Valuation *&* Litigation Briefing

Fraud

Using data analytics to help prevent and detect fraud

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Organizations that use proactive data monitoring can reduce their fraud losses by an average of 54% and detect scams in half the time, according to the Association of Certified Fraud Examiners' *2016 Report to the Nations.* Here's insight into how forensic accountants can use data analytics technology to detect patterns and uncover anomalies that may help unearth fraud in real time.

Switch to data analytics

Historically, many organizations have relied on cumbersome manual processes — such as external audits and employee tips — to detect fraud scams. Unfortunately, these methods of detection are inherently reactive — that is, they flag suspicious activity well after the fact. They can also be hit-or-miss. Audit procedures, for example, often rely on sampling, which leaves large amounts of data unexamined.

Advances in data analytics now make it possible to examine enormous amounts of data — both inside and outside an organization — to uncover patterns, relationships, correlations, anomalies and other insights. This technology enables organizations to be proactive in monitoring their activities in or near real time and spotting high-risk or suspicious activities quickly and cost-effectively.

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Fraud patterns

Data analytics helps reveal patterns that would be difficult or even impossible to detect using conventional methods. During the last several years, the U.S. Securities and Exchange Commission (SEC) has used data analytics to detect even the smallest securities fraud offenses. Its so-called "Robocop" program uses automation to quickly sift through enormous amounts of trading data and flag potentially fraudulent activity that warrants further investigation.

Consider insider trading. Traditionally, the SEC has employed a security-based approach, where it launches an investigation based on suspicious activity involving a specific stock or other security. Typically, the agency learns of these activities from news reports or from referrals from the Financial Industry Regulatory Authority (FINRA) about suspicious trading activity leading up to a merger, acquisition or other corporate event that affects the security's price.

Based on this information, the agency searches through billions of lines of data furnished by brokerage and clearing firms to find out who traded the security prior to the event. By the time manual data searches are complete and the traders are contacted, the SEC has tipped its hand, giving traders an opportunity to cover their tracks.

Data analytics in action

How can data analytics help detect and prevent fraud? Here are three real-world examples:

◆ An insurance company used data analytics to uncover a fraudulent claim for flood damage to a car. By including social media data, its system was able to show that the car was out of town on the day the flood occurred.

◆ PayPal uses data analytics to protect its customers against fraud. The company analyzes historical payment data to identify factors that are closely associated with potential fraud, such as the type of device used, country of origin and certain details from user profiles. The company uses this information to create machine-learning algorithms that evaluate each transaction for signs of fraud.

◆ The SEC used data analytics to catch an investment advisor guilty of "cherry picking." The data revealed that, rather than follow his firm's pro rata allocation guidelines, the advisor allocated a disproportionate number of profitable trades to his account or those belonging to someone else with the same last name.

Data analytics allows the SEC to take a more proactive, trader-based approach. This approach sifts through brokerage and clearing firm data to identify patterns, such as traders who trade the same securities. In turn, these patterns may be used to uncover relationships between traders or others with common sources of material non-public information, warranting further investigation. This helps the SEC conduct its initial insider trading investigation secretly, so evidence can be collected before initiating an enforcement action.

In a recent case, the SEC used data analytics to catch a defendant who allegedly traded on material nonpublic information about a pending merger of a pharmaceutical company. The SEC complaint alleged that the investor learned of the merger from a relative who worked for the acquirer.

Baseline trends

The goal of data analytics is to detect potential fraud by spotting anomalies or deviations from "normal" behavior or patterns. To do that, an expert establishes a baseline of nonfraudulent activity to compare to the suspicious dataset.

It may also be possible to identify data known to be associated with fraud. Perhaps fraudulent activity is more likely to occur at certain times of the day, in certain geographic locations, in certain types of accounts or in certain amounts.

For example, suppose a company is concerned about invoice fraud. It determines that fraudsters usually create phony invoices with amounts that are just under the $2,500 approval limit. Data analytics identifies vendors with an unusually high percentage of invoices slightly below this threshold.

Take a proactive stance

The longer fraud goes undetected, the more costly it becomes. By enabling organizations to be proactive rather than reactive in detecting fraud, data analytics helps minimize the damage. ∎

Got IP? Value it with the relief from royalties method

Some of a business's most valuable assets may not show up on its balance sheet. Intellectual property (IP) is an intangible asset. When IP is developed *internally*, it's usually not recorded on a company's financial statements — only IP that's *acquired* from another party is reported as an asset under U.S. Generally Accepted Accounting Principles (GAAP).

The value of IP typically comes into play when IP rights are infringed or when selling the asset or the entire business. Here's an overview of how IP is valued under the relief from royalty (RFR) method.

What is IP?

Businesses may not recognize all of their intangible assets, so the first step is to identify specific types of IP. Most IP generally falls into one of four broad categories:

1. Patents,

2. Copyrights,

3. Trademarks, and

4. Trade secrets.

IP also may refer to trade names, trade dress, brands, computer software and other intangible

assets that fall within, or are closely related to, the four categories listed above.

Why is IP valued?

Almost as numerous as the types of IP are the reasons for valuing it. They include financial reporting (fair value measurements, annual impairment tests); tax compliance (gift and estate taxes, charitable contributions); litigation (damages calculations, shareholder disputes, divorce, bankruptcy); and sale or licensing transactions (mergers and acquisitions, IP sales/licenses).

Under GAAP, companies are required to allocate the purchase price of an acquired company among the tangible and intangible assets being acquired. They also must test acquired goodwill and other indefinite-lived intangibles annually for impairment and write them down if their fair values drop below their carrying amounts.

Testing goodwill for impairment is a complex process. But, in general, the value of goodwill depends on the value of a company's tangible and identifiable intangible assets, including IP. Goodwill is a residual intangible asset; that is, its value is assigned after value has been assigned to all other assets.

To help reduce costs and complexity, private companies may elect a simplified alternative, however. Under this alternative, private companies have the option to amortize goodwill over a period not to exceed 10 years, rather than test it annually for impairment. For companies that elect this option, it's critical to value IP assets accurately from the acquisition date.

How is IP valued?

IP assets can be valued using the cost, market and income approaches. When applied to IP assets,

however, the cost approach may not be effective because valuation experts can't identify and quantify all of the costs involved in creating an IP asset. Moreover, the cost of creation may have nothing to do with the IP's value.

The market approach also may not work because comparable transactional data for IP and other intangible assets is difficult to obtain. Some assets — such as trademarks, trade names or brands — are rarely bought and sold in the marketplace. And even for assets that are sold, such as copyrights and patents, transactional data may not be published.

How does the RFR method work?

The RFR method is categorized as an income-based method (somewhat similar to the discounted cash flow approach). But it also shares some attributes of the cost and market approaches.

Under the RFR method, an IP asset's value is equal to the value of the royalty payments from which the company is relieved by virtue of owning the asset. A valuation expert applies the RFR method by selecting a royalty rate based on available market data for licenses involving similar assets, industries, territories and other characteristics. Then he or she selects an appropriate, risk-adjusted discount rate to determine the present value of the royalty payments.

Typically, this hypothetical license is treated as a perpetual license. To estimate value, the expert calculates the present value of projected royalty payments over a certain period (for example, 10 or 15 years) and then calculates the present value of the residual at the end of that period.

Ready, set, value

Today, many companies rely heavily on their IP assets. So, it's important to value these assets correctly. One tried-and-true technique is the RFR method. We can help you get it right. ■

Transupport, Inc. v. Commissioner

Court rejects compensation expert's "result oriented" approach

In this case, the U.S. Tax Court rejected the testimony of the taxpayer's expert on the reasonableness of compensation paid to four shareholder-employees. The court found that the expert's analysis portrayed a "result oriented" approach, rather than an "independent and objective analysis."

All in the family

Transupport is a C corporation that supplies and distributes aircraft engines and engine parts for military vehicles. In 2005, the 98% owner of Transupport gifted and sold equal amounts of nonvoting common stock to each of his four sons, who were the company's only full-time employees and officers. Each son received a six-figure salary annually.

The IRS concluded that the sons' salaries from 2006 to 2008 were excessive. The main issue before the Tax Court was whether the company's deductions for the sons' salaries were reasonable.

The controlling shareholder had sole discretion over the amount paid to his sons, and he didn't consult anyone else inside or outside of the

company when deciding on annual pay. He considered three factors when setting compensation:

1. Reduction of reported taxable income,

2. Equal treatment of each son, and

3. Percentage ownership of the company's stock.

The sons had no special experience or education to qualify them for their positions. Moreover, because there were no other employees, their duties included menial tasks along with managerial responsibilities. The court noted "repeated examples of the professed ignorance of [the company's] officers concerning matters allegedly within their areas of responsibility."

> *The expert failed to consider evidence that contradicted the reasonableness of the sons' compensation.*

In 2007, the controlling shareholder contemplated a sale of the business and prepared several draft offering memoranda for a prospective buyer. The drafts included a "recast financial summary" in which all five shareholders' salaries were reduced to a "market rate" of $50,000, substantially boosting the company's profits.

Expert vs. advocate

The Tax Court rejected the testimony of the taxpayer's compensation expert. Although the expert was qualified to testify on reasonable compensation, he was hired merely to validate the amounts reported on the company's returns. Specifically, the court found that the expert had:

◆ Ignored evidence that the sons lacked basic knowledge needed to perform their jobs,

◆ Disregarded sources and criteria the expert used in other cases that would have indicated lower reasonable compensation amounts,

◆ Used only one source of data, even though his writings and lectures advocated the use of multiple sources,

◆ Assumed that the company was a manufacturer rather than a wholesaler when selecting the appropriate compensation database, and

◆ Ranked the sons in the 90th percentile of people in "comparable" positions, despite evidence to the contrary.

The expert failed to consider evidence that contradicted the reasonableness of the sons' compensation. He disregarded the equivalency of the sons' compensation, the proportionality of their pay to their stock interests, the disproportionality of the sons' pay to the controlling shareholder's compensation, the failure to use arm's length negotiation to set salaries, the deduction of the excessive shareholder-employees' salaries to reduce taxable income, and the adjustments made to compensation in the draft offering memoranda.

Independence is critical

Transupport illustrates the need for experts to reach independent judgments rather than to merely validate a party's claims. It also demonstrates the willingness of courts to challenge expert testimony that, in their view, disregards objective and relevant facts. In this case, the Tax Court explained, "We know from the factual evidence that the returns were consistently inaccurate and that the deductions were excessive. Thus, the experts' opinions fail a sanity check." ■

Spotlight on damages
Experts shouldn't assume causation

Is causation a legal issue outside a financial expert's body of knowledge? Many attorneys see it this way and expect experts to assume that a plaintiff's theory of causation is correct. However, this assumption severely limits your expert's ability to quantify damages, because damages and causation are inextricably intertwined.

In commercial litigation, there may be many potential causes of a plaintiff's lost profits, apart from the defendant's actions. Examples include economic and industry trends, increased competition, rising costs, product obsolescence, and legal or regulatory issues. If your expert fails to scrutinize these factors and distinguish damages caused by the defendant from other types of business losses, his or her testimony is at risk of being excluded.

Case in point

In *American Aerial Services v. Terex USA, LLC*, a federal district court excluded portions of an expert's lost profits testimony in a *Daubert* challenge. The reason? The expert adopted the plaintiff's causation theory without conducting an independent analysis.

Here, the plaintiff sued the defendant for damages caused by a defective truck crane the plaintiff had purchased for use in its crane rental and steel erection businesses. In addition to lost profits directly attributable to the company's inability to rent the crane, the plaintiff's owner and president theorized that the company had lost overall revenue and steel erection revenue due to problems with the crane.

The president attributed a significant drop in overall revenues to "marketplace awareness that [the company] was no longer in the crane rental business," leading its customers to question the company's financial health. He also developed a "luster effect" theory to explain lost revenues from

the company's steel erection business. According to this theory, the "confidence engendered by having a large piece of industrial equipment opened up business opportunities otherwise not available." Once the crane went out of service, that confidence faded and the company's steel erection revenues began to decline.

The court dismissed the expert's testimony as speculative, noting that he "did not analyze financial data or engage in quantitative analysis to either confirm or dispute [the president's] opinion that the company's increase in revenues in 2012 and decrease in revenues in 2013 were related to the Crane." Similarly, the court believed that the expert's testimony regarding the impact of the luster effect was based on nothing more than the president's unsubstantiated theory.

Cause and effect

Experts can't properly quantify lost profits damages without considering causation. To ensure that your damages theories pass muster in court, ask your experts to independently analyze the link between a defendant's alleged wrongdoing and a plaintiff's damages. ◼