

Advocate'sEDGE

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Computing reasonable royalties

Court rejects deviation from “classic way”

Daubert challenges continue to trip up qualified financial experts who nonetheless present unreliable testimony based on questionable methodologies. In a recent patent infringement case, *Sloan Valve Co. v. Zurn Industries, Inc.*, for example, the judge excluded all of the testimony of the plaintiff’s damages expert.

EXPERT FLOATS DAMAGES COMPUTATION

The patent at issue in the case covers flush valves for plumbing fixtures like toilets. The valves include improvements that allow users to select one of two flush volumes based on the type of waste.

In addition to problems with the foundation of the expert’s analysis, the court stated that his methodology was “flawed and unreliable.”

Sloan Valve Company, which owned the patent, sued Zurn Industries for infringement. Sloan’s damages expert opined that it was entitled to \$9 million in damages, but Zurn’s expert put the damages at \$1 million. Zurn sought to exclude Sloan’s expert’s testimony.

COURT PLUMBS THE ROYALTY RATE

The court noted that calculation of a reasonable royalty requires determination of two separate figures:

1. Royalty base, or the revenue generated by the infringement, and
2. Royalty rate, which is the percentage of that revenue owed to the plaintiff.

Zurn challenged the second of these, Sloan’s royalty rate. It argued that the company’s expert failed to limit his per-unit royalty rate to the value attributable to the patented invention. Instead, it contended, the expert improperly included profits earned on both patented and unpatented features of the accused product. The product was composed of flush valves, packages — toilet valves, bowls and related accessories — and handles.

The court found that Sloan presented a credible argument and evidence that the patented technology was the basis for a consumer’s willingness to pay a premium for a manual dual flush valve over a manual single flush valve. The single valve was identical to the dual valve in every respect except for the patented technology. Profits from valve sales, therefore, were includable in the royalty rate.

However, neither Sloan nor Sloan’s expert presented any evidence that the dual flush valve drove the demand for packages or handles. Further, the valves didn’t constitute a functional unit in combination with toilets, handles and related accessories. Liability doesn’t extend to include items that were sold with the infringing device only as a matter of convenience or business advantage.



Zurn also attacked the expert's inclusion of profits from the sale of nonpatented collateral products like faucets in the royalty rate. The court found that, rather than including the *quantitative* amount of his estimate of lost sales of collateral goods in the rate, the expert should only have considered the *qualitative* effect those sales would have on a negotiated royalty. His approach in effect created an "overly inclusive royalty base" by including all revenues from the estimated lost sales.

ROYALTY APPROACH CLOGS CALCULATION

In addition to problems with the foundation of the expert's analysis, the court stated that his methodology was "flawed and unreliable." He didn't follow the "classic way" to determine a reasonable royalty amount — multiply the royalty base by the royalty rate. Rather than using revenue generated by infringement as his base, he used the number of infringing units Zurn sold. And he applied a per-unit royalty rate, not a percentage.

The expert identified the base as the number of infringing units and the rate as a dollar figure. In doing so, he improperly incorporated into his estimate:

- ▶ The full value of Sloan's lost profits based on the number of infringing products sold,
- ▶ The full value of collateral goods that he asserted would have been sold with the product, and
- ▶ Additional lost profits he claimed Sloan would have made if not for price erosion.

See "Price erosion theory doesn't hold up" at right.

DON'T FLUSH YOUR CASE AWAY

One of Zurn's attorneys reported that the expert's exclusion had "dramatic implications for Sloan, which faced the prospect of a trial with no damage expert to counter Zurn's." As a result, the attorney said, Sloan settled the case shortly after the exclusion, presumably for

PRICE EROSION THEORY DOESN'T HOLD UP

The plaintiff's damages expert in *Sloan Valve Co. v. Zurn Industries, Inc.* (see main article) attributed more than half of his reasonable royalty rate to what he called "price effect." This is, essentially, price erosion, or the theory that, "but for" infringement, the plaintiff would have sold its product at higher prices. The court faulted the expert's inclusion of the so-called price effect in his analysis on several bases.

For example, it found that the expert lacked the proper foundation to conclude that the plaintiff would not have suffered any reduction in sales at its intended price. He assumed the plaintiff would have made every sale that the defendant made despite the intended higher price.

Moreover, the price effect was twice as large as the value the expert attributed to the patented product. The court concluded, therefore, that the expert was attempting to use the label "price effect" to claim lost profits without making the required but-for showing.



significantly less than the amount its expert had proposed. Don't let this happen to you. Retain qualified experts who use reliable, preferably "classic," methods. ▶

Secrets of solid copyright infringement damages

Copyright damages can be some of the most complicated calculations damages experts make. Copyright holders generally are entitled to recover actual damages suffered as a result of infringement — measured by market value or lost profits.

Although the market value approach is relatively straightforward, most experts use the lost profits approach. It involves multiple elements that vary depending on the circumstances of the case.

FIRST STEP

To calculate lost profits, the first step generally is to determine lost sales. These may be based on one or more of several factors, starting with the infringer's sales. The copyright holder may allege that, if not for the infringement, its sales of the protected work would have increased in an amount equal to the infringer's sales. However, unless the holder's and infringer's products are comparable in terms of price, customers, distribution, packaging and advertising, a court will likely reject this approach.

Another potential factor in determining lost sales is overlapping customers or diverted sales. This theory holds that the copyright holder lost some of its former customers to the infringer. In other words, if not for the infringer, those customers would have purchased from the copyright holder. Comparability, such as a common customer base, must again be established.

Experts also consider sales projections. If the copyright holder has maintained records of its projected and actual sales for earlier financial periods, it may be possible to establish a historical correlation between the figures. This correlation can support the use of sales projections as a basis for measuring lost sales. The accuracy of past



projections is insignificant as long as the relationship between the projections and the actual past sales remains stable.

Damages experts further review sales records. Sales of different products may also indicate lost sales. Sales during periods of both infringement and noninfringement, and in both infringed and noninfringed market segments, are analyzed to establish benchmarks for projecting the product mix relationships in the absence of the infringement.

Courts might also give weight to changes in the size of the market, sales of alternative products and related market trends. By presenting multiple approaches that reach similar amounts, copyright holders increase their chances of prevailing. Defendants can also present multiple approaches to support their proposed damages calculations.

OTHER FACTORS

Several other factors bear on lost profits calculations and the determination of actual damages. For example, after the amount of lost sales is determined, a deduction must be made for the costs and expenses that the copyright holder would have incurred to generate those sales. Conversely, the holder's lost interest or earnings on the lost sales may be added to the amount.

In addition, the Copyright Act allows the copyright holder to recover the infringer's profits that were attributable to the infringement and not already taken into account in the lost sales calculation. But some of the infringer's sales may be due to factors other than the infringed work.

It may be necessary to determine the portion of the product's value that's provided by the infringed work. Or, the infringed work may be closely intertwined with other product elements, complicating the calculation.

FINANCIAL LIMITS

Copyright holders may receive statutory damages if the court finds insufficient evidence to support a calculated award — or if the holder elects statutory damages in lieu of actual

damages. These damages, however, carry statutory per-infringement caps: not less than \$750 or more than \$30,000 per infringement.

Where the infringer has willfully infringed a copyright, a court may increase the award of statutory damages to a sum of not more than \$150,000. However, where the infringer proves that it wasn't aware, and had no reason to believe, that its acts constituted copyright infringement, the court may reduce the award of statutory damages to a sum of not less than \$200.

GIVE ENOUGH TIME

If your clients are embroiled in copyright matters, don't wait before enlisting a damages expert. The complexity of damages calculations requires time and expert attention. ▶

Option pricing models help experts calculate DLOMs

The valuation of noncontrolling interests in a business can come up in gift and estate planning, charitable giving, and divorce contexts. A critical step is determining an appropriate discount for lack of marketability (DLOM). One way to make that determination is to use option pricing models (OPMs), which base the discount on the cost of an option to sell shares in the subject business. Experts frequently use the following models.

CHAFFE MODEL

The Chaffe model, first published in 1993, appears to be the root from which OPMs stem. David Chaffe theorized that someone who holds restricted or nonmarketable shares and purchases an option to sell those shares at the market price (a put option) has effectively

purchased marketability for the shares. Thus, the cost of the put option equals the DLOM (option cost / stock price = percentage DLOM).

Chaffe asserted that small closely held companies will likely have stock price volatility of at least 60%. He concluded that, for a closely held stock with at least a two-year required holding period and a volatility rate of 60% to 90%, the DLOM is 28% to 41%. He cautioned, though, that his findings should be considered as a minimum DLOM.

LONGSTAFF MODEL

The Longstaff model, introduced in 1995, produces a ceiling for the DLOM based on a floating strike lookback put option. (Strike is the price at which a holder can exercise an option.) Unlike Chaffe, this model captures the DLOM component

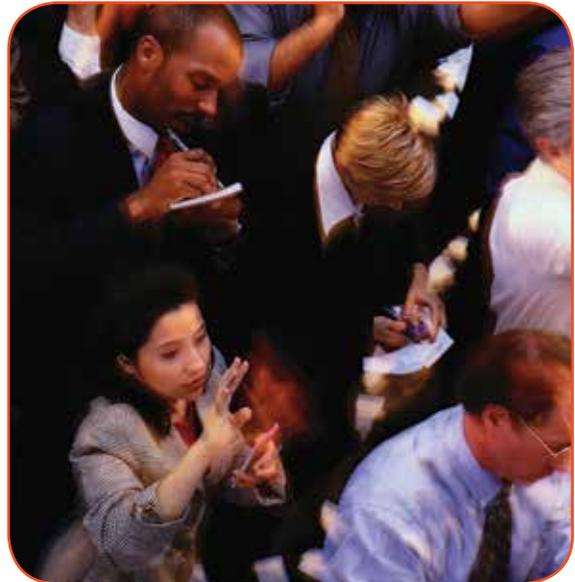
that relates to an investor's inability to realize an intermediate gain quickly and efficiently.

With a lookback option the holder can, at the end of the option's life, retroactively exercise it at the highest price. The Longstaff model assumes an investor has a single-security portfolio, perfect market timing and trading restrictions that prevent the security from being sold at the optimal time. It estimates the appropriate DLOM for a two-year holding period and 30% volatility to be 39% and, for a five-year holding period and 30% volatility, 66%. Critics, however, have argued that the model overstates the discount.

FINNERTY MODEL

John Finnerty published his option pricing model in 2012. It bases the DLOM on the value of the average-strike put option. In contrast to Longstaff, the model doesn't suppose the investor has perfect market timing. Instead, Finnerty assumes the investor would, in the absence of any transfer restrictions, be equally likely to sell the stock at any time.

Assuming a two-year holding period, Finnerty posits a DLOM for non-dividend-paying stocks that ranges from 3.2% to 29.2%, from lowest to highest volatility. A lower discount would apply to stocks that pay dividends. However, Finnerty



noted that his model tends to understate the DLOM when volatility is less than 45% or more than 75%, especially for longer holding periods.

NOTE A CAVEAT

OPMs were originally developed to calculate the price of options for publicly traded stock, not private companies. As a result, they don't consider some factors that could reduce the marketability of shares — such as contractual transferability restrictions — and might therefore understate the DLOM. ▶

How to disable disability fraud

Predictive analytics and forensic tools are critical

The government isn't the only organization that needs to worry about disability fraud. Many employers provide private disability insurance policies. Self-employed, and even some traditionally employed, individuals also purchase private disability coverage.

Fraud perpetrators can file false claims under any of these types of policies, leaving insurers

on the hook — and the rest of us paying higher premiums. Fortunately, fraud experts have techniques for detecting such fraud.

TYPICAL SCENARIOS

Disability fraud can go down in several ways, regardless of whether the claims are made under government programs or private insurance. For

example, an individual who had a legitimate disability may continue making claims after the disability has abated. Or, a perpetrator might fake an injury.

A person's level of pain can't be measured objectively, after all. And unethical medical providers are more than willing to provide false documentation, either to obtain a share of the proceeds or to seek reimbursement from health insurers.

PREDICTIVE ANALYTICS

Several tools have proven effective in detecting false disability claims, including predictive analytics. Private insurers, and even government agencies, are turning to predictive analytics to detect disability fraud. This tool extracts information from existing data sets to determine patterns and predict future outcomes.

In the case of disability fraud, analytics can identify red flags (for example, a disproportionate number of claims involving a specific health care provider) to allow for further investigation before a potentially fraudulent claim is paid. Such early detection holds obvious advantages over the historical "pay-and-chase" model.

To take an example, private insurer Unum Group uses predictive analytics to continuously monitor disability insurance claims. Its model integrates claims data from many sources and analyzes multiple data points simultaneously to identify subtle variations and patterns indicative of potential fraud and the need for further investigation.



OTHER TOOLS

Experts have additional tricks up their sleeves. Forensic accounting techniques, for instance, can be useful when evaluating claims for income. It's not unusual for a claimant to report preinjury income higher than he or she actually earned or postinjury income lower than received. A forensic accountant will review income and expense documentation to obtain an accurate picture of the claimant's losses. Take a self-employed fraud perpetrator who owns his business's property. He might try to hide income by paying above-market rent, so a forensic accountant would look for a rent increase. An expert might also compare the subject's business expense ratio against industry averages.

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Social media is becoming increasingly useful for ferreting out all types of fraud, including false disability claims. You'd think crooks would have learned by now, but apparently they haven't. On the social media accounts of claimants, fraud investigators often find photos of sports participation or other evidence that contradicts supposed physical limitations. Even when fraud perpetrators are smart enough to leave such evidence off their own social media accounts, experts often find it on their friends' and family members' accounts.

AN UNFAIR FIGHT?

While the methods of committing disability fraud aren't subject to much change over time, the techniques for detecting it continue to evolve. With qualified experts on their side, those footing the bills have a better chance of avoiding being duped. ▶

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- ▶ Fraud investigations
- ▶ Lost profit analysis
- ▶ Securities claims
- ▶ Shareholder derivative actions
- ▶ Purchase/Sales agreement warranty claims
- ▶ Legal and accounting malpractice claims
- ▶ Intellectual property analysis
- ▶ Other economic damage claims

Arnie & Company has an especially strong depth of experience in the analysis of commercial damages and in conducting forensic investigations. Dennis Arnie is both a Certified Public Accountant and a Certified Fraud Examiner. He has frequently testified as an expert witness in a variety of state and federal courts and various arbitration hearings.

Thanks to the firm's commitment to delivering outstanding service, Arnie & Company has become a trusted advisor to many leading law firms and businesses in the Houston, Dallas, and Austin areas. Our clients include numerous Fortune 500 companies in various industries, as well as significant privately held companies and individuals.

We welcome the opportunity to put our experience and advanced knowledge of commercial damage analysis and forensic accounting to work for you and your clients. Please call us at 713-840-1634 and let us know how we can be of assistance. ▶

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