

Viewpoint on Value



January/February 2009

How fraud
affects value —
and valuation

Statistics add value
to appraisals

Less can be more
**When calculations offer
an alternative to valuations**



John M. Leask II CPA, LLC.

Business Valuation Services

765 Post Road, Fairfield, Connecticut 06824
Phone: 203-255-3805 • Fax: 203-380-1289
E-mail: mac@LeaskBV.com • Web Page: www.LeaskBV.com

John M. Leask, II
(Mac)
CPA/ABV, CVA



How fraud affects value — and valuation

Businesses lose an average of 7% of their annual revenues to fraud, according to the 2008 *Report to the Nation on Occupational Fraud & Abuse* issued by the Association of Certified Fraud Examiners (ACFE). In total, the fraud cost to U.S. businesses was approximately \$994 billion in 2008.

Beyond economic losses, fraud brings other adverse consequences, including tarnished public image and deflated morale. These side effects are harder to quantify and further diminish value.

3 forms of fraud

Before discussing the link between fraud and valuation, it's important to define and classify fraud. The ACFE defines occupational fraud as “the use of one’s occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization’s resources or assets.” And, according to the ACFE, fraud falls into three categories:

1. Corruption. Corrupt employees engage in fraudulent business transactions to obtain economic benefits for themselves or others. Examples include invoice kickbacks, conflicts of interest and illegal gratuities.



2. Asset misappropriation. Fraud may involve the embezzlement or misuse of an organization’s resources. Most misappropriations — such as false invoicing, check tampering or skimming — involve cash. But some schemes target other desirable assets, such as computers or inventory. Some perpetrators don’t physically remove assets. Instead, they use company property for personal purposes without permission.

3. Financial misstatements. Fraud perpetrators may intentionally misstate or omit material information from financial reports. Cooked books typically involve fictitious revenues or concealed expenses that artificially enhance earnings. These scams are the least common — but most costly — type of financial misstatement, according to the ACFE.

Understanding gray areas

Outside of these three categories is a gray area that includes such items as discretionary spending, “creative” accounting practices and quasi-business expenses. For example, a controlling shareholder might artificially lower earnings — say, by delaying revenue recognition or expensing personal legal fees — to minimize the value of his or her business interest for divorce purposes or to minimize taxable income.

Although these bookkeeping practices may not technically qualify as occupational fraud, they often require adjustment to arrive at an accurate value conclusion.

Bringing in the experts

Valuators rely on financial statements to estimate value. Unless it is specifically set forth in their engagement letters, appraisers customarily don’t audit financial information or investigate for fraud. To the extent that financial statements contain fraud, an appraisal will be inaccurate, unless properly adjusted.

So what happens if management or the valuation professional suspects fraud? Some valuers are cross-trained in both valuation and forensic accounting. More likely, however, the valuator will bring in a co-worker or outside referral to investigate fraud predications. A forensic accounting specialist can help make the requisite adjustments to accurately value the business — and build a fraud case, if necessary.

The 3 sides of the fraud triangle

Fraud is more likely when particular conditions exist. Forensic experts refer to three elements — motive, opportunity and rationalization — as the “fraud triangle.” Companies that understand the fraud triangle can lower their fraud risks by identifying and remedying high-risk individuals, relationships, policies and procedures.

To illustrate how the fraud triangle works, consider the case of Joe, a CFO for a small manufacturing firm. Because the fraud triangle was in place, Joe successfully stole \$350,000 over the past two years. Here’s how the three elements came into play:

1. Motive. Before resorting to fraud, employees must have perceived financial or emotional needs that are difficult to share with others. Joe had several motives that led him to steal. He was in the midst of a long, expensive divorce and, new to the dating scene, was spending lavishly on his new girlfriend, who worked in the firm’s purchasing department.

2. Opportunity. Employees who think they’ll be caught rarely commit fraud. During his 20-year tenure, Joe had earned the trust of the firm’s owners. He never took vacations, and was accustomed to juggling multiple tasks, including journal entries, bank reconciliations, cash deposits, invoicing, check writing and purchase-order approval.

In addition, the manufacturer’s books were not audited, and physical inventory counts occurred at year end under Joe’s supervision. Furthermore, Joe tested the waters by falsifying expense reimbursements, a relatively minor defalcation. When no one noticed, he and his girlfriend set up a fictitious vendor and charged embezzlements to inventory. Joe also paid personal legal fees with company funds.

3. Rationalization. Fraud perpetrators clear their consciences with excuses that justify their behavior. For example, Joe initially viewed his theft as a temporary “loan” that he’d repay once his divorce settled. As CFO, Joe also knew how much the owners took home in salaries and distributions. By comparison, he felt overworked and underpaid; in his mind, fraud evened the score.

Fraud can be a touchy subject. Unlike traditional CPAs, forensic accountants understand how to gather evidence without violating employee rights or destroying evidence. Their reports are designed to help resolve disputes and support formal fraud allegations.

If the scope of an appraisal assignment is expanded to include fraud work, the expert usually requires the client to sign a revised engagement letter or an addendum to the existing contract.

Quantifying fraud losses

Together, the valuator and the forensic specialist can estimate economic damages resulting from fraudulent activity. For example, damages may equal the difference in business value before and after the fraudulent behavior, adjusted for external factors beyond the fraud perpetrator’s control.

Alternatively, they might compare the perpetrator’s personal assets and expenditures to his or her known sources of income. In theory, any excess net worth equals the illicit gain.

Assessing fraud risks

Evaluating risk is part of valuing every business. One risk factor valuers consider is fraud. Some businesses are

more vulnerable to fraud than others. When assessing fraud risks valuers consider issues such as:

Size. High-profile fraud cases — such as Enron or WorldCom — make front-page news. But the ACFE reports that companies with fewer than 100 employees suffer the highest median loss of all size groups (\$200,000 in the 2008 study). Because private businesses also possess fewer fiscal and human resources than their public counterparts, they often struggle to rebound from fraud losses.

Internal controls. These are the policies and procedures companies use to protect assets, improve operating efficiency and ensure reliable financial statements. A strong system of internal controls, including fraud training programs and whistleblower hotlines, is a company’s first line of defense against fraud. Other examples of internal controls that minimize fraud risks include:

- Restricted access to physical assets, including locks, passwords, electronic surveillance and security systems,
- Formal job descriptions, codes of conduct and employee manuals,

- Mandatory vacation and job rotation policies,
- Segregation of duties, such as record keeping, authorization and custody over assets,
- Duplicate signatures on checks above a preset dollar amount,
- Monthly bank reconciliations and physical inventory counts,
- Background and reference checks on prospective job candidates, and
- Annual (or surprise) audits conducted by internal auditors or a CPA firm.

Internal controls can be intentionally circumvented and thus are less effective if managers override the system or become lax in supervising subordinates. These loopholes undermine a company's efforts to detect and prevent fraud.

Factoring in fraud

High fraud risk equates with lower values. For example, when applying the income approach, valuers might increase their company-specific risk premiums, a component of the cost of equity, to account for significant fraud risks.

Similarly, under the market approach, fraud risk may come into play: 1) when choosing selection criteria to pick guideline companies, or 2) when adjusting median

(or average) pricing multiples for differences between the subject company and the comparables.

A subject company with significant fraud risk might appear less marketable to potential buyers or less desirable to potential minority interest owners. Accordingly, valuers might factor fraud risk into their valuation discounts.

Cooked books typically involve fictitious revenues or concealed expenses that artificially enhance earnings.

Regardless of how valuers choose to account for these risk factors, it's important that they not double-count the effect of fraud risk on value. Otherwise, they risk undervaluing business interests.

Seeking the best advice

Public or private, all businesses are exposed to fraud risk. A competent valuator is aware of potential fraud risk and understands how it factors into a company's value. Furthermore, when an engagement extends beyond a valuator's area of expertise, he or she acknowledges that it's time to call in reinforcements — namely, a forensic accountant — to bridge the gap. ●

Statistics add value to appraisals

Appraisers have many tools to estimate a company's value. One such tool is statistics. When evaluating empirical data sets, statistical analyses can supplement an appraiser's professional judgment, adding sophistication and credibility to the business valuation.

Understanding regression analysis

One commonly used statistical approach is regression analysis. To illustrate how it works, suppose an appraiser obtains a sample of guideline transactions and wants to apply the guideline merger and acquisition (M&A) method to value a company.

The guideline M&A method is a subset of the market approach, where the valuator finds a sample of comparable business transactions. Then he or she derives pricing multiples from these transactions and compares them with the subject company.

Regression can help support this valuation technique. It assists the valuator in estimating the relationship between price and performance with a linear equation derived from the comparable data. The scatter graph below, "Regression analysis: Price vs. revenues," illustrates how regression analysis works.

Created using spreadsheet software, the graph plots eleven guideline transactions based on sales price (the y-axis) and last year's revenues (the x-axis). The spreadsheet also calculates a regression line using this data:

$$\text{Sales price} = 0.55 \times \text{Revenues} + \$1.17 \text{ million}$$

In technical terms, this equation estimates the best linear unbiased estimator (BLUE) line for the data set. In other words, it is the trend line that most closely approximates the relationship between sales price and revenues for the sample.

Suppose the company's revenues were \$1.3 million last year. Applying the regression equation without further analysis, the estimated value would be \$1.885 million ($0.55 \times \$1.3 \text{ million} + \1.17 million).

In addition, spreadsheet software can calculate correlation coefficients, such as r-squared (R^2). Ranging from zero to one, R^2 estimates how closely the data is related: the higher the R^2 , the stronger the correlation. In the example, the R^2 was about 79%.

Correlation coefficients also can be used to determine which performance metric — say, revenues, pretax profits or gross margin — generates the most meaningful pricing multiple. Valuers generally choose the metric with the strongest correlation.

No substitute

Appraisers use regression to estimate the line that best fits the data set. But regression analysis — like any statistical



tool — cannot substitute for a valuator's professional judgment or experience. For instance, the appraiser may decide to revise the selection criteria to obtain a larger (or smaller) sample or to eliminate outliers to boost the correlation coefficient.

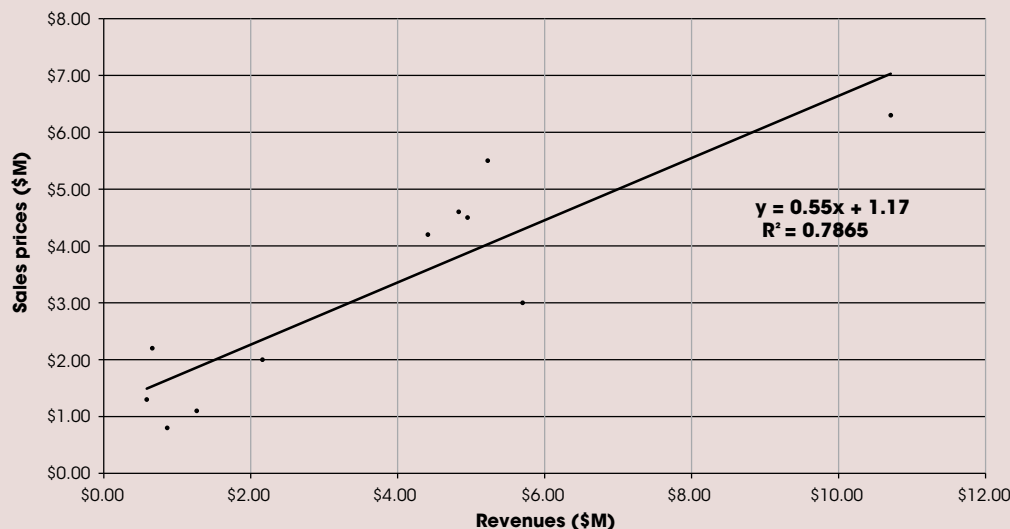
Alternatively, the appraiser may decide that the subject company differs from the comparables and, therefore, warrants a higher or lower value than that suggested by the BLUE line. Valuers sometimes add upper or lower boundary lines to their scatter graphs to facilitate their analyses.

Valuers also may indicate where other value estimates (from other valuation techniques, an opposing expert's estimate or a purchase offer) fall on the scatter graph. Even if the guideline M&A method is not used to estimate value, it can provide a sanity check for other valuation evidence.

More than a gimmick

The blind use of averages and medians is passé. Today's valuator understands how and when to use statistic tools to build stronger, more defensible valuations. They also know how to interpret statistical results and when to intervene with professional judgment. ●

Regression analysis: Price vs. revenues



Less can be more

When calculations offer an alternative to valuations

Most valuation assignments generate an official expert opinion and a detailed written report. But not all cases require such formality. Calculations offer an efficient, economical alternative — but only under the right circumstances. Let's look at what a calculation is, identify the pros and cons, and consider some examples of when a calculation might (or might not) work.

The basic differences

Generally, business appraisal work falls into two categories — valuations and calculations.

Formal valuation engagements require more procedures than do calculation engagements. As such, they are more expensive and extensive in scope. Valuations generate an official “conclusion of value” in conformity with the valuator’s professional standards, such as the Uniform Standards of Professional Appraisal Practice (USPAP) or the Statement on Standards for Valuation Services (SSVS) No. 1, issued by the American Institute of Certified Public Accountants (AICPA).

In contrast to valuations, which generate value *conclusions*, calculations provide an *indication* of value based on assumptions and procedures to which the client has agreed. (Some appraisers refer to calculations as “restricted-use appraisal reports.”)

In the AICPA’s aforementioned SSVS 1, a calculation engagement is defined as follows:

A valuation analyst performs a calculation engagement when (1) the valuation analyst and the client agree on the valuation approaches and methods the valuation analyst will use and the extent of procedures the valuation analyst will perform in the process of calculating the value of a subject interest (these procedures will be more limited than those of a valuation engagement) and (2) the valuation analyst calculates the value in compliance with the agreement. The valuation analyst expresses the results of these procedures as a calculated value. The calculated value is expressed as a range or as a single amount. A calculation engagement does not include all of the procedures required for a valuation engagement (see SSVS 1, paragraph 46).



Not all business valuers are bound by AICPA standards. But all appraisal organizations provide similar guidance for alternative reporting formats. Check your appraiser’s specific professional standards for additional guidance.

Less verbiage

Of course, there are many specific differences between valuations and calculations as well. One of the most time-consuming — and costly — steps in the valuation process is drafting a detailed appraisal report.

In contrast, a calculation engagement may call for only an abbreviated letter report, numerical exhibits or verbal presentations in lieu of a comprehensive written report.

For example, a written report may not be necessary for:

- An owner who is curious about business value for strategic planning or retirement purposes,
- Shareholders updating their buy-sell agreement, or
- A seller who wants to establish an asking price for his or her business interest.

Calculations also may facilitate settlement talks in shareholder disputes or divorces, while minimizing appraisal fees. Or they might help a client decide whether it's worthwhile to pursue a lawsuit. Before testifying in court, however, the appraiser is likely to recommend upgrading to a formal valuation report. If settlement appears unlikely, the client probably should opt for a formal valuation report from the get-go.

Beware that calculations may raise a red flag when they accompany gift, estate or charitable donation tax forms. Most valuers recommend a formal report that adheres to IRS guidelines for tax purposes. This is because the written report typically serves as a valuator's direct testimony, should the return wind up in Tax Court.

Omitted steps

Clients also can save time and money by omitting specific valuation procedures from an engagement's inception. Or a client may specifically prescribe a method he or she deems most appropriate for the calculation's intended use.

If settlement appears unlikely, the client probably should opt for a formal valuation report from the get-go.

To illustrate, suppose two disputing partners opt for a calculation — rather than a full-blown valuation report — to facilitate an out-of-court settlement. They specifically agree to omit the guideline public company method when calculating the value of their small private accounting firm. They also stipulate in advance concerning discounts for lack of marketability and control.

Communication is key

When an appraiser is engaged to perform a calculation, communication is key. The engagement letter — a legal contract between the client and appraiser — establishes expectations up front. Additionally, valuers specifically list scope limitations in their engagement letters, spreadsheets and written reports.

It's imperative that clients and professional advisors understand the limitations of value calculations. In some cases, a value conclusion can differ materially from a value calculation.

If scope limitations evolve throughout a calculation engagement, a new engagement letter — or an addendum to the original contract — can confirm the appraiser's revised objectives.

Again, the cost and time savings may be for naught if the partners don't settle. To withstand courtroom scrutiny, calculations generally must be upgraded to formal valuation engagements. If they're not taken to the next level, an appraiser may refuse to testify in court. Be aware, too, that the appraiser's value conclusion may differ materially from his or her calculation after completing the omitted steps or analyses.

Limited information

Some clients have limited access to the subject company's financial data, personnel or facilities. Lack of relevant information can be especially problematic when the client owns a noncontrolling business interest or is a nonmonied spouse in divorce.

But a valuator can perform a calculation without complete access to information. For example, he or she may base the value exclusively on, say, the past two years' tax returns. A calculation also could be performed without interviewing management or conducting site visits. However, all omissions and limitations must be fully disclosed in the calculation letter.

Not for everybody

Like clients, valuation reports come in all shapes and sizes. Whether or not a calculation will work for you depends on the engagement specifics, including the appraisal's intended use, the interest being valued, any third-party requirements and the availability of information as well as budget and timing restrictions. ●

John M. Leask II (Mac), CPA/ABV, CVA, values 25 to 50 businesses annually. Often, Mac's valuations, oral or written, are compiled in conjunction with the purchase or sale of a business, to assist shareholders prepare buy/sell agreements, or to set values when shareholders purchase the interest of a retiring shareholder. Here are examples:

- **Due Diligence & Assist with Purchase of a Business.** Mac has assisted purchasers of businesses by determining or reviewing the offer. He helps negotiate the price, perform due diligence prior to closing and/or helps structure and secure financing. Services have included, but are not limited to, verifying liabilities and assets, reviewing sales and expense records, and identifying critical issues relating to future success, and helping management plan future operations.
- **Family Limited Liability Partnerships, Companies & Closely Held Businesses.** Mac regularly values various sized business interests for estate and gift tax purposes. He provides assistance to estate and trust experts during audits of reports prepared by other valuers.

Mac also helps business owners and their CPAs and/or lawyers in the following ways:

- Planning — prior to buying or selling the business
- Prepare valuation reports in conjunction with filing estate and gift tax returns
- Plan buy/sell agreements and suggest financing arrangements
- Expert witness in divorce & shareholder disputes
- Support charitable contributions
- Document value prior to sale of charitable entities
- Assist during IRS audits involving other valuers' reports
- Succession planning
- Prepare valuation reports in conjunction with pre-nuptial agreements
- Understanding firm operations & improving firm profitability

More information about the firm's valuation services (including case studies) may be found at www.LeaskBV.com.

To schedule an individual consultation or to discuss any other points of interest, Mac may be reached at 203 - 255 - 3805. The fax is 203 - 380 - 1289, and e-mail is mac@leaskBV.com.

If you have a business valuation problem, Mac is always available to discuss your options — at no charge.



John M. Leask II CPA, LLC.

Business Valuation Services

765 Post Road, Fairfield, Connecticut 06824

**Professional
Business
Valuation
Services**

CVA

 **John M. Leask II CPA, LLC.**
Business Valuation Services

PRSR STANDARD
US POSTAGE
PAID
PERMIT NO. 57
FAIRFIELD, CT