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  Ethics in the Forensic Environment

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Apple v. Samsung Debate: Focus on Damages

By: Michael D. Pakter, CPA, MAFF, CVA, and Zisl Taub Edelson, JD, MBA

(This article is a follow-up to the article published by the authors in the *National Litigation Consultant's Review*, Volume 1, 2013, entitled "*Apple v. Samsung:* Lessons Learned for Financial Experts." Ed.)

On August 25, 2012, a California jury awarded Apple a landmark $1.05 billion in damages against its main competitor in the smart phone market, Samsung, for willful violations of Apple's patents for the iPhone and iPad. The $1.05 billion damages award was a compromise between Apple's alleged damages of $2.5 to 2.7 billion and Samsung's damages estimate of approximately $519 million.

On March 1, 2013, after months of post-trial motion practice, the judge presiding over the case, the Honorable Lucy Koh, issued a final order on damages that reduced damages by $450,514,650, related to a group of infringing Samsung products, and ordered a new trial to determine proper damages for those products only. The balance of the jury's award was upheld. The reduction in damages resulted primarily from technical legal issues intertwined with the jury's calculations. It was not, for the most part, a reflection of the merits of Apple's case or the strength of its patents. Judge Koh's ruling on damages is explained in further detail below.

A study of the pathway from jury trial to the final order on damages provides insight into the role of financial experts in determining patent infringement damages and the complex legal issues involved. What follows is a recap of the significant court filings and rulings related to the damages award at stake in the case.

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View From the Bar

Getting *Frye*-d Without Getting Burned

By Michael J. Molder, JD, CPA/CFF, CVA, CFE

In the 1990s, the United States Supreme Court turned expert witness practice on its head through a series of rulings interpreting Federal Rule of Evidence (FRE) 702. Beginning with *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), which dealt specifically with expert testimony in the context of scientific analysis, and continuing with *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999), extending the *Daubert* analysis more broadly to technical testimony from expert witnesses, the court firmly established the federal courts' role as "gatekeeper" to establish whether prospective expert witnesses meet the requirements of FRE 702 before allowing that testimony to reach the jury. In the years since these rulings were issued, motions *in limine* to preclude an expert witness from testifying, so-called "*Daubert* motions," have become routine in federal courts and state jurisdictions that have adopted the *Daubert* standard.

Several states, however, have not adopted *Daubert* and its progeny, including California, Florida, Illinois, Kansas, Maryland, Minnesota, New Jersey, New York, Pennsylvania, and Washington. These jurisdictions, which represent some of the highest volume courts in the country, continue to assess admissibility of expert testimony based on a 1923 ruling from the D.C. Circuit, *Frye v. United States*, 293 F. 1013.

The principal difference between the *Frye* standard and the *Daubert* standard relates to the court's evaluation of the requirement in FRE 702(c) that "the [expert's] testimony is the product of reliable principles and methods." Under the *Daubert* standard, this is a relatively flexible requirement, and the expert can meet the requirement through any number of different tools, including, among others, application of the scientific method, use of techniques which can be, or have been, replicated by other qualified experts or have been subjected to peer review and evaluation. The *Frye* standard, on the other hand, relies on the easily articulated, but no so easily applied, standard of whether the technique or principle is "*sufficiently established to have gained general acceptance* in the particular field in which it

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Shortly after the jury issued its August 2012 award for $1.05 billion, Apple filed a motion to enhance the damages award by $535 million to account for the *willful* aspect of Samsung's patent violations. Apple also requested supplemental damages of $121 million plus $50 million in interest, representing damages based on Samsung's sales from July 1, 2012 through the date of final judgment, August 25, 2012[1]. In addition, Apple filed for a permanent injunction barring U.S. sales of Samsung's infringing products, on the basis that monetary damages could not compensate Apple for irreparable harm caused by Samsung's continued sale of the infringing products.

In contrast, Samsung filed for a new trial, and/or reduction in damages and requested a finding that violation of the Apple patents was not willful. A favorable ruling on willfulness was particularly important to Samsung, because willful patent infringement could justify a far greater damages award.

On December 17, 2012, Judge Koh denied Apple's request for a permanent injunction and on January 29, 2013, Judge Koh overturned the jury's verdict of willfulness, but affirmed most of the remaining verdicts and held that the trial was fairly conducted. At first glance, it may seem that the March 2013 order on damages favored Samsung, with its large reduction, but since the judge ordered a new trial, damages could ultimately increase or decrease.

Both Apple and Samsung invested significant sums in retaining financial experts, who put in substantial hours developing detailed and complex damages calculations and providing expert testimony at trial. In the numerous post-trial motions filed by Apple and Samsung, the financial experts continued to play an important role in the litigation, primarily by supporting their respective side's positions with detailed post-trial declarations and analyses.

Unfortunately, many pages of the post-trial expert declarations have been sealed from public view, because they contain sensitive corporate information. Moreover, the declarations may not have fully had their intended effect, because Judge Koh entered an order striking numerous pages and exhibits from the declarations, strictly enforcing required page limits.[2]

Post-Trial Declaration Re: Damages

On September 21, 2012, Samsung's financial expert, Michael Wagner filed a declaration in support of Samsung's request to reduce the jury's damages award.[3]

Wagner's declaration provided a detailed analysis of the jury's verdict and hypothetical recalculations of damages primarily based on the alternative assumption that the jury should not have awarded damages for Apple's estimated lost profits, but rather should have based its award on a percentage of Samsung's actual profits. His analysis broke down the jury's damages award into several categories, based upon product and type of patent infringement, and compared those amounts to losses calculated by Apple's expert Terry Musika.

In his declaration, Wagner noted that:

- The jury awarded 40 percent of Samsung's profits calculated by Musika, for the 11 Samsung devices that infringed Apple design patents but not trade dress, totaling $599,859,395.
- The jury awarded the exact amount of lost profits claimed by Apple plus 40 percent of Samsung's profits, as calculated by Musika, for the five Samsung phones that infringed Apple's design patents and diluted Apple's trade dress, totaling $381,683,562.
- The jury awarded 50 percent of the royalty calculated by Musika for five Samsung devices that infringed only utility patents, totaling $9,180,124.
- The jury awarded 40 percent of Samsung's profits as calculated by Musika for the Samsung Galaxy Prevail, which infringed only utility patents, totaling $57,867,383.
- The jury awarded $833,076 in damages for the Galaxy Tab 10.1, which only infringed utility patents, an amount that was higher than the $604,391 sought by Apple. Musika did not provide a reasonable royalty calculation for that product.
- $948,278,061 was the total amount of damages awarded related to Samsung's profits.

Wagner's declaration noted that Musika's calculations of Samsung's applicable revenues were based on patent violation notice dates of June 2010 and August 2010. Wagner provided hypothetical calculations assuming later patent violation notice dates of April 15, 2011 and June 16, 2011, which reduced Samsung's applicable revenues by $3.34 billion (through second quarter 2011), for 16 infringing products. In describing these calculations, Wagner made clear that he used the same method to adjust for later notice dates, which Musika had endorsed in his trial testimony.

Wagner's declaration went on to provide detailed damages recalculations, based on the later notice dates, a 40 percent profit rate, but factoring out any award for lost profits. On that basis, Wagner reduced damages for the 16 Samsung products by approximately $544 million. Wagner also provided an alternative damages calculation based on a scenario where Apple would be entitled to 5 percent of the jury award, also adjusting for later patent notice dates, and factoring out lost profits.

1 The August 2012 jury verdict accounted for damages only through June 30, 2012.

2 Order Striking Evidence entered by Judge Lucy Koh, Case No. 11-CV-01846-LHK, Document No. 2212, filed January 2, 2012.

3 Declaration of Michael J. Wagner in Support of Samsung's Motion for Judgment as a matter of Law, New trial and/or Remittitur pursuant to Federal Rules of Civil Procedure 50 and 59, dated September 21, 2012, Case No. 11-CV-01846-LHK, Document No. 1990-20, filed September 21, 2012.

Post-Trial Declarations Re: Apple's Request for Permanent Injunction

Shortly after the jury entered its $1.05 billion verdict, Apple filed for a permanent injunction banning sales of Samsung's infringing products, on the basis that a money damages award could not fully compensate Apple for a spectrum of possible future losses caused by Samsung's infringement. On August 29, 2012, Musika provided his Declaration in Support of Apple's Motion for Permanent Injunction.[4] Musika's declaration provided a detailed business/economic analysis of the negative impact Samsung's patent infringements could have on Apple's future profits and market share. Musika emphasized the potential negative impact of Apple losing first-time customers to Samsung and the broader negative impact or "halo effect" on Apple's "ecosystem," (i.e., its potential lost profits from interrelated products and revenue sources, caused by decreased consumer loyalty to the Apple brand and its operating platform).

On October 19, 2012, Samsung's financial expert, Wagner, filed his Declaration in Support of Samsung's Opposition to Apple's Motion for a Permanent Injunction.[5] Wagner's declaration was detailed and systematically refuted Musika's declaration on almost every issue. His main point was that Apple's future lost sales caused by Samsung's patent infringement could be accurately measured and compensated by money damages.[6]

Judge Koh's Post-Trial Rulings Relating to Damages

1. Judge Koh's Order Denying Permanent Injunction Against Samsung

On December 17, 2012, Judge Koh denied Apple's request for a permanent injunction against 26 Samsung products that the jury determined infringed Apple's patents or diluted Apple's trade dress. Her opinion relied primarily on Apple's failure to prove a "causal nexus" between Samsung's infringement of specific patents and Apple's loss of market share. Additionally, Koh pointed out that the infringed patented features were just a small component of the various Samsung products.

From an economic perspective, Koh noted that Apple did not show that monetary damages could not compensate Apple for the harm caused by Samsung's patent violations. Koh emphasized Apple's licensing agreements for intellectual property with other competitors as evidence that money damages could be sufficient compensation. Judge Koh reasoned:

> The fact that Apple is now expressing an unwillingness to license these properties does not change the fact that Apple has, in the past, felt that money was a fair trade for the right to practice its patents and that Apple has in the past been willing to extend license offer to Samsung.[7]

The public interest factors addressed in Koh's opinion are also worth noting. She affirmed the principle that "the public interest does favor the enforcement of patent rights to promote 'the encouragement of investment-based risk'."[8] However, she felt more compelling was the public interest in providing consumers with broad access to a variety of cell phone products, especially considering that "though the phones do contain infringing features, they contain a far greater number of non-infringing features."[9]

Judge Koh found Apple's evidence of damages from lost customers and downstream sales persuasive, but not substantial enough to justify injunctive relief. She further stressed that while it appeared Apple had indeed lost sales and market share, the company did not prove that Samsung's patent infringement caused—i.e. Apple had not established a causal nexus.[10]

Furthermore, Judge Koh drew an interesting contrast to recent Federal Circuit cases that awarded permanent injunctions because without an injunction, the patent holders business would have been wiped out or the patent was the "central force driving sales on the infringing product."[11] The judge pointed out:[12]

> . . . Samsung may have cut into Apple's customer base somewhat, but there is no suggestion that Samsung will *wipe out* Apple's customer base, or force Apple out of the business of making smartphones.
>
> The present case involves lost sales—not a lost ability to be a viable market participant.

Koh's opinion seems to set a very high bar for injunctions in patent infringement cases. Furthermore, she appears to give cover to patent infringers, so long as the infringing product has more non-infringing features than infringing features. She suggests that sufficient harm to merit injunctive relief may be shown only where the continuing sale of the infringing product would force the patent holder out of business. The Federal Circuit Court of Appeals will most likely have its say on these matters.

2. Judge Koh's Order Granting in Part and Denying in Part Samsung's Motion for Judgment as a Matter of Law (and for New Trial)

On January 29, 2013, Judge Koh entered her Order Granting in Part and Denying in Part Samsung's Motion for Judgment as a Matter of Law (and for New Trial). Her detailed 40-page opinion discussed the evidence presented at trial and the jury's verdict regarding patent infringement and damages, addressing each patent and each trade dress issue. She also related the relevant facts to recent patent damages decisions of the Federal Circuit Court. Ultimately, Judge Koh determined the jury's findings were reasonable and upheld the verdicts, as follows:

- Apple's design patents were valid.
- Samsung infringed Apple's design patents.
- Apple's trade dress items were protectable and diluted.
- Apple's utility patents were valid and infringed.

However, regarding the issue of *willful* patent infringement, Judge Koh overturned the jury's determination of willfulness on the basis that Samsung reasonably believed Apple's patents could be invalid, which is a valid defense. Lastly, Judge Koh held the trial was conducted fairly, denying Samsung's request for a new trial.

3. Judge Koh's March 1, 2013 Final Order on Damages

Judge Koh's ruling on Apple's motion to increase damages and Samsung's motion to reduce damages surprised some patent law experts. Of those following the case closely, no one predicted Judge Koh

4 Declaration of Terry Musika in Support of Apple's Motion for Permanent Injunction, dated August 29, 2012. A redacted public version was filed on Nov. 2, 2012, as Document No. 2120-1, Case No. 11-CV-01846.

5 Declaration of Michael J. Wagner in Support of Samsung's Opposition to Apple's Motion for a Permanent Injunction, dated October 19, 2012. A redacted public version was filed on October 20, 2012, as Document No. 2065, Case No. 11-CV-01846-LHK.

6 *Ibid.* at pp. 93-94.

7 Order of Judge Lucy Koh Denying Motion for Permanent Injunction, Case No. 11-CV-01846-LHK, entered December 17, 2012, Document No. 2197, p. 11.

8 *Ibid*. at p. 13.

9 *Ibid*. at p. 14.

10 *Ibid*. at p. 14.

11 *Ibid*. at p. 15.

12 *Ibid*. at p. 15.

would significantly reduce Apple's landmark $1.05 billion damages award, which she did, by more than 40 percent. Judge Koh's lengthy ruling examined both sides' arguments , the financial experts' calculations, and the proper role of financial experts in determining damages.

In Apple's motion to increase damages, Apple had argued that damages should be increased for five specific products because the jury had awarded less than Samsung's damages expert estimated. Judge Koh denied the motion on constitutional grounds pointing out that:

> The jury was 'not bound to accept the bottom line provided by any particular damages expert' . . . but was rather free to evaluate the testimony of both sides' expert in arriving at its award.[13]

However, Judge Koh did agree that Apple was entitled to supplemental damages for infringing sales not considered by the jury. She held that such damages should be determined on "per-sale… product-by-product bases."[14] However, given the need for the parties to present evidence on the actual volume of post-trial sales and the pending appeals, Koh delayed a final determination on supplemental damages until appeals are heard.

The lost profits issue was also resolved in favor of Apple. Judge Koh declined to set aside any portion of the verdict related to lost profits, on the basis that Apple's financial expert provided "reliable economic evidence of 'but for' causation."[15]

Judge Koh noted:

> Mr. Musika's opinion reconstructs the market based on market share, capacity, and demand, thus demonstrating how many additional sales Apple would likely have made, but for Samsung's infringement. This constitutes exactly the type of economic evidence of causation that the Federal Circuit requires in sustaining as award of lost profits.[16]

The court struck damages in the amount of $57,867,363, awarded for Samsung's Galaxy Prevail™, which infringed Apple's utilities patents, because the award was apparently based on Samsung's profits, an impermissible legal theory. The jury failed to properly follow the court's instructions and instead applied a set percentage, 40 percent, to Samsung's profits to determine its award. Since there was no reasonable way for Judge Koh to re-calculate the damages herself, she ordered a new trial on damages for the Galaxy Prevail.

The largest part of the damages reduction, $392,647,267, was attributable to the jury's use of an incorrect notice date in making its calculations. For some of the infringing products, the court determined that the notice date used was too early. The court could not calculate the proper damages based on the record because evidence of sales was presented quarterly and could not fairly be prorated. Therefore, a new trial was ordered. Judge Koh squarely placed the blame for this outcome on Apple's financial expert. She pointed out:

> [I]t was Apple's strategic decision to submit an expert report using an aggressive notice date for all of the patents. The need for a new trial could have been avoided had Apple chosen a more circumspect strategy or provided more evidence to allow the jury or the Court to determine the appropriate award for a shorter notice period.[17]

13 Order of Judge Lucy Koh Re: Damages, Case No. 11-CV-01846-LHK, Document No. 2271, Filed March 3, 2013, p. 2.

14 *Ibid*. at p. 5.

15 *Ibid.* at p. 14.

16 *Ibid*.

17 *Ibid* at p. 24.

Practical Implications for Financial Experts

The many post-trial pleadings and rulings in this case highlight both potential benefits and pitfalls that may affect the outcome of litigation, which expert witnesses should consider, including:

1. Financial experts can provide valuable services to clients in addition to expert reports and trial testimony. For example, jury verdicts can be analyzed and interpreted in light of counsel's strategy for post-trial motions and appeals. In this case, the analysis provided in Michael Wagner's post-trial affidavit showed that the jury's verdict was calculated based on a set percentage of Apple's sales. This fact formed the basis of Judge Koh's order on damages, because it showed the jury failed to follow the court's instructions for calculating damages. While financial experts generally cannot opine on legal matters, they can illuminate facts and set the stage for a judge to make a legal finding in their client's favor.
2. Financial experts should not be short-sighted in formulating their opinions and reports. Rather, experts should assume that cases will be challenged in post-trial motions and appeals and that their opinions and reports will be scrutinized over and over again in various contexts. It appears that, by taking an aggressive approach on the notice date in his expert opinion, Terry Musika left no room for Judge Koh to recalculate damages based on alternative scenarios. As a result, his client will have to fund the costs of a new trial. While a client may request an expert to take the most aggressive approach, it may be in the client's best interest for financial experts to offer a range of possible calculations based on alternative assumptions or differing methods.

Conclusion

On its face, the original $1.05 billion damages awarded by the jury seemed ominous. But in the context of Samsung's estimated revenue of $60 billion (up from $30 billion in 2011) from sales of Android smart phones and tablets, the original award may not have been significant enough to deter Samsung from future violations of Apple's patents.

The end result of Judge Koh's final order on damages, which reduced the $1.05 billion jury verdict by $450,514,650, may not be seen for many months, since a new trial will not be conducted until the pending appeals are resolved. A new trial will be costly and a new jury could award more or less than the original award. These realities may encourage Apple and Samsung to move toward a reasonable financial resolution. Judge Koh's denial of a permanent injunction may allow Samsung to continue selling infringing products but leave the company open to exposure for additional damages based on future lost profits.

More important for the technology sector generally, will be any judicial determinations made at the appellate court level for *Apple v. Samsung*. Those appellate court decisions may have potential to affect the strength of patent protection, upon which innovators and technology investors in many industries depend. Because appellate court decisions often have broad implications, experts likely will continue to play a very important role in guiding juries and judges through the complexities of damages calculations for the ever-growing array of technology patents.

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belongs" (293 F. 1013, 1014, emphasis added.). That *Frye* represents a long-established standard and has been abandoned by federal courts does not mean that it is not the subject of hotly contested battles and on-going re-evaluation by courts.

In a recent Pennsylvania Supreme Court decision involving asbestos-based tort claims, *Betz v. Pneumo Abex LLC, et al.*, 44 A.3d 27 (2012), the court affirmed the trial court's decision to hold a "*Frye* hearing" to assess the threshold question of admissibility. The anticipated testimony related to a theory that asbestos-related disease is a result of cumulative exposure to asbestos, and each breath of contaminated air constitutes a substantial contributing factor to contracting the disease. While the Pennsylvania Supreme Court recognized that liberally "allowing challenges would substantially increase the number of challenges (and cases in which lengthy pre-trial proceedings would ensue), as has happened in *Daubert* jurisdictions, it was particularly concerned with "the influential nature of expert testimony on complex subjects, and the potential that distortions have to mislead laypersons" (*Betz* 44 A.3d at 73-74, citations omitted). The justices held that a *Frye* hearing was an appropriate tool for the trial court to assess whether the proposed testimony represented the application of accepted scientific methodology in a conventional fashion.

The New York Court of Appeals, on the other hand, affirmed a trial court's decision to *not* conduct a *Frye* hearing (*People v. Bedwessie*, 970 N.E.2d 380 [NY, 2012]). In *Bedwessie*, a criminal defendant sought to introduce expert testimony concerning false confessions the day before the trial was to begin. For a number of reasons, the trial court declined to continue the proceeding to allow the proposed expert, who would be unavailable for several weeks, to testify. The appellate court considered the proposed expert's anticipated testimony as embodied in his expert report. A significant area of the proposed testimony concerned police interrogation techniques and the impact of a suggestion that a confession would result in treatment rather than incarceration, the "treatment alternative strategy." The appellate court faulted the expert for failing to establish that the "treatment alternative strategy" was generally accepted in the relevant scientific community as a factor that led to false confessions. The proposed expert's failure to meet the *Frye* standard led the appellate court to find that the trial court had not abused its discretion in disallowing the testimony.

In California, the *Frye* test was augmented and re-affirmed in *People v. Kelly*, 1976 Cal. LEXIS 274. The crux of the *Kelly/Frye* analysis is "general acceptance" within the "particular" scientific or technical community. The Court of Appeals of California recently re-addressed these issues in the context of the admissibility of polygraph test results in a child custody hearing.

According to the California Court of Appeals,

> the proponent of a new scientific procedure must prove three preliminary facts: (1) that the reliability of the scientific technique is generally accepted by recognized authorities in the scientific field(s) in which the technique belongs; (2) that the witnesses giving expert testimony on the acceptance in the relevant scientific communities are qualified experts on the subject; and (3) that correct scientific procedures were used in administrating the scientific technique.[1]

Further,

> The *Kelly*[/*Frye*] requirement of "general acceptance" of a scientific technique means proof of scientific consensus drawn from a typical cross-section of the relevant, qualified scientific community. The test is met if use of the technique is supported by a clear majority of the members of the relevant scientific community. In determining the general acceptance issue, courts must consider the quality, as well as the quantity, of the evidence supporting or opposing the scientific technique.
>
> Considerations of judicial economy make it impractical to require that the views of a cross-section of the relevant scientific community be presented personally by each scientist testifying in open court. Accordingly, for this limited purpose[,] scientists have long been permitted to speak to the courts through their published writings in scholarly treatises and journals. If a fair overview of the literature discloses that scientists[,] significant either in number or expertise[,] publicly oppose the technique as unreliable, the court may safely conclude there is no such consensus at the present time.
>
> In addition to considering published writings in scholarly treatises and journals, the court may receive the testimony of disinterested and qualified experts on the issue of the technique's general acceptance in the relevant scientific community.
>
> A witness qualifying as an expert is disinterested if he is not so personally invested in establishing the technique's acceptance that he might not be objective about disagreements within the relevant scientific community. Factors such as being a leading proponent of the scientific technique, having a long association with its development and/or promotion, or having a vested career interest in its acceptance in the scientific community are among those that show a lack of impartiality by the expert.[2]

In *In re Jordan R.*, appellant, the accused parent, claimed error in the failure to permit live testimony and cross-examination on the issue of general acceptance. The Court of Appeals ruled that the juvenile court had not abused its discretion in basing its decision solely on an evaluation of published materials. Where "[t]he scientific literature that was presented to the court leaves little doubt there is continuing controversy about the reliability of [the technique or theory] in the relevant scientific community," there is no need for further hearings or testimony.

As these cases demonstrate, trial courts have wide latitude not only in deciding the scope of material which meets the *Frye* standard of general acceptance, but also the extent of proceedings to assess that material. As with so many things, it is important to know the specific practices of the court when proffering expert testimony so as not to get fried … um, *Frye*-d.

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1 *In re Jordan R.*, 2012, 205 Cal. App. 4th 111; 140 Cal. Rptr. 3d 222; 2012; Cal. App. LEXIS 452

2 *Id.* at ***18-21, internal quotations and citations omitted.

The Risk of Proffering Financial Expert Testimony in Lay Witness Clothing: The Limits of Rule 701 of the Federal Rules of Evidence

By: Steven L. Katz

Introduction

It is not uncommon for business entities in litigation to seek to introduce opinion testimony on lost profits or other issues concerning company finances through their owners or company executives. For instance, a company in litigation may disclose and rely upon its chief financial officer as an expert witness concerning damages, especially if that executive is trained as a certified public accountant and/or has other valuation credentials.

However, in some instances, litigants in federal court may seek to introduce *lay* opinion testimony through their owners or company executives on issues of damages or finances instead of introducing such testimony through in-house or retained *expert* witnesses. Typically, *lay* opinion witnesses are not subject to the same qualification, disclosure, and reporting requirements as are expert witnesses (*See, e.g.*, Fed.R.Civ.P. 26[a] [2].).

While sometimes lay opinion testimony is admissible as to lost profits or other financial matters, the governing evidentiary rules can be less than clear, and the case law interpreting such rules less than consistent. As such, a federal court litigant relying on lay opinion testimony to prove damages or interpret financial data is at risk of having such testimony stricken if the court determines such opinions require specialized or technical knowledge generally reserved to experts. In other words, at least as far the federal courts are concerned, sometimes the "experts" really do know best.

Applicable Federal Rules of Evidence

The Federal Rules of Evidence provide for two categories of opinion testimony: lay and expert.

Rule 701, Opinion Testimony by Lay Witnesses, provides:

> If a witness is not testifying as an expert, testimony in the form of an opinion is limited to one that is: (a) rationally based on witness's perception; (b) helpful to clearly understanding the witness's testimony or to determining a fact in issue; and (c) not based on scientific, technical, or other specialized knowledge within the scope of Rule 702. Fed.R.Evid. 701.

The final requirement of Rule 701, excluding lay testimony based on scientific, technical or other specialized knowledge within the scope of Rule 702, was added by amendment in 2000 and is designed "to eliminate the risk that the reliability requirements set forth in Rule 702 will be evaded through the simple expedient of proffering an expert in lay witness clothing" (Fed.R.Evid. 701, Advisory Comm. Note, 2000 Amendment.).

Rule 702, Testimony by Expert Witnesses, provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has applied the principles and methods reliably to the facts of the case. Fed.R.Evid. 702.

Application of Rule 701 of the Federal Rules of Evidence

It is sometimes tempting, and under some circumstances advantageous, for litigants to proffer financial opinions through a business owner or company executive as lay testimony under Rule 701 of the Federal Rules of Evidence in lieu of disclosing an expert under Rule 702. Most often, this is motivated by a desire to save on the expense of an outside expert and/or avoid the expert disclosure and reporting requirements under Rule 26(a)(2) of the Federal Rules of Civil Procedure (*See* Fed.R.Civ.P. 26[a] [2].). Avoiding expert disclosure and reporting also may be perceived to create certain tactical advantages. Additionally, as a practical matter, the business owner or executive may be the most knowledgeable about the company's finances and an outside expert might not be needed if calculation of business damages is based upon the witness's personal knowledge and readily evident from the company's financial records.

Indeed, the Advisory Committee's notes clarify that the intent of the 2000 amendment to Rule 701 excluding lay testimony based on scientific, technical or other specialized knowledge within the scope of Rule 702 was not to eliminate the admission of lay opinion testimony as to lost profits:

> … [M]ost courts have permitted the owner or officer of a business to testify to the value or projected profits of the business, without the necessity of qualifying the witness as an accountant, appraiser, or similar expert. *See, e.g., Lightning Lube, Inc. v. Witco Corp.*, 4 F.3d 1153 (3d Cir. 1993) (no abuse of discretion in permitting the plaintiff's owner to give lay opinion testimony as to damages as it was based on his knowledge and participation in the day-to-day affairs of the business). Such opinion testimony is admitted not because of experience, training or specialized knowledge within the realm of an expert, but because of the specialized knowledge that the witness has by virtue of his or her position in the business. This amendment does not purport to change this analysis. Fed.R.Evid. 701, Advisory Comm. Note, 2000 Amendment.

Generally, federal courts allowing owners or officers of a business to testify on lost profits have been limited to cases where the alleged damages are based upon the personal knowledge of the witness and can be readily confirmed by the company's financial statements through basic mathematics or simple projections (*See, e.g., Meaux Surface Protection, Inc. v. Fogleman, LLC,* 607 F.3d 161 [5th Cir. 2010] [parent company's chief financial officer permitted to testify as a fact or lay opinion witness, not as an expert, on lost profits of subsidiary based on his familiarity with the subsidiary's financial performance.]; *Diesel Machinery, Inc. v. B.R. Lee Industries, Inc.*, 418 F.3d 820 [8th Cir. 2005] [Business owner's testimony on lost profits, including personal knowledge of growth rate and duration of projection, deemed sufficient.]).

Yet, as opinion testimony on lost profits often requires more complex analysis and assumptions requiring technical or other specialized knowledge, several federal courts have disallowed lay opinion testimony concerning lost profits and other matters of financial analysis (*See, e.g., James River Ins. Co. v. Rapid Funding, LLC*, 658 F.3d 1207 [10th Cir. 2011] [lay opinion of plaintiff's principal as to value of plaintiff's real estate, impacted by depreciation and deterioration, improperly admitted as requiring technical or specialized knowledge.]; *Von der Ruhr v. Immtech Int'l, Inc.*, 570 F.3d 858 [7th Cir. 2009] [business owner's personal knowledge deemed insufficient to allow his lay opinion testimony on lost profits concerning a new product in a complex market.]; *Compania Administradora de Recuperacion de Activos Administradora de Fondos de Inversion Sociedad Anonima v. Titan Int'l, Inc.*, 533 F.3d 555, 560 [7th Cir. 2008] [plaintiff's president could not give valuation opinions concerning corporate assets as a lay witness, because he lacked personal knowledge concerning such assets.]).

As most litigators and retained experts well know, the federal courts have developed a robust body of law to assess the reliability of expert testimony under Rule 702 (*See, e.g., Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311 [9th Cir. 1995]). Yet, proffering testimony under Rule 701 does not shield lay opinions from similar reliability requirements (*See, e.g., e360 Insight, Inc. v. Spamhaus Project*, 658 F.3d 637 [7th Cir. 2011] [inconsistent testimony of business owner on lost profits deemed unreliable and excluded whether witness was considered a lay or expert witness]; *Zenith Elecs. Corp. v. WH-TV Broad Corp.*, 395 F.3d. 416, 419-20 [7th Cir. 2005] [both expert and lay testimony is inadmissible where it consists of unsupported inferences]; *Macy's, Inc. v. Johnson Controls World Services, Inc.*, 670 F.Supp.2d 790 [N.D. Ill. 2009] [lay opinion testimony on lost profits excluded where witness could not sufficiently explain projections and where based on unreliable assumptions]).

In sum, reliance upon business owners or company executives for lay opinion testimony concerning complex financial analysis can give rise to a dangerous trap for unwary counsel.

The Echo Case

Illustrative is *Echo, Inc. v. Timberland Machines & Irrigation, Inc.,* 2011 WL 148396, 84 Fed.R.Evid.Serv. 692 (N.D.Ill. 2011); *aff'd* 661 F.3d 959 (7th Cir. 2011). In that case, Echo, Incorporated ("Echo") supplied outdoor power equipment to Timberland Machines & Irrigation, Inc. ("TMI"), a Connecticut-based distributor. Echo terminated the parties' distributorship agreement. In response, TMI brought a claim against Echo alleging that the termination was improper under the Connecticut Franchise Act, Conn.Gen.Stat. § 42-133f (2011). TMI sought approximately $50 million in damages.

Echo moved for summary judgment on several grounds, including that less than 50 percent of TMI's sales and gross profits resulted from its business with Echo and thus TMI did not qualify as a franchise under the Connecticut Franchise Act (*See, e.g., Rudel Mach. Co., Inc. v. Giddings & Lewis, Inc.*, 68. F.Supp.2d 118, 124-28 [D.Conn. 1999] [interpreting the Connecticut Franchise Act]). In opposition to Echo's summary judgment motion, TMI submitted an affidavit from TMI's president aimed at establishing that more than 50 percent of TMI's sales and gross profits resulted from its Echo business. In turn, Echo moved to strike portions of the affidavit of TMI's president, contending that the president was not disclosed or qualified as an expert and yet he relied on technical or specialized knowledge of accounting and legal principles in formulating the opinions in his affidavit.

The district court noted that the affidavit of TMI's president contained any number of "interpretive decisions" such as: (1) excluding certain expenses associated with one division of TMI from his gross profits and total sales calculations on the basis that such division had not been profitable; (2) deducting a portion of TMI's freight costs from the gross profits attributable to Echo; (3) including as direct TMI sales, commissions received by TMI from Echo for facilitating sales to an Echo house account; and (4) including sales attributable to an Echo affiliate in the total sales figures (*Echo, Inc*., 2011 WL 148396, at *3, 84 Fed.R.Evid.Serv. 692.).

The district court concluded that the opinions expressed in the president's affidavit fell outside the boundaries of lay opinion testimony and granted Echo's motion to strike those portions of the affidavit (*Echo*, *Inc*., 2011 WL 148396, at *4, 84 Fed.R.Evid.Serv. 692.). According to the court, "a layperson lacking knowledge of accounting principles could not arrive at such complicated determinations" and, to "admit the analysis as lay opinion testimony would circumvent the restrictions on expert testimony as set forth in the Federal Rules of Evidence" (*Id.).* As a consequence of the court's ruling on the motion to strike, it did not consider the opinions in the president's affidavit and entered summary judgment in favor of Echo on TMI's claim under the Connecticut Franchise Act (*Id.).*

On appeal, TMI alleged that the striking of its president's affidavit was error as the president simply testified as to factual matters of which he had personal knowledge as company president. TMI argued that its president's affidavit was akin to allowing a business owner or officer to testify "to the value or projected profits of the business, without [being qualified] as an accountant, appraiser, or similar expert" where that testimony is based on the "particularized knowledge that the lay witness has by virtue of his or her position in the business" as contemplated by the Advisory Committee Notes to Rule 701 of the Federal Rules of Evidence (*Echo, Inc.,* 661 F.3d at 965, *citing Titan Int'l, Inc.,* 533 F.3d at 550, 560; *Von der Ruhr,* 570 F.3d 858, 862 ["In the realm of lost profits, lay opinion testimony is allowed in limited circumstances where the witness bases his opinion on particularized knowledge he possesses due to his position within the company."].).

The United States Court of Appeals for the Seventh Circuit affirmed the grant of summary judgment in favor of Echo (*Echo, Inc.,* 661 F.3d at 969). The court ruled that the district court correctly excluded the president's opinions regarding both the calculation of gross profits and gross sales (*Id.* at 965-966).

As to gross profits, the *Echo* court noted that regardless of whether the president's opinions constituted expert testimony, the president's decision to exclude one division's sales and profits from the calculation of total corporate gross profits must be stricken because it rested on nothing more than his "say-so" rather than a statistical analysis or any analysis for that matter (*Echo, Inc.,* 661 F.3d at 965). Including this division's profits proved fatal to TMI's contention as part of its franchise claim that 50 percent or more of its total gross profits were attributable to its Echo business (*Id.*).

Turning to the gross sales analysis, the court determined that the affiant in his role as corporate president likely *could* assess commissions received from Echo for facilitating sales to an Echo house account when calculating TMI's total sales (*Echo, Inc.,* 661 F.3d at 966). However, the court concluded that it was inappropriate for TMI's president to claim the entire revenue from such sales within the calculation of TMI's total sales when the commission actually received by TMI for facilitating such sales was but a small fraction of the total sales amount (*Id.).* The court found that the president's affidavit thus had overstated the percentage of TMI's gross sales attributable to its sales of Echo products, which was well below the 50 percent threshold required under the Connecticut Franchise Act (*Id.*).

Conclusion

This is not to say that business owners and executives cannot provide any lay financial opinions. For example, in addition to the lost profits cases cited above, in one recent case a former financial accounting manager was allowed to organize business records and information into charts and spreadsheets, but she was not allowed to interpret the data summarized or offer an opinion on the ultimate issue before the court (*In re Furr's Supermarket*, 373 B.R. 691, 704 [10th Cir. BAP 2007]). Likewise, a business owner or executive is sometimes able to testify as to the value of a company asset, such as particular inventory (*See, e.g., Twenhafel v. State Auto Prop. & Cas. Ins. Co.*, 581 F.3d 625, 630 [7th Cir. 2009]).

But, on the whole, litigants must tread very carefully when relying upon lay opinion testimony concerning complex financial or valuation opinions. Although the Advisory Committee Notes to Rule 701 explain that a business owner or officer is allowed to testify to the value or projected profits of the business without being qualified as an expert, in many cases, opinion testimony relying on this exception to Rule 702 has been rejected by the federal courts. There is often a fine line between knowledge particular to one's employment duties and specialized knowledge deemed to fall within the realm of experts. Also, even if the lay witness happens to possess expert qualifications, the failure to timely disclose the witness as an expert and submit an appropriate expert report pursuant Rule 26(a)(2) of the Federal Rules of Civil Procedure may preclude the admission of the witness's opinion testimony (*See, e.g.*, Fed.R.Civ.P. 26[a] [2]; *Echo, Inc*., 2011 WL 148396, at *4, 84 Fed.R.Evid.Serv. 692 [plaintiff failed to disclose its president as an expert in accordance with pre-trial deadlines and there was no basis in record to conclude he was an expert in financial accounting.]). Finally, when it comes to financial analysis, federal courts are very reluctant to admit lay opinion testimony which includes *interpretive analysis* of the underlying data (*See., e.g., Zenith Electric Corp. v. WH-TV Broad Corp.,* 395 F.3d 416, 420 [7th Cir. 2005] ["Rule 701…does not assist [plaintiff], because [the disputed testimony] depends upon inferences to be drawn from the raw data, rather than these data…themselves."]; *Echo, Inc*., 2011 WL 148396, at *3-4, 84 Fed.R.Evid.Serv. 692 [striking from evidence opinion testimony of plaintiff's president containing "interpretative decisions" concerning plaintiff's financial statements.]).

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Red Flags in Financial Analysis: A Case Study

By Colleen Vallen, CPA, CFF

I have specialized in consulting for over 15 years working on both forensic accounting and litigation consulting engagements. I was retained to analyze the financial impacts and potential damages to a business (let's call it "ABC"). ABC was in a dispute with another company (let's call it "XYZ") that involved breach of contract allegations among other issues.

At the start of the engagement, I was provided with financial documentation regarding ABC's historical financial performance. During the initial analysis, I identified that the financial records of ABC contained inconsistencies and red flags[1]. While these findings do not necessarily indicate an error, omission, or fraud situation, I discussed the inconsistencies and red flags with my client and the client expanded the scope of my engagement to conduct further analysis of these findings. Generally, financial statement fraud focuses on five areas—revenue recognition, expense recognition, asset valuation, hidden liabilities, and disclosures. In this matter, based on my initial analysis, the expanded scope focused on revenue recognition issues.

One test I performed was a comparative analysis of ABC's income statements for a five-year period, Year 1 to Year 5. Analysis of these income statements identified that revenue significantly increased in the fifth year. ABC had flat to minimal growth in the four-year period, Year 1 through Year 4, then revenue increased over 30 percent in Year 5. Analysis of ABC's forecast for Year 5 indicated ABC had expected minimal growth in revenue in that year.

Overstating revenue is a common type of financial manipulation. The growth in ABC's revenue was a red flag as it was unexplained, inconsistent with prior years, and inconsistent with ABC's financial forecast. I analyzed ABC's monthly income statements and noted that the company generated a significant portion of Year 5 revenue November and December, the end of ABC's financial reporting year. Complex transactions or significant transactions near year-end are another red flag. Analysis at the transactional level identified the revenue increase in November and December was related to two specific contracts, Contract A and Contract B.

I also obtained ABC's balance sheets and performed a comparative analysis of certain assets and liabilities. Specifically, I noted that accounts receivable increased in November and December, corresponding with the increase in revenue for the period. However, subsequent data showed that the accounts receivable were not being collected in the normal course of business and overall accounts receivable continued to grow. Increased revenue without corresponding cash flow is another red flag.

I researched ABC's market and industry. While companies do not always move in tandem with their market or their industry, benchmarking can be a valuable tool in certain contexts and can identify additional red flags. I found that ABC's significant growth in revenue was not in line with ABC's market or its industry. Research indicated flat to minimal revenue growth in both ABC's market and its overall industry. ABC's out-performance of its market and industry in Year 5 was another red flag.

Although multiple forensic procedures were performed, I was unable to identify any basis for ABC's significant revenue growth in Year 5. I arranged to interview ABC personnel to obtain their understanding of the overall revenue increase and to specifically discuss Contracts A and B. I wanted to understand why revenues increased during the last quarter of Year 5 since the increase was inconsistent with ABC's performance in prior periods, the current year, Year 5 forecast, and industry benchmarks. If a reasonable basis existed for the revenue growth, it should be easily explained. Did ABC obtain a significant new client or contract? Had ABC developed a new proprietary product? I wanted to understand why accounts receivable patterns had changed resulting in larger than normal receivables. Of particular interest was the increase in accounts receivable over 90 days old. I wanted to know what caused ABC's inability to timely collect cash.

I interviewed ABC's personnel. After meeting with several individuals, I recognized that the revenue was overstated in November and December, and, as a result, overstated for the year. I learned that Contract A was for a 12-month period; however, all revenue related to that contract was recorded in November and December. The revenue should have been recorded as earned over 12 months covering two separate years. Contract B was a fictitious contract and services were never provided related to this contract. Consequently, accounts receivable were not being collected based on this advance revenue booking and on the fictitious customer.

Forensic accounting skills added value to this assignment. I identified certain red flags in the financial documentation and discussed them with the client. As a result, the scope of the engagement was expanded and the red flags were addressed. I then proceeded with my damages calculation considering the impact of the information gathered.

Colleen Vallen, CPA, CFF, is a partner in Citrin Cooperman's Valuation and Forensic Services practice. She has more than 16 years of experience in the field of forensic and investigative accounting and litigation support. Colleen has focused her attention on forensic and fraud investigations, the preparation of financial damage analysis and litigation support. She is experienced in the analysis, investigation and review of financial documents and the preparation of expert reports and also serves as an adjunct professor at Villanova Law School and a member of the Forum of Executive Women. She can be reached at (215) 545-4800, ext. 4110 or cvallen@citrincooperman.com.

1 Red flags are indicators that fraudulent activity could exist; they are not absolute, but should be investigated to ensure fraudulent activity is not present. See for example http://nc-cherokee.com/internalaudit/files/2011/01/red-flags-for-fraud.pdf

The Litigation Services Handbook

Edited By: Roman L. Weil, Daniel G. Lentz, David P. Hoffman

Reviewed by Michael D. Pakter, CPA, CFF, CGMA, CFE, CVA, MAFF, CA, CIRA, CDBV

We recently warmly welcomed into our office the Fifth Edition of the *Litigation Services Handbook, The Role of the Financial Expert,* Edited by Roman L. Weil, Daniel G. Lentz, and David P. Hoffman, published by John Wiley & Sons, Inc. ("the Handbook"). Our fourth edition had been yellow highlighted, post-it noted, copied, and generally picked over until the seams had frayed and the pages curled. So now the dog-eared and beat up green copy of the Fourth edition has been retired from service and unceremoniously replaced by the brand-spanking-new, shiny black cover of the Fifth Edition. Was it worth the wait? Yes, I believe it was.

The Handbook includes several new chapters, incorporates a fresh look at some existing chapters by new authors, and carries forward some existing chapters that have been refreshed by the original authors to assure inclusion of the most current and relevant information on each topic. Each of the nearly 40 chapters has authors—accountants, economists, academics, and litigators—who are leading expert in their fields.

There are more than 70 contributors to close to 40 chapters in seven sections each addressing a different practice area or set of functional tools. The three editors of the Handbook are:

1. **Roman L. Weil**, PhD, CMA, CPA, CFA, is an emeritus faculty member of the Chicago Booth School of Business. He is currently the visiting professor at the Stern School of Business at NYU and program fellow at Stanford Law School.
2. **Daniel G. Lentz**, CPA, CFE, MBA, is the America's Leader of the Dispute Services team with Ernst & Young's Fraud Investigation and Dispute Services practice.
3. **David P. Hoffman**, CPA CFF, CFE, is a partner in the Fraud Investigation and Dispute Services practice in Ernst & Young's Atlanta office. He provides business and financial advice to attorneys, lenders, companies, and individuals throughout the investigation, litigation, and commercial dispute process.

The Fifth Edition of the Handbook has a number of changes from previous editions. For the first time since its original publication, professionals from Ernst & Young LLP's Fraud Investigation and Dispute Services have assumed leading editorial responsibility for the selection of material for inclusion. That team worked closely with the book's editors and the chapter's authors to freshly evaluate content and to improve the structure and organization of the previous edition while retaining the highest-quality work from the preceding authors and editions. One criticism of the Handbook would be my concern that placing so much editorial responsibility into the hands of one public accounting firm may, in time, impair the diversity in professional viewpoints for which the Handbook is currently so well known.

The Handbook has a detailed table of contents and index. Part I, which deals with the litigation environment, adequately explains the issues inherent in dispute resolution and the complexities of serving as a financial expert in litigation. Part II explains how to develop a damages analysis, teaches "how to" develop damages theories and models, and includes sections on causation and expert testimony. Part III of the Handbook covers litigation tools and techniques. Part IV deals with ancillary issues in damages such as prejudgment interest, punitive damages, and the tax treatment of damages awards. Part V covers intellectual property, ownership and business failure, regulatory litigation, construction and real property disputes, and other civil litigation issues, and Part VI covers criminal matters and investigation. The Handbook concludes with Part VII, which covers family law services.

The Handbook contains an extremely useful chapter on *ex ante* versus *ex post* damages calculations. A good amount of emphasis is placed on statistics—both the use of statistical sampling in litigation and the statistical estimation of incremental cost from accounting data and econometric analysis. Additional chapters provide guidance on estimating the cost of capital, business valuations, business interruption insurance claims, lost earnings of individuals, and expert analysis of class certification issues.

The sections of the Handbook dealing with civil litigation are especially useful. The intellectual property subsection deals with both patent and non-patent damages measurements as well as royalty examinations. The ownership and business failure subsection deals with merger and acquisition transaction disputes, troubled businesses, and bankruptcy. The regulatory litigation subsection deals with federal security acts, securities class certification, antitrust, and federal contract disputes. Other subsections include construction claims, real estate litigation, accountant liability, executive compensation, employment litigation, bank failure and directors' and officers' litigation. There really is something here for all litigation service providers.

Each chapter of the Handbook follows a similar format—the contributors are listed, followed by a more detailed table of contents specific to the chapter, a list of cases and then the text itself. There are more diagrams than in the Fourth Edition, which serve to break up the text, making review easier and more interesting. Footnotes are thorough and case extracts are succinct and meaningful. Some chapters include appendices providing detailed and useful information. For example, the chapter on econometric analysis includes a detailed update on case law. The appendix lists the issues, the case type, the name of the litigated matter, the citation and clear quotes/comments on the issue. Extracted in Figure 1 is a sample of the presentation of the acceptance of statistics and regression analysis in age discrimination cases.

The Handbook makes generous use of tables and charts. Extracted in Figure 2 is the chart (Exhibit 5-1) explaining the difference between the *ex ante* and the *ex post* approaches in litigation.

The Handbook doesn't stop with the basics, but delves into the detailed issues the litigation services provider needs to consider in his or her work. Continuing to use *ex ante* and *ex post* as an example, the text's discussion continues dealing with the mechanics and applications of each analysis, the issue debated and the conclusion to be reached. The appendix to the *ex ante/ex post* chapter lists and discusses both the case law supporting *ex ante* analysis and the case law supporting *ex post* analyses.

The cases that reflect court decisions supporting *ex ante* analyses are listed in chronological order and note that those reflect that breach

Figure 1

Issue	Case Type	Matter	Cite	Quotes/Comments
Acceptance of Statistics and Regression	Age Discrimination	*Durwood Currier v. United Technology Corp.*	326 F. Supp. 2d 145, 2004, U.S. District Court for the District of Maine	"Statistical analyses are admissible in disparate treatment cases 'unless they are so incomplete as to be inadmissible as irrelevant' (*McMillan v. Mass. Society for the Prevention of Cruelty to Animals*, 140 F.3d 288, 303 (1st Cir. 1998)."

Figure 2

	Ex Ante	*Ex Post*
Information	Use information known or knowable on the date of the unlawful act; ignore subsequent events.	Use all available information.
Measurement Date	Date of unlawful act.	Date of analysis.
Discounting	Discount all cash flows back to the date of unlawful act using a rate that reflects the risk of the asset. Calculate prejudgment interest on this amount from the date of the unlawful act to the date of judgment using a rate reflecting either the plaintiff's cost of capital, or the defendant's debt rate.	Bring past cash flows (i.e., damages) to present value using an interest rate reflecting either the plaintiff's cost of capital or the defendant's debt rate. Discount future cash flows (i.e., damages) to the date of judgment.

of contract damage measures usually employs *ex ante* approaches. The cases containing *ex post* analyses by courts are listed by subject matter in chronological order and note that decisions related to antitrust, patent infringement, damage to property by government and legal malpractice cases have used *ex post* analyses.

If you make one new purchase of a professional text this year to read or merely add to your physical library as a resource for you and/or your associates, this is the text to buy. I often cite to the Handbook in my expert reports. It is a resource well worth owning and using. Your copy will soon be dog-eared and beat up, too.

The *Litigation Services Handbook* is published by John Wiley & Sons, Inc. and is available at www.NACVA.com. Click on "Member Login," enter your NACVA member number and password, then click on the Wiley Bookstore. NACVA members receive a 15 percent discount as well as free UPS ground shipping.

Michael D. Pakter has been recognized by courts and arbitral bodies as an expert in accounting, economic damages, financial analysis and business economics. Mr. Pakter focuses on financial analysis, forensic accounting, economic damages determination, valuation issues, and financial investigations. Mr. Pakter may be contacted at mpakter@litcpa.com.

Book Review

The Dark Side of Valuation

By Aswath Damodaran, PhD

Reviewed by Michael Blake, CFA, ASA

Dr. Aswath Damodaran has become one of the leading academic voices in the business valuation community. In particular, his writings and research have focused on the valuation of assets that don't quite fit tried and true valuation models. Damodaran has an unusual ability to translate quantitative methods for a non-mathematician audience. *The Dark Side of Valuation* ("*Dark Side*") clearly resonates with Damodaran's creative identity.

The Dark Side of Valuation has nothing to do with "Sith Lords" or evil emperors. Rather, the "dark side" refers to critical valuation considerations that are overlooked and/or underrepresented when a valuation analyst either tries to shoe-horn an unconventional asset into a conventional valuation model, or simply ignores the unconventional nature of the asset altogether. Some of these errors might be called "stupid appraiser tricks." In contrast, Damodaran also offers a "light side" perspective, illustrating how he would treat each particular valuation challenge.

Much of business valuation theory hinges on certain assumptions about economics and financial markets. In many, if not most valuation assignments, those (simplifying) assumptions do not interfere with the credibility of the valuation analysis. However, there are always the less conventional tasks—the five to ten percent of engagements where those simplifying assumptions are too far off base from reality to be ignored. Damodaran's book presents paths to resolve those "don't quite fit" valuation problems with arithmetical concepts. In this respect, many valuation practitioners will find the content appealing. *Dark Side* addresses valuation challenges ranging from valuing startups, distressed companies, and foreign-based companies, to valuing financial services companies. *Dark Side* also devotes significant space to a discussion of the "risk free" rate, which lies at the heart of income-based valuation approaches as well as basic option theory.

The book's overarching themes are:

- Understanding a business' life-cycle stage is critical to assessing its value.
- Valuation practitioners must embrace more basic statistical techniques, such as linear regression.
- The need for ongoing investment into a company must be considered in the valuation process.
- Certain valuation problems cannot be adequately addressed with conventional ("static") techniques, such as discounting cash flow and/or examining market multiples of similar companies. Rather, more dynamic models, such as those using real options theory or simulation techniques, must be called into service.

In addition to the book's outstanding content, *Dark Side* shines in its presentation. For each key concept addressed in the book, that concept is applied in a case study involving an actual company. For those of us that find it challenging to simply read a finance book and instantly convert theory into practice, the case studies are wonderful opportunities to see how the concepts might be implemented in an actual appraisal assignment and to test whether or not we fully understand the chapter's content.

The lifecycle discussion could have been a book unto itself. Damodaran offers a chapter each on startups, growth companies, mature companies, and end-of life companies. He also offers a chapter on cyclical and commodity companies, which connects well with the company life-cycle analyses. The fact that companies in each stage are different and present different valuation challenges is nothing new. What is novel is the way that Damodaran breaks down a company in each stage and presents a step-by-step process for addressing the challenges presented by each situation.

One shortcoming of *Dark Side* is contained in Damodaran's discussion of valuing startup companies; he presents a top-down cash flow modeling perspective. Many venture capitalists would dismiss such a model and likely assign a value of zero to a company that used such a model for its financial and operational foundation. Damodaran also missed an opportunity to discuss valuation of alternative stock claims, such as preferred stock, and how specific terms play as important a role in share value as the nominal value itself. However, to be fair, it was only one chapter and there are books (and AICPA Practice Aids) that offer some of the detail that I found lacking.

A particularly strong part of the book is what Damodaran calls "Relative Valuation," which most practitioners refer to as "the Market Approach." In particular, Damodaran illustrates the deceptive difficulty in presenting a market-based valuation case.

When I took piano lessons, my teacher would tell me, "Everyone can play Chopin—few can play Chopin well." To paraphrase, everyone can use the Market Approach, few use the Market Approach well. Litigators take note—there's a lot more to the Market Approach than simply researching some comparables, crunching the valuation ratios and multiplying by the numbers on the financial statements. The Market Approach requires the application of meticulous detail to adjust the comparables so that they more closely resemble the subject company. Damodaran does a thorough (if not exhaustive) job of illustrating how valuators should consider and approach such adjustments. The one caveat for the reader, though, is that *Dark Side* only discusses the use of guideline public companies, not private company transactions.

I was excited to read *Dark Side's* treatment on the valuation of foreign assets, in particular, those of emerging markets. As a business valuation practice becomes more global, understanding foreign asset valuation will be increasingly important. I found Damodaran's perspective interesting—relying on credit default spreads on bonds to estimate the incremental equity risk premium associated with holding equity securities in a particular country (what some call "sovereign risk"). While I don't disagree with the practice, I wonder if it isn't simpler to rely upon Ibbotson's *International Cost of Capital* data, which provides arithmetic and logarithmic CAPM return data, to quantify sovereign risk. Further, if you don't have access to a Bloomberg terminal, those credit default spreads are difficult to locate. If there is a reason that the Ibbotson data is inadequate, it would have been helpful if *Dark Side* addressed that issue.

As an intellectual property appraisal specialist, I appreciated Damodaran's treatment of intangible assets and intangible-based companies. *Dark Side* includes a full chapter on the subject, and much of the chapter is devoted to applying simulation or options theory to intellectual property valuation. I applaud this treatment because the nature of intellectual property (especially technology and patents) is such that conventional, static models do not always readily capture the inherent uncertainty surrounding the development and outcomes of those assets.

It is worthwhile to add a word on the discussion of re-investment. *Dark Side* does a terrific job of raising and emphasizing an often overlooked issue in valuation. It is easy to take growth for granted. We are presented with projections and, if a compelling case is made by the creator of those projections, we might accept them as credible and rely upon them for our analysis. In rare cases, growth is not free, and goes beyond consideration of debt-free working capital to grow revenue. Growth can require technology updates, new or expanded factories and new equipment investments. The need to analyze growth trajectories versus capacity versus the cost to add capacity is critical in valuation. Failing to specifically account for ongoing investment requirements puts the appraiser at risk of overvaluing the company by omitting required cash outlays. Failing to do so also undervalues scalability—the extent to which growth can be achieved with minimal investment. The need to pay for growth is a point that *Dark Side* makes over and over again.

Dark Side is a terrific field guide for valuing those businesses that don't quite fit the traditional models. The presentation is clear, the case studies are helpful, and there are even some nice data tidbits that are helpful references. *Dark Side* talks a lot about valuation subjects that are not often discussed. Damodaran makes a clear distinction between robust analysis (light side) and oversimplification (dark side). If you want to improve your understanding of the concepts discussed here, then the book is a very worthwhile read. "Give in to the *Dark Side*."

The Dark Side of Valuation is available from Amazon.com at a cost of $42.87 (hardcover) or $32.99 (Kindle).

Michael Blake, CFA, ASA, is Director of Valuation Services at Habif, Arogeti & Wynne in Atlanta, Georgia, where his practice focuses on transaction support and expert testimony. A second generation business appraiser, Mr. Blake describes himself as a "recovering venture capitalist and investment banker". Mr. Blake is also co-founder of StartupLounge, a nonprofit providing support to the startup community in Georgia, and the Ukrainian American Chamber of Commerce of Georgia. His blog (www.unblakeable.com) covers topics involving the lessons in professional sports that translate into the business world. Mr. Blake's twitter handle is @unblakeable.

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E-mail: NACVA1@NACVA.com

Payment Method:

❑ Check #: _________ ❑ VISA ❑ MasterCard ❑ AMEX ❑ Discover ❑ Diners Club

Credit card #: ______________________________ Expiration Date: ____________

Authorized Signature* ____

Credit card billing address: ❑ Same as above, or

Address: ____

City: ____________________ State: ___ ZIP: ______________________

* Your signature will authorize the CTI/NACVA or the IBA to confirm your registration via e-mail and/or fax and authorize the CTI/NACVA or the IBA to use either medium for future communication. CTI/NACVA or the IBA will not disclose or share this information with third parties to secure confidentiality.