal of this article is to raise the following questions:

- 1. How best to systematically consider departures from lost profits damages measured only by a change in quantity sold?
- 2. What challenges are presented in lost profits analysis by *expense* changes?
- 3. What role does *time* play in measuring lost profit damages?

Expanding the Factor List Potentially Causing Lost Profits⁴

Replacing the lost profits model in equation (2) with a more generalized model of lost profits involves expanding each expression. We next provide a series of equations that describe profits before and after some harmful event.

³ Foster and Trout (1989).

⁴ See Stephenson et al. (2012), op cit.

Revenue but-for an "event" (for example, a breach of contract, tort, fraud, or other actions) is $R_{B.}$

(3) $R_B = P_B * Q_B$, where P_B is the price and Q_B is the quantity but-for the event.

Profits but-for the event is Π_B where:

(4) $\Pi_B = R_B - F_B - V_B$, where F_B are fixed costs before and V_B are variable costs (in the but-for world).

Actual revenue after the event is R_A.

- (5) $R_A = P_A * Q_A$, where P_A is the actual price, and Q_A is the actual quantity. Actual profits after the event is Π_A .
- (6) $\Pi_A = R_A F_A V_A$, where F_A are actual fixed costs and V_A are actual variable costs. Damages suffered because of the event are estimated as $\Pi_B - \Pi_A$. Substituting the expressions for but-for and actual profits from the equations above, we have:

(7) $\Pi_{B} - \Pi_{A} = (R_{B} - R_{A}) - (F_{B} - F_{A}) - (V_{B} - V_{A})$

The first term ($R_B - R_A$) in (7) shows damages suffered because of changes in revenue that can be due to price and/or quantity changes (such as *price erosion or lost sales*). The second term ($F_B - F_A$) refers to the change in *fixed costs* because of the event. These changes in fixed costs may include additional management, legal, and other expenses incurred due to the bad act—that is, $FA = F_B + E$, where E is extraordinary expenses. The last term ($V_B - V_A$) refers to a *change in variable costs* (due to the sales decline suffered due to the event).

Equation (7) is a general improvement that can help the practitioner focus on measuring lost profits. This equation can be expressed in profit margins (in terms of percentages). We have, respectively:

(8) $\Pi_{B} - \Pi_{A} = VM_{B} * R_{B} - VM_{A} * R_{A}$ where VM is the variable margin in terms of percentages, $VM_{B} = VM_{A} + \Delta VM$, and $R_{B} = R_{A} + \Delta R$.

Replacing VM_B and R_B , and including changes in fixed costs, we have:

(9) $\Pi_B - \Pi_A = R_A * \Delta VM + \Delta R * \Delta VM + \Delta R * VM_A$ + changes in fixed costs

That is, lost profits damages are due to changes in revenue and changes in the profit margin, which are additive after accounting for pricequantity interactions plus fixed costs changes.

Special Attention to Expenses in Lost Profits Damages

- a) Variable or fixed expenses. As noted in the discussion above, expenses directly made in the course of generating revenue such as costs of goods sold, sales commissions, or direct labor are costs not incurred if sales decline. These are called "variable expenses," and the damages expert takes into account the reduction in variable expenses from the decline in revenue to measure lost profits. Fixed expenses in a change model cancel out and can be disregarded, at least if one measures incremental costs as the added costs incurred to generate another unit of sales. This canceling out is only possible if the scale of operations is unchanged and this "stickiness" defines the short run.
- b) *Event-related expense changes.* Some expenses, such as added marketing or advertising, may be needed to offset the decline in sales after some event such as an increased vacancy rate in an apartment complex due to water damage to the units from faulty roofing. Such expenses are referred to as changes in fixed costs, E, in the discussion above and can be added to lost profits damages directly.
- c) *Economies of scale*. A related change in costs arises if the event prevented a planned change in efficiencies at the same scale of operations. Imagine a situation where, without the event, the firm would

have expanded output at the same scale of operations (think the size of the office, set of equipment, etc.). Such an expansion is made possible by added variable inputs (such as labor and material) and might be expected to generate greater inefficiencies concerning the use of existing fixed costs, leading to declining average costs of production (= (variable + fixed cost)/output). This decline in the average cost of production is referred to as *economies of scale*.

For example, in one case, the CEO of a company that made and distributed log home kits was diverted from his regular activities in business development, managing operations, and training staff to spend hours and days dealing with buyer complaints. The company claimed it had suffered economic damages as a result of the insurance company's bad-faith conduct in handling third-party claims underlying the litigation. Plaintiff claimed the carrier's inactions should have been part of its insurance coverage.⁵ To assess damages, the expert used both a market method and a before/after lost profits method. Normally, in the application of the latter method, the expert adjusts the decline in quantity sold by the pre-event profit margin measured by variable costs to measure lost profits. But, in this case, the pre-event profit margin was 26.1% in 1999 and the "after" margin was 22.6%, a 3.6% decline. This was an unexpected result because production and sales rose after 1999, but plaintiff experienced an associated fall in profit margin due to an increase in variable costs. There were no economies of scale as reasonably expected, and results were consistent with operational inefficiencies caused by the defendant's bad faith. Application of the difference in profit margin led to a damage

estimate of \$1.3 million, excluding extraordinary expenses.⁶

d) Incremental or fully allocated cost approach. As noted, incremental costs are added costs associated with an increase in sales but a fully allocated cost approach, means consideration of most or all costs on a percentage basis, is also permitted in some situations. For example, in Lanham Act cases involving trademark infringement, when calculating damages based on the owner's lost sales, one should use incremental profits. However, when considering the infringer's profits, the law is less clear-it is acceptable to use an incremental or fully allocated cost approach or a hybrid (as expected, use of a fully allocated cost approach will generally lead to lower profits than a strictly incremental approach).⁷

The Role of Time in the Measurement of Lost Profits Damages

The purpose of damages is, in a tort action, to restore an injured party to the position he or she was in before being harmed and, in a contract action, to place the innocent party in the position he or she would have been in had the contract been performed.⁸ In either event, time plays an essential role in determining economic damages, especially regarding the following issues:

• When do losses begin and end? The start of damages is usually the date of some harmful event such as a fire or even contract breach where the event date is generally known, e.g., failure to perform some agreed to action, but the end date for damages is often less clear, especially if future damages,

⁵ See *B-K Cypress Log Homes Inc. v. Auto-Owners Insurance Company,* 2012 U.W. Dist. LEXIS 73773, as listed in Fannon and Dunitz (2017), pp. 69-71.

⁶ In the *B-K Cypress* case, each side filed *Daubert* challenges, but only the plaintiff's expert was permitted to testify.

⁷ Evans and Simon (2017).

⁸ hosseinilaw.com/types-of-damages-in-civil-litigation posted June 18, 2013 by Behdad Hosseini.

those after a trial or settlement date, are projected. However, when mitigation damages (or mitigation profits) equal or exceed lost profits damages, that provides an ending date for the damages period. In some other situations, such as an infringement of copyright or trademark rights, exactly when the infringement begins, and such infringement leads to economic harm, may be challenging to prove. Finally, in a patent infringement case, issuance of patent, patent marking, or other statutory limits may define when economic damages begin. Similarly, the patent damages period may end with the award of an injunctive relief.

• What information related to the litigation can be used in analyzing damages? Related to this issue is: What date should the expert use for damages measurement, the harm date or the trial date? Unfortunately, there is no consensus by the courts on this issue. One choice is to measure all damages, past and future, as the present value as of harm date and then adjust by prejudgment interest to the date of trial. This is the ex ante approach to damages, and a strict interpretation does not allow the use of any information after the harm date, except that which might be reasonably known. Another view by some courts is the expost view, which permits the use of all information from harm date to trial date. Again, prejudgment interest is applied to damages from harm date to trial date, i.e., "past damages," and "future damages," i.e., those after trial are discounted to present value as of trial date.⁹

Many damages experts use a *hybrid* approach to when damages are measured, such as valuing damages as of some settlement date or report date, then adjusting to trial date via application of prejudgment interest, if needed. While the expert has considerable latitude to adjust damages for dynamic features such as interest rates, growth rates, and possible adjustments for time factors such as trend and seasonality, the main point is the expert needs to consult with the attorney about which damages measurement date the court prefers.

An excellent description of the ex ante/ ex post difference is provided in the 1990 article "Janis Joplin Yearbook and the Theory of Damages" by Franklin Fisher and Craig Romaine. Similarly, a detailed discussion of this issue and list of court cases favoring each is found in Elizabeth Evans and Roman Weil's "Ex Ante versus Ex Post Damages Calculations," Chapter 5 in their *Litigation Handbook*, 6th ed., Wiley, 2017, co-edited with Daniel Lentz.¹⁰ Consider the following thought experiment.

A person buys a lottery ticket for \$1 with an expected return of 15 cents, but a thief takes the ticket before the lottery drawing results are known. Assume on the theft date there were many tickets available, each with the same chance of winning and each costing \$1. Time passes and the stolen ticket is subsequently drawn as the winner, worth \$30 million. What is the value of the stolen lottery ticket needed to make the injured party (= owner) whole? The expected value of the return of the ticket, the ex ante value, is 15 cents plus purchase price, or \$1.15, before the drawing. Yet, the fair market value of the stolen ticket before the drawing is \$1, enabling the person to buy another ticket. Yet, value after the drawing is known, the expost value, is \$30 million.

⁹ All information from the harm date to the trial date is referred to as reliance on "the book of wisdom," a phrase used in a 1933 Supreme Court case involving patent litigation. *Sinclair Ref. Co. v. Jenkins Petroleum Co.*, 289 U.S. 689, 698-99, 53 S. Ct. 736, 77 L.Ed. 1449 (1933). In this case, several years had passed and economic conditions had changed between date of harm and date of trial, both factors arguments for an ex post approach.

¹⁰ Also see Martin (2015/2016).

Three essential differences in these approaches are as follows:

- 1. Information to be considered: Only use information up to harm date; ignore subsequent events. This is ex ante. In ex post, use all information, meaning from harm date to trial.
- 2. *Measurement date:* In ex ante, this is harm date; in ex post, it is trial date (or report date).
- 3. *Discounting:* Discount all damages back to harm date, then take prejudgment interest from harm date to trial date using statutory rate, plaintiff's cost of capital, or defendant's debt rate. This done in ex ante approach. In ex post approach, discount future damages to present value as of trial and apply prejudgment interest to damages from harm date to trial date.
- Interest rates are another time-sensitive factor that impacts lost profits damages. The discussion of choice of the damages measurement date, harm date or trial date, raises associated questions about how best to adjust damages. Two types of interest are pertinent. Obviously, an appropriate interest rate, one reflecting risk, opportunity yield, and time duration, is one issue as discounted damages are greater with a smaller discount rate, and vice versa. Much has been written on this topic already.¹¹ Importantly, compounding is involved.

Another type of interest may be granted by the court, and that is prejudgment or post-judgment interest.¹² Use or not of such interest depends on three questions:

1. Do federal or state laws apply?

- 2. Are the associated damages liquidated or unliquidated?
- 3. Do damages arise from a contract or tort action?¹³

Such interest rates are generally not compounded and only apply simple interest rates for pre- or post-judgment determined by statute. The prejudgment or legal rate of interest is used in the absence of an agreement as generally applied to liquidated damages. Postjudgment interest is generally designed to encourage payment after a court award.

Added Comments

Many challenges confront the economic expert who provides an opinion on lost profits damages in civil litigation, including potential criticism from opposing counsel (or his or her damages expert), and the court as to whether or not the expert provides a credible opinion in keeping with Federal Rules of Evidence, Rule 702, concerning the testimony of expert witnesses.¹⁴ This

14 Rule 702 was amended in response to Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), and to the many cases applying Daubert, including Kumho Tire Co. v. Carmichael, 119 S.Ct. 1167 (1999). In Daubert, the court charged trial judges with the responsibility of acting as gatekeepers to exclude unreliable expert testimony, and the court in *Kumho* clarified that this gatekeeper function applies to all expert testimony, not just testimony based in science. See also Kumho, 119 S.Ct. at 1178 (citing the Committee Note to the proposed amendment to Rule 702, which had been released for public comment before the date of the Kumho decision). The amendment affirms the trial court's role as gatekeeper and provides some general standards that the trial court must use to assess the reliability and helpfulness of proffered expert testimony. Consistently with *Kumho*, the rule as amended provides that all types

¹¹ For instance, see Weil (1995) and Dilbeck (1995).

¹² See Phillips and Freeman (2001).

¹³ Some types of cases, such as personal injury or contract breach, may fit easily into tort or contract category, but other actions such as trade secret misappropriation may fall into either category depending on case facts.

References

Dilbeck, Harold. "The Time Value of Money," in Roman Weil, Michael Wagner, and Peter Frank (eds.) *Litigation Services Handbook*, 2nd ed. (Hoboken, N.J.: Wiley, 1995).

Dunitz, Jonathan and Tyler Farmer. "Context of Lost Profits Damages Claim," in Nancy Fannon and Jonathan Dunitz (eds), *Economic Damages*, 5th ed. (Portland, Ore.: Business Valuation Resources, 2018).

Evans, Elizabeth, and Peter Simon. "Economic Analysis of Nonpatent Intellectual Property Rights and Damages Measures," in Roman Weil, Daniel Lentz, and Elizabeth Evans (eds.) *Litigation Services Handbook*, 6th ed. (Hoboken, N.J.: Wiley, 2017), Chapter 19.

Fannon, Nancy and Jonathan Dunitz. "Volume Two Case Law," in Nancy Fannon and Jonathan Dunitz (eds). *Economic Damages*, 5th ed. (Portland, Ore.: Business Valuation Resources, 2018).

Fisher, Franklin M., and R. Craig Romaine. "Janis Joplin Yearbook and the Theory of Damages," *Journal of Accounting, Auditing and Finance*, Jan. 1, 1990.

Foster, Carroll, and Robert Trout. "Computing Losses in Business Interruption Cases," *Journal of Forensic Economics* 3(1) (December 1989): 9-22.

Jenkins, Joryn, and Michael Mard. "What the *Daubert* Test Means to a Financial Expert," *The Value Examiner* (July/August 2015).

Martin, Harold G. Jr. "What's the Damage? A Primer on Economic Damages in Business Litigation," *Financial Valuation and Litigation Expert* Issue 58 (December 2015/January 2016).

Phillips, John, and Neil Freeman. "Interest as Damages," in Roman Weil, Michael Wagner, and Peter Frank (eds.), *Litigation Services Handbook*, 3rd ed. (Hoboken, N.J.: Wiley, 2001).

Stephenson, Stanley P., David Macpherson, Gauri Prakash-Canjels. "Computing Lost Profits in Business Interruption Litigation: A General Model," *Journal of Business Valuation and Economic Loss Analysis* 7(1) May 2012: 1-16, DOI: 10.1515/1932-9156.1118.

Weil, Roman. "Compensation for the Passage of Time," in Roman Weil, Michael Wagner, and Peter Frank (eds.), *Litigation Services Handbook*, 2nd ed. (Hoboken, N.J.: Wiley, 1995).

note has sought to provide related advice to the expert by providing information that helps demonstrate compliance with the *Daubert* test. As Attorney Jocyn Jenkins and Accountant Michael Mard recently wrote in "What the *Daubert* Test Means to a Financial Expert,"¹⁵ the following list can demonstrate compliance with the *Daubert* test:

- Peer-reviewed methodology;
- Error rate established;

15 Jenkins and Mard (2015).

of expert testimony present questions of admissibility for the trial court in deciding whether the evidence is reliable and helpful.

- Tested empirically;
- Accepted generally in the expert's industry; and
- Litigation and nonlitigation use of methodology is established.

Granted, an economic expert is not the same as a medical or scientific expert, but efforts should be made to find ways to address each of the above issues. This article's focus on peer-reviewed methods, which are generally accepted in forensic economic circles and use of valuation tools such as discounting, help the expert serve the trier of fact in a credible manner. Error rates and empirical testing proxies need to be developed on a case-specific manner, perhaps by the systematic use of different data gatherers who are different from data analysts and use external information to add credibility to the damages expert's report, which is the main point. In summary, the economic expert needs to meet the threefold criteria in order to withstand the Daubert challenge and not be disqualified. Namely, he or she should: (1) be qualified to opine on the issue; (2) provide reliable, fundamentally sound testimony using rigorous, generally accepted methods that are tied to the facts of the case; and (3) provide testimony that is relevant and useful for the court. ◆

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