

# Financial Valuation *and* Litigation Expert

IEWS AND TOOLS FROM LEADING EXPERTS ON VALUATION, FORENSIC/FRAUD AND LITIGATION SERVICES



## Editor's Outlook

**Jim Hitchner**

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Frist off, let me apologize that this issue is a bit late in reaching you. Transaction databases have long been a tool for valuation analysts. However, I recently became captivated by the ways in which these databases are used— or should I say *misused*? The deeper I delved into my investigation, the more concerns I discovered about the use of these databases. While the suppliers provide excellent guidelines for users, abuse of this information continues within the profession. I hope you'll think about our front-page article this issue and voice your response to me at the email address listed above. I'm reminded of another favorite quotation from Bertrand Russell, whom I've referenced before in this journal: *"In all affairs it's a healthy thing now and then to hang a question mark on the things you have long taken for granted."*

We're pleased to include several new panel members in this issue. Bill Quackenbush takes a look at risk assessment and shows us how the DuPont Formula can continue to aid analysts in their assessment of value drivers in a company.

Stacy Preston Collins zeros in on two related industries— engineering and architectural firms— and shares resources that can help analysts in

*Continued on next page*

## Transaction Databases: **USEFUL** *or* **NOT?**

**"For every complex problem, there is a solution that is simple, neat, and wrong."**

*H.L. (Henry Louis) Mencken (1880–1956)  
U.S. journalist and critic*

This quote best describes the often inappropriate use of certain transaction databases in the guideline company transaction method ("GCTM") of the market approach. This quote also applies when the valuation analyst does not read the instructions that are supplied by the vendors who sell transaction data. These vendors do a good job telling users about the data and how to use it.

The GCTM has a place in valuation and can enhance the supportability of your value conclusion. This method can be used as a primary method when data is available concerning the details of the transaction. This usually occurs when either the buyer or the seller is a public company and/or where there is disclosure of information about the deal and the company that has been bought/sold. That's the easy part. However, the

majority of transactions in the databases discussed here do not include such detail. They actually include very limited data, particularly for smaller to mid-size companies. These transactions are the focus here.

The following transaction databases were reviewed for this article: Pratt's Stats, BIZCOMPS and The Institute of Business Appraisers ("IBA"). It is up to each analyst to read the pertinent information, absorb it and apply it. However, there are some areas of concern that, while openly presented by the vendors, may not be initially obvious. That is the purpose of this article; expose and highlight data, verbiage and other factors that can hurt your analysis and credibility. In the following pages, we will start with the business valuation standards applicable to the GCTM to

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# Financial Valuation and Litigation Expert

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## EDITOR'S OUTLOOK, continued

valuing such firms.

As a quick reference tool, we've included a "Valuation Services Engagement Control Checklist" to guide you through your valuation engagements.

Moving into the litigation area, Richard Wise reviews some of the common tactics attorneys use in cross-examination. An awareness of these techniques can help valuation analysts to better prepare for this process.

Continuing in the the courtroom arena, Michael Kaplan shares 11 ways that attorneys can "kill" their own experts. For those of our readers who are involved in expert testimony, these two articles provide important insights from two experts who testify regularly.

As always, your feedback is encouraged. Please email [jhitchner@valuationproducts.com](mailto:jhitchner@valuationproducts.com).

As Thanksgiving quickly approaches, I thank all of you for sharing the passion of our profession. The ongoing interaction among our panel members and our readers continues to fuel lively debate, which ultimately leads to the betterment of our profession. Thank you. ☺

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see how these transaction databases can fail to provide the data necessary to meet certain standards. We will then review the caveats that the data vendors publish regarding the use of the data, and finally, we will look at a case study highlighting issues with some of the data found in the Pratt's Stats database.

### BUSINESS VALUATION STANDARDS

Before we get into detail concerning issues with transaction databases, we have to lay the foundation for the level of due diligence required by the various business valuation standards that many of us work under. This includes the standards of the American Institute of Certified Public Accountants (AICPA), American Society of Appraisers (ASA), the Appraisal Foundation's Uniform Standards of Professional Appraisal Practice (USPAP), National Association of Certified Valuation Analysts (NACVA) and the Institute of Business Appraisers (IBA). Our focus here is on a *Full* valuation sometimes referred to as an *Appraisal* or *Valuation Engagement* and does not focus on a *Limited Appraisal* or a *Calculation Engagement*.

To be blunt, this is very serious. Why? Because many valuation analysts ignore these standards – until they get discredited on cross-examination in a litigation setting. You will see what we mean when you read below.

### ASA

(Quoted from "ASA Business Valuation Standards BVS-V Market Approach to Business Valuation," July 2008))

- "III. Reasonable basis for comparison"
- "A. The business, business ownership interest, security or intangible asset used for comparison must serve as a reasonable basis for comparison to the subject."
- "B. Factors to be considered in judging whether a reasonable basis for comparison exists include:
  1. A sufficient similarity of qualitative and quantitative investment characteristics
  2. The amount and verifiability of data known about the similar investment
  3. Whether or not the price of the similar investment was observed in an arm's-length transaction, or in a forced or distressed sale" (p.12)

(Quoted from "ASA Statements on Business Valuation Standards SBVS – 2 Guideline Transactions Method," July 2008)

- "IV. Financial data of guideline companies
  - A. It is necessary to obtain and analyze relevant financial and operating data of the companies involved in guideline transactions, as available.
  - B. Adjustments to the financial data of the subject company and the companies in the guideline transactions should be considered to minimize the differences in accounting treatments when such differences are significant.
  - C. Unusual or nonrecurring items should be analyzed and adjusted, as appropriate." (pp.35-36)

- "V. Valuation ratios derived from guideline transactions"
  - "B. Several valuation ratios may be selected for application to the subject company. These ratios may require adjustment for differences in qualitative and quantitative factors between the companies (or interests) involved in the guideline transactions and the subject.
  - C. Guideline transactions typically involve a specific buyer and a specific seller. Information regarding both the buyer and seller in a guideline transaction may be necessary in order to draw valuation inferences from the transaction." (p.36)

### "VI. Other factors and considerations"

"Adjustments may be necessary to the ratios for factors that have not been considered earlier in the appraisal, such as:

- A. Degree of control
- B. Degree of marketability and/or liquidity
- C. Timing differences between market transactions and the valuation date
- D. Strategic or investment value issues
- E. Size, depth of management, diversification of markets, products and services, and relative growth and risk" (p.36)

### AICPA

(Quoted from AICPA Statement on Standards for Valuation Services (SSVS) No. 1, effective January 1, 2008, Paragraphs 37 & 38)

"In applying the methods listed in paragraph 36 [includes Guideline Company Transaction Method] or other methods to determine valuation pricing multiples or metrics, the valuation analyst should consider:

- Qualitative and quantitative comparisons
- Arm's-length transactions and prices
- The dates and, consequently, the relevance of the market data" (p.19)

"The valuation analyst should set forth in the report the rationale and support for the valuation methods used..." (p.19)

### USPAP

Quoted from The Appraisal Foundation, the Appraisal Standards Board, Uniform Standards of Professional Appraisal Practice, USPAP 2008 – 2009 (Note: USPAP 2010-2011 is now available and is effective January 1, 2010)

"an appraiser must:

- (a) be aware of, understand, and correctly employ those recognized approaches, methods and procedures that are necessary to produce a credible appraisal;" (p.U-68)
- "(b) not commit a substantial error of omission or commission that significantly affects an appraisal; and" (p.U-68)

*Continued on next page*

“Comment: An appraiser must use sufficient care to avoid errors that would significantly affect his or her opinions and conclusions. Diligence is required to identify and analyze the factors, conditions, data, and other information that would have a significant effect on the credibility of the assignment results.” (p.U-68)

“(c) not render appraisal services in a careless or negligent manner, such as by making a series of errors that, although individually might not significantly affect the results of an appraisal, in the aggregate affect the credibility of those results.” (p.U-68)

“Comment: Perfection is impossible to attain, and competence does not require perfection. However, an appraiser must not render appraisal services in a careless or negligent manner. This Standards Rule requires an appraiser to use due diligence and due care.” (p.U-68)

“An appraiser must not allow assignment conditions to limit the scope of work to such a degree that the assignment results are not credible in the context of the intended use.” (p. U-13)

#### **NACVA**

(Quoted from NACVA Professional Standards, effective January 1, 2008)

“c. Due Professional Care. A member must exercise due professional care in the performance of services, including completing sufficient research and obtaining adequate documentation.” (p.4)

“f. Sufficient Relevant Data. A member shall obtain sufficient relevant data to afford a reasonable basis for conclusions, recommendations or positions relating to any service rendered.” (p.4)

“3.7 Valuation Approaches and Methods. Valuation methods are commonly categorized into the asset-based approach, market approach, and income approach or a combination of these approaches. Professional judgment must be used to select the approach(es) and the method(s) that best indicate the value, including whether a combination of the results from more than one approach and/or method is necessary to arrive at an appropriate indication of value.” (p.6)

#### **IBA**

(Quoted from The IBA Business Appraisal Standards, October 25, 2001)

1.1 Competence. “It is essential that a business appraiser communicate the research and thought processes which led to his opinions and conclusions

in a manner that is clear, meaningful and not misleading. Said communication, whether oral or written, shall not be rendered in a careless or negligent manner.” (p.4)

“1.7 Supportable Opinion. The essence of business appraisal is a supportable opinion. While it is intuitively logical that on a case-by-case basis certain opinions will be based on the informed, but subjective, judgment of the appraiser to a greater degree than others, the appraiser's goal is to have a supportable opinion.” (p.6)

“1.16 Valuation Approaches/Methods. The approaches/methods used within a given assignment are a matter that must be determined by the business appraiser's professional judgment. The task is generally decided through consideration of the approaches/methods that are conceptually most appropriate and those for which the most reliable data is available.” (p.8)

Overall, the standards quoted above collectively require the following:

- Similar qualitative and quantitative comparisons
- Verifiability
- Whether transaction was arm's length
- Due diligence and due care
- Obtain and analyze relevant financial and operating data
- Minimize the differences in accounting treatments
- Information about the buyer and the seller
- Unusual or nonrecurring items should be analyzed and adjusted
- Degree of control
- Degree of marketability and/or liquidity
- Timing differences between market transactions and the valuation date
- Strategic or investment value issues
- Size, depth of management, diversification of markets, products and services, and relative growth and risk
- The dates and, consequently, the relevance of the market data
- Rationale and support for methods selected
- Not commit a substantial error of omission or commission
- Not render appraisal services in a careless or negligent manner
- Obtain sufficient relevant data
- Supportable opinion

The three databases discussed here meet few of the requirements as described above. If not addressed properly, this can lead to potential violations of the various business valuation standards. Of course, not all of these standards directly apply to every valuation analyst. It obviously depends upon which organizations/associations he or she belongs to.  
*Continued on next page*

### CAVEATS/TROUBLING LANGUAGE

The vendors of transaction databases tell you the caveats that you will be working under. You have to read these caveats so as not to be embarrassed or, worse, humiliated when confronted with this language. The vendors, again, do a good job of presenting these caveats. However, that doesn't lessen the problems that these troubling language excerpts create in supporting a value conclusion by the GCTM. We have quoted language from each of the three databases discussed here.

### PRATT'S STATS

The following information is directly quoted or paraphrased from BV Resources' database offerings, database statistics, definitions and FAQs [www.bvresources.com](http://www.bvresources.com) and [www.bvmarketdata.com](http://www.bvmarketdata.com)

- "If it can not be definitively determined if there were any reported liabilities assumed, the assumption is made that there were either zero...or...insignificant liabilities assumed such that they would not make a material difference in the calculation of an MVIC."
- "What is typically assumed to be transferred in a stock sale?
  - o Entire legal entity of the company
  - o All assets and liabilities unless otherwise specified in the purchase agreement"
- "What is typically not assumed to be transferred in a stock sale?
  - o Excess or nonoperating assets that have been liquidated and or transferred prior to the sale or at the point of sale"
- "In an asset sale, there are typically no long term liabilities assumed"
- "In a stock sale, if the Debt Assumed field is labeled N/A, Pratt's Stats was not able to definitively determine if there were interest-bearing liabilities assumed"
- Equity Price
  - o Pratt's Stats formerly reported equity prices and equity multiples, but no longer does
- MVIC (Market Value of Invested Capital)
  - o "...total consideration paid to the seller and includes any cash, notes and/or securities that were used as a form of payment plus any interest-bearing liabilities assumed by the buyer."
- "The MVIC price includes the noncompete value and any interest-bearing liabilities assumed, and excludes (1) the real estate value and (2) any earnouts (because they have not yet been earned, and they may not be earned) and (3) the employment/consulting agreement values."
- In an Asset Sale, Pratt's Stats assumes that all or substantially all operating assets are transferred in the sale
- "In an Asset Sale, the MVIC may or may not include all current assets, noncurrent assets and current liabilities (liabilities are typically not transferred in an asset sale)."
- "Asset Data labeled as a "Purchase Price Allocation" will

provide definitive information as to what was included in the asset sale."

- If no purchase price allocation, "...the appraiser needs to use his/her experience and knowledge in the field and the buyer's/seller's knowledge and experience with his/her business to determine what is customarily transferred in an asset sale in that industry"

### IBA

This information is directly quoted or paraphrased from the IBA website titled IBA Tutorials <http://www.go-iba.org> and IBA published materials such as *Business Appraisal Practice* and *IBA News*.

- "Owner's compensation expense: This data category is not available for all transactions, and is of only marginal utility given the quality of small business financial statements."
- "Annual earnings before owner's compensation expense, interest expense, and income tax expense. This data category is not available for all transactions, and is of only marginal utility given the quality of small business financial statements."
- "Problems with the P/E ratio include differing interpretation by persons who furnish data as to what constitutes "earnings."
- "As between price to earnings, P/E, and price to gross, P/G, ratios, it would ordinarily seem that P/E ratio would be the preferable choice, since it relates more directly to buyer and owner motivation. However, practical problems in data gathering and interpretation tend to limit the usefulness of P/E ratio as a measure of market performance. As one skilled financial analyst noted, "The most unbelievable number from an economic perspective on the financial statements of a closely held business is net income.'"
- "Small to medium sized closely held businesses are less likely to sell for a price approximating fair market value than are large closely held businesses"
- "They [Businesses] are bought and sold based upon imperfect information, risk perceptions and tolerances of different individuals, compulsions and behavioral characteristics of different individuals, synergetic possibilities, etc."
- "To be an equally desirable substitute for the subject closely held businesses, the guideline business must be both similar and relevant"
- "'Similar' refers to the nature of the business being appraised. It encompasses such business attributes as:
  - o business size
  - o markets served
  - o depth of management
  - o information processing systems
  - o level of technology utilization
  - o probable future earnings growth etc."

*Continued on next page*

- “‘Relevant’ refers to the desires and expectations of the probable “willing buyer” or investor. This includes:
  - o risk tolerance (degree of risk assumed)
  - o liquidity of investment
  - o degree of management involvement
  - o probable holding period, etc.”
- “It will be seen . . . that there is relatively little change in the range of uncertainty as the size of the sample decreases from more than 20 to about 10. As the number of transactions falls below 10, however, the range of uncertainty becomes greater. Then, below about 5 transactions, the range of uncertainty begins to increase rapidly until, with only a single guideline transaction, the range of uncertainty is infinite.”

“How to Use the IBA Market Data Base, Part VIII,” *IBA News*, Volume 17, no. 2.
- “Unless there is data on at least five or six transactions, neither the DMDM nor any other method based on guideline transactions should be used.”
- “The exact combination of assets and liabilities transferred in individual transactions in the database is indeterminate. However, it can be assumed that, in general, the combination of assets and liabilities transferred corresponds to what is typical in the subject industry.”
- “In some instances, it may be appropriate to contact a broker who customarily sells businesses in the subject industry for information about the content of a typical sale.”
- “IBA’s recommendations as to sample size for estimating market means are somewhat arbitrary, but were chosen as being of practical use. Specifically, we recommend that there should be at least 5 transactions in the applicable SIC as the basis for a rough estimate of the mean of the total market.”
- “...rough and approximate estimates are far better than no estimate at all, and meet the practical requirements of real-world appraising.”

“The IBA Transaction Database and the Direct Market Data Method, Part XLVII, Responding to Criticisms,” Ray Miles, CBA, ASA, *IBA News*, January/February 2008, p. 7.
- “The IBA Transaction Database is intended for use only in the “total market” method, in which all known market transactions involving businesses of the same type (same SIC or NAICS) as the subject are used to develop a statistical profile of the entire market for businesses of that type.”

“The IBA Transaction Database and the Direct Market Data Method, Part XLVII, Responding to Criticisms,” Ray Miles, CBA, *IBA News*, January/February 2008, ASA, p. 7.
- “The DMDM’s use of a statistical ensemble representative of the entire market, instead of a limited number of

publicly traded “same or similar” businesses, is a major difference between the DMDM and other valuation methods under the Market Approach. While other methods based on comparisons are about companies, the DMDM is about markets.”

### BIZCOMPS

The following information is quoted or paraphrased from BIZCOMPS Business Sale Statistics website, including BIZCOMPS User Guide 2009 [www.bizcomps.com](http://www.bizcomps.com) and BV Resources database offerings, database statistics, definitions and FAQs [www.boresources.com](http://www.boresources.com) and [www.bvmarketdata.com](http://www.bvmarketdata.com)

- Most BIZCOMPS transactions are financed, often seller financed, and may be at below market rates and terms
- “If there was something negotiated on top of the sale price, it would not be included.”
- “There may be a few cases where the numbers are annualized, i.e., there may be 8, 9, 10 or 11 month “profit and loss statements” that are annualized to make a 12 month period.”
- “The study is geographically limited to the Eastern and Western United States to provide reliable, comparative data that is regionally discriminated. Since business values are affected by external economic forces, it is important to compile sales data by region.”
- “The reported data is not altered; however, the earnings multiple for 660, or 6.4 percent of the 10,260 businesses surveyed, has been excluded from the data averages. It is the author’s opinion that these 660 businesses are outliers that have inordinately high earnings multiples or negative earnings that would have distorted the average statistics.”
- “It should be noted that BIZCOMPS cannot determine which cash transactions were marketed as “cash only” sales, or were converted to a cash sale at some point during the transaction.”
- “Much has been written about the need to have current, relevant transaction data. Ideally, there should be enough recent data available to meet these criteria. In fact, due to the difficulty involved in obtaining reliable data, particularly in the more unusual or unique business categories, this is often not the case. The analyst is left with a decision to go with limited data or to use older data that the bases contain.”
- “Keep in mind that the FF&E estimate may have been made by any one of a number of parties to the transaction. It may be the seller’s estimate, new value, book value, replacement value or, hopefully, the estimate of an experienced intermediary familiar with this type of business. In any event, this estimate should be used with caution.”

As you can see, Pratt’s Stats, BIZCOMPS and The IBA do a very good job telling you about their data, how to use their data and what to rely upon; even when it’s not what  
*Continued on next page*

you want to hear. Also, many of these caveats weaken the reliability of the data and, if not addressed properly, may put the analysis in violation of certain business valuation standards.

**CASE STUDY – APPLICATION OF PRATT’S STATS DATA**

This case study and the comments concerning limitations in the Pratt’s Stats transaction database are focused on transaction data in one SIC code. However, three additional SIC codes were also looked at, and the same types of issues occurred in those transactions as well. Note: all amounts (\$000)

**Subject Company**

- Subject company is Duffy’s Printing
  - o Print shop
  - o S corp
  - o TTM sales at \$2.5 million
  - o TTM EBITDA \$150 TTM
  - o Owners comp TTM = \$225
  - o TTM discretionary earnings \$375
  - o Sales grew 40 percent in last three years = 12 percent CAG
  - o Owner thinks sales will grow 10 percent next year and doesn’t know after that; thinks margins will be steady

**Pratt’ Stats Search**

- Advanced Search Criteria
  - o SIC Code 2752 Commercial Printing
  - o Net sales between \$.5 million to \$12.5 million
  - o Sale date 8/7/2006 to 8/7/2009 (Past three years)
- Advanced Search Results
  - o Nine transactions
  - o One in 2009; four in 2008; two each in 2007 and 2006
  - o Net sales \$.5 million to \$4.9 million
  - o Mean and median sales \$1.5 million and \$.9 million
  - o Mean and median net profit margin\* 8.1 percent and 7.5 percent

*\*Issue – Net profit margins are both pretax and after tax. The analyst must adjust for this.*

**Transaction One**

- All cash asset deal; LLC
- Agreed upon purchase allocation: inventory, fixed assets and intangible assets. No debt assumed. Noncompete exists but given zero value.
- Sale closed 9/06
  - o Asset data as of 9/06
  - o Income data as of 12/05, approximately nine months before the closing
- Multiples

		<u>Applied to Duffy’s</u>
o MVIC/Sales	.58	\$1,450
o MVIC/DE	2.64	\$990
o MVIC/EBITDA	13.98	\$2,097

- This transaction cannot be relied upon as a part of a primary valuation method. The income data that the multiples are based on are approximately nine months before the closing. The application of the multiples results in a wide difference in values for the subject company.

**Transaction Two**

- All cash asset deal; C corp
- No agreed upon purchase allocation. Shows inventory, other current assets, total assets and total liabilities. Does not show fixed assets and intangible assets. Asset values shown do not add up to total assets. Debt assumed is N/A. Noncompete N/A.
- Sale closed 10/06
  - o Asset data as of 5/06
  - o Income data as of 7/06
- Multiples

		<u>Applied to Duffy’s</u>
o MVIC/Sales	.41	\$1,025
o MVIC/DE	N/A	
o MVIC/EBITDA	N/A	

- This transaction cannot be relied upon as part of a primary valuation method. What was bought/sold is unknown and there is only one multiple (MVIC/Sales) that does not reflect the profit margin of the subject company.

**Transaction Three**

- Can’t tell if all cash deal or cash and notes; asset deal; S corp
- Agreed upon purchase allocation: fixed assets and intangible assets. No debt assumed. Noncompete exists and given \$92 value.
- Says down payment of \$108 on MVIC paid of \$540. Says no debt assumed and no notes in consideration paid. Where then is the remaining \$432 (\$540-\$108)?
- Sale closed 3/07
  - o Asset data as of 3/07
  - o Income data as of 12/05, approximately 14 months before the closing
- Multiples

		<u>Applied to Duffy’s</u>
o MVIC/Sales	.63	\$1,575
o MVIC/DE	2.74	\$1,028
o MVIC/EBITDA	4.13	\$620

- This transaction cannot be relied upon as a part of a primary valuation method. The income data that the multiples are based on are around 14 months old, there is missing data about whether this is an all cash deal or cash and notes, and the application of the multiples results in a wide difference in values for the subject company.

*Continued on next page*

**Transaction Four**

- Cash and notes; asset deal; Company type N/A
- Agreed upon purchase allocation: inventory, fixed assets and intangible assets. Debt and liabilities N/A. Non-competite exists and given \$30 value.
- Says down payment of \$1000 on MVIC paid of \$1,150. \$100 promissory note at 8 percent over five years, \$50 promissory note at 8 percent at five years for five years, no personal guarantee.
  - o 8 percent may not be a market rate
- Sale closed 8/07
  - o Asset data as of 8/07
  - o Income data as of 12/06, approximately eight months before the closing
- Multiples
 

	<u>Applied to Duffy's</u>	
o MVIC/Sales	.94	\$2,350
o MVIC/DE	N/A	
o MVIC/EBITDA	N/A	
- This transaction cannot be relied upon as a part of a primary valuation method. The income data that the multiples are based on are approximately eight months before the closing. Debt may not be at a market rate. Sales multiple doesn't reflect profitability.

**Transaction Five**

- Can't tell if all cash deal or cash and notes; asset deal; S corp
- Agreed upon purchase allocation: inventory, fixed assets and intangible assets. Debt and liabilities N/A. Non-competite N/A.
- Says down payment of \$75 on MVIC paid of \$185. Says debt assumed N/A and no notes in consideration paid. Where then is the remaining \$110 (\$185-\$75)?
- Sale closed 1/08
  - o Asset data as of 1/08
  - o Income data as of 12/06, approximately 13 months before the closing
- Multiples
 

	<u>Applied to Duffy's</u>	
o MVIC/Sales	.36	\$900
o MVIC/DE	7.13	\$2,674
o MVIC/EBITDA	12.29	\$1,844
- This transaction cannot be relied upon as a part of a primary valuation method. Net sales and gross profit and the corresponding multiples are the same, i.e., no COGS. Sales are clearly incorrect as other expenses are small. Results in incorrect MVIC/Sales multiple. The income data that the multiples are based on are around 13 months old, there is missing data about whether this is an all cash deal or cash and notes, and the application of the multiples results in a wide difference in values for the subject company.

**Transaction Six**

- All cash deal; assets; S corp

- Agreed upon purchase allocation: inventory, trade receivables, fixed assets. Intangible assets N/A. Debt and liabilities N/A. Noncompetite N/A.
- Sale closed 2/08
  - o Asset data as of 2/08
  - o Income data as of 12/05, approximately 25 months before the closing
- Multiples
 

	<u>Applied to Duffy's</u>	
o MVIC/Sales	.38	\$950
o MVIC/DE	5.29	\$1,984
o MVIC/EBITDA	17.09	\$2,564
- This transaction cannot be relied upon as a part of a primary valuation method. The income data that the multiples are based on are around 25 months old and the application of the multiples results in a wide difference in values for the subject company.

**Transaction Seven**

- Cash and note deal; assets sold; S corp
- No agreed upon purchase allocation: shows cash equivalents, receivables, inventory, other current assets, fixed assets, intangible assets (\$0), other noncurrent assets, long-term liabilities and total liabilities. No debt assumed. Noncompetite valued at \$50, employment agreement for one year (40 hours/week at \$60).
- Says down payment of \$145 on MVIC paid of \$655. Says no debt assumed. Note with personal guarantee of \$50 at 6 percent for five years. Where then is the remaining \$410 (\$655-\$145-\$50-\$50)?
- Sale closed 6/08
  - o Asset data as of 12/07
  - o Income data as of 12/07, approximately five months before the closing
- Multiples
 

	<u>Applied to Duffy's</u>	
o MVIC/Sales	.69	\$1,725
o MVIC/DE	3.35	\$1,256
o MVIC/EBITDA	5.02	\$753
- This transaction cannot be relied upon as a part of a primary valuation method. The income data that the multiples are based on are around five months old (may be okay), what was bought/sold is unknown, there is missing data about the level of cash and notes, and the application of the multiples results in a wide difference in values for the subject company. Debt may not be at a market rate.

**Transaction Eight**

- Cash and notes; asset deal; S corp
- Agreed upon purchase allocation: inventory, fixed assets and intangible assets. Debt and liabilities N/A. Non-competite exists and given \$2 value. Total assets shown does not equal the actual total of the assets agreed upon, \$2,413 vs. \$2,387.

*Continued on page 11*

# Risk Assessment and the DuPont Formula

If you have been valuing businesses for any length of time you've seen *The Report*. You know the one. It was produced by someone who made sure every item on some checklist was included in the report – regardless of whether any particular topic was relevant to the assignment at hand, and even when the information was conflicting or nonsensical.

For example, I recently reviewed a report that had a 14-page, third-party written economic analysis plopped right into the report. The preparer didn't even bother to format this section (which was full justified) to match the rest of the report (which was left justified). The preparer then provided a short, one-paragraph industry analysis as follows:

This is a very specialized industry for which it is difficult to find specific information as to the conditions and outlook. However, this is a process that is used in such a wide variety of products that it is not generally affected by fluctuations in the economy.

Given this industry analysis, what was the point of investing 14 pages of the 21-page report to a review of the economic environment? In a similar vein, this same report, while including several schedules of historical financial information, provided only a brief, three-sentence paragraph dedicated to the analysis of historical financial conditions and performance – and contained no discussion as to expected future financial performance or risk.

## RISK ASSESSMENT IN THE VALUATION PROCESS

Isn't risk assessment the one thing we as professional business appraisers bring to the value discussion? After all, valuation formulas are relatively simplistic:

**Market Value = Company Metric X Pricing Multiple for that Metric**

The appraiser's skill, after choosing the correct formulas, is in defining and supporting variables in such formulae. It is our assessment of risk that helps us determine what adjustment, if any, is necessary to observed pricing multiples from either publicly traded companies or control transactions in a market approach to value. It is our assessment of risk that allows us to estimate the required rate of return to the interest being valued in an income approach to value. At the end of the day, our assessment of risk is used to estimate the future economic benefit (or pricing metric), growth associated with that economic benefit, and the likelihood of that economic benefit not occurring.

We often have plenty of material from which we can perform this risk assessment from both a qualitative and quantitative basis. A review of environmental issues such as economic, industry, competitive, and regulatory conditions and prospects are often critical to our analysis of future expected margins and growth. Quick – what is the first question that comes to your mind if I tell you I am valuing an independent hardware store? For most of us, it's "Is Home Depot and Lowes in its market yet?"

Management interviews and site inspections invariably reveal issues that affect one or more of the key value inputs. How can we independently assess operational capacity for growth as related to future expected capital expenditures unless we observe such? On more than one occasion I have had to reassess my initial perspective regarding future CapX when low leverage, high margins, and management's upbeat view of future growth are all constrained by the company's



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current full-tilt, packed-to-the-rafters operating levels that only became apparent upon my site inspection.

In the same way, an analysis of historical financial data can contextualize the subject company's performance to itself over time, to its industry peers and/or to potential guideline public companies. This analysis may be critical in estimating future financial performance and assessing company-specific risk, either in our discount rate development or in adjusting market pricing multiples.

## FINANCIAL ANALYSIS IN RISK ASSESSMENT

Financial analysis can provide insight as to the subject company's growth, profitability, leverage, liquidity, and asset utilization. Generally we utilize three types of financial statement analysis. First, we typically include some level of common size financial statement analysis (balance sheet items as a percent of total assets, income statement items as a percent of total revenue, etc.). Second, we may per-

*Continued on next page*

*expert* TIP

**The DuPont Formula can continue to help analysts assess value drivers in a company.**

## FINANCIAL VALUATION - Specific Company Risk, continued

form a trend analysis, which allows us to compare the company's performance to itself over time – and we can do this in terms of dollars, via our common size analysis, or in a review of calculated financial ratios. Finally, we may do a comparative analysis, comparing common size and financial ratios to industry, peer, or guideline company financial data.

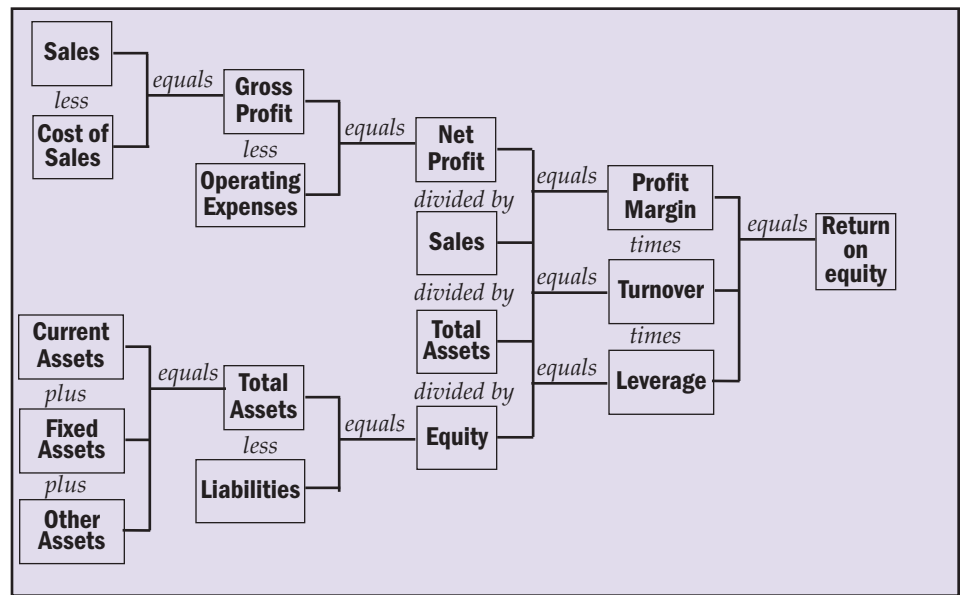
A financial analysis will also help us evaluate how predictive past performance may be of the future and assess the quality of management's forecasting skills. It helps develop such questions as:

- What has been the subject company's growth at a rate over time and has it been variable or dissimilar to the industry or its peers?
- Are company margins at variance to industry norms or changing over time, either to itself or in comparison to the industry?
- Is the financial and operational risk in this company similar to, less than, or greater than that of its peers?
- Does past performance have any connection to future projections? If not, why?
- What are the drivers of value for this company?

### THE DUPONT FORMULA

One additional analytical tool available to appraisers for use in answering these types of questions is the DuPont Formula. While the DuPont Formula's genesis is subject to some debate, the analytical power it provides generally is not. The DuPont Formula is an analysis of return on equity (or "ROE") that shows the relative contribution of profitability, utilization, and leverage to ROE. Appraisers often address these issues in their financial analysis, but the DuPont Formula helps make the linkage more obvious and easier to illustrate and explain. It can aid in tying together various aspects of our analysis. The traditional DuPont Formula is stated as:

$$ROE = \frac{\text{Net Income}}{\text{Equity}} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$



Further, we can break down the components of the DuPont Formula back through financial statements to analyze the contributing factors to ROE, both good and bad. As illustrated above, you can see how the financial components of profitability, asset utilization, and leverage relate directly to ROE.

There are at least three direct benefits to using the DuPont Formula in assessing risk when developing valuation metrics:

1. We can compare the contributing factors to ROE for the subject company to either industry peers or guideline companies; How similar are the subject's value drivers to other companies?

Let's assume we are comparing our subject company to some other company in the same industry – a company we would consider a peer or a potential guideline company in a market approach to value. Below is the breakdown of the ROE using the DuPont Formula for each company.

What does the analysis reveal? If we were performing a traditional ratio analysis we might conclude that the two companies are very similar in terms of returns – they have the same ROE of 26.3 percent.

However, a look at the components of ROE – profitability, utilization and leverage, reveals two very different companies. The first company

*Continued on next page*

$$ROE = \frac{\text{Net Income}}{\text{Equity}} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

#### COMPANY 1:

$$ROE = \frac{4,200}{16,000} = \frac{4,200}{175,600} \times \frac{175,600}{25,200} \times \frac{25,200}{16,000}$$

$$26.3\% = 2.4\% \times 6.97 \times 1.58$$

#### COMPANY 2:

$$ROE = \frac{1,750}{6,650} = \frac{1,750}{175,600} \times \frac{175,600}{43,200} \times \frac{43,200}{6,650}$$

$$26.3\% = 1.0\% \times 4.06 \times 6.50$$

## TRANSACTION DATABASES - continued

- Says down payment of \$600 on MVIC paid of \$2,413. \$300 note at 9 percent for ten years, balance SBA loan, ten years variable. Personal guarantee on note.
  - 9 percent may not be at a market rate.
- Sale closed 9/08
  - Asset data as of 9/08
  - Income data as of 5/08, approximately four months before the closing
- Multiples

	<u>Applied to Duffy's</u>	
◦ MVIC/Sales	.84	\$2,100
◦ MVIC/DE	N/A	
◦ MVIC/EBITDA	N/A	
- This transaction cannot be relied upon as a part of a primary valuation method. Debt may not be at market rate. Sales multiple doesn't reflect profitability. Discrepancy in total assets minor. Timing difference between closing date and income data probably acceptable.

### Transaction Nine

- Cash and assumed debt; asset deal; S corp
- No agreed upon purchase allocation: receivables, inventory, fixed assets, long-term liabilities and total liabilities have values shown rounded to nearest \$100 and \$0 value to intangible assets. Noncompete exists and given \$25 value. Employment agreement at \$100.
- Says down payment of \$600 on MVIC paid of \$1,000. Assumed debt of \$400, no personal guarantee. No terms known. LT liabilities at \$200 on BS; Total liabilities at \$400 on BS.
- Sale closed 2/09
  - Asset data as of 12/08
  - Income data as of 12/08
- Multiples

	<u>Applied to Duffy's</u>	
◦ MVIC/Sales	.20	\$500
◦ MVIC/DE	1.76	\$660
◦ MVIC/EBITDA	2.71	\$407
- This transaction cannot be relied upon as a part of a primary valuation method. There are uncertainties about what was bought/sold and uncertainty about the type and terms of the debt assumed. Says no agreed upon purchase price but the asset information is only one month before closing and amounts shown for assets all rounded to nearest \$100. The values are in a relatively tight range but much lower than the results from the application of most of the other transaction multiples.

### CONCLUSION

Are the transaction databases discussed here useful? Possibly, but only in a limited way and usually as a corroborating business valuation method. Unfortunately, as seen in the previous case study example using Pratt's Stats, the limitations across the nine transactions analyzed included errors and missing and unknown data and sources. Fur-

## QUACKENBUSH - continued

relies on efficient use of its assets to drive profitability, and both utilization and profitability are driving ROE. The second company, however, is focused on leveraging its equity to drive returns, with nearly twice as much debt in its invested capital structure than the first company, even though it has little more than a third of the first company's equity.

### 2. We can identify either underutilization (low economic benefits) or capacity constraints (high risks).

Particularly when compared to itself or its peers over time, the DuPont Formula can highlight potential extremes in a company's profitability, efficiency, and/or leverage. Extremes at either end of the spectrum generally do not contribute to value. For example:

- Increases in net profit are generally a value enhancer, except when a company sacrifices growth potential, sales levels, and quality for the sake of profitability.
- Increases in asset turnover that optimize operating efficiencies are generally a value enhancer, except when a company runs into capacity constraints or deferred maintenance disruptions.
- Increases in financial leverage enhance equity value, but only to the extent that the company has not acquired so much debt that the impact increases the company's default risk to a greater extent than it improves ROE.

Identifying such should lead the appraiser to ask the important *why* questions.

### 3. What is driving ROE? Is that consistent with the company's strategies, and how well is the strategy being implemented?

This is essentially a quality of management analysis. Answering this question helps us bring our analytical assessments together and paints a picture for us, and the readers of our valuations, that contextualizes the analysis and helps answer the *why* in addition to the *what* of the analysis.

The development of valuation metrics from an analysis of the subject company – an internal perspective—requires judgment. As appraisers, we support our analyses with observation and the linking of related quantitative analyses. The DuPont Formula is one more analytical tool in the appraiser's toolbox towards this end. ☞

## TRANSACTION DATABASES - continued

thermore, if used incorrectly, their application may result in a violation of certain professional business valuation standards. ☞

*Lively debate enriches our profession. We encourage your reaction to this article. Please email [jhitchner@valuationproducts.com](mailto:jhitchner@valuationproducts.com).*

# Industry Focus: Engineering and Architectural Firms

We have recently valued several Architectural and Engineering (A/E) firms. I was amazed at the abundance of industry data sources that exist. For anyone who is valuing that type of business for the first time, a summary of some of the publications and information may be of interest.<sup>1</sup>

## ZWEIGWHITE PUBLICATIONS

ZweigWhite ([www.zweigwhite.com](http://www.zweigwhite.com)) specializes in the analysis of engineering, architectural and environmental consulting firms. Several annual publications dedicated to these types of firms may be of use, such as the following:

### Financial Performance Survey

The *Financial Performance Survey* provides an annual summary of financial performance statistics, ratios, and analyses. Sections include key financial statistics, personnel costs, staff information, and a variety of other information, so comparisons can be made for a subject company to other firms in the industry. The 2009 Survey can be purchased from ZweigWhite's website for \$395.

### Valuation Survey

The *Valuation Survey* provides valuation data for different firms. The data is based on valuations of more than 200 firms as reported in annual survey responses. Among other things, valuation data for survey firms is categorized by firm size, type, age, region, growth rate and projections, the reason for the valuation, valuation methods, and the date of the valuation. The survey also provides guidance on the valuation formulas used in design and environmental consulting firms, median valuation multiples, and a series of case studies based on valuations of firms in the survey. ZweigWhite's "Z-Formulas" for value are also addressed. The 2009 Survey can be purchased from Zweig White for \$495.

### Merger & Acquisition Survey

The *Merger & Acquisition Survey* provides results from an annual survey on acquisition activity amongst a wide range of firms. The survey includes broad parameters on transaction multiples and types of firms that are acquiring or have themselves been acquired. The 2009 Survey can be purchased from ZweigWhite's website for \$445.

As an example of the content in this publication, the 2009 Survey surveyed 49 firms about their recent acquisitions. The survey reported more asset purchases than stock sales. The respondents' latest acquisitions were priced at multiples of 62.5 percent for price-to-net service revenue and 4.0x pre-distribution EBITDA; both represent the reported medians.<sup>2</sup>

### Other ZweigWhite Reference Materials

In addition, ZweigWhite periodically offers webinars and other educational opportunities that may be of interest. In early 2009, a webinar was offered called "The Winds of Change: An Overview of M&A Activity in the AEC Industry." The webinar commented on the outlook for acquisitions in this space, including discussion of market segments that appear to be in demand and trends in transaction multiples. It provided information about the impact the recession has had on buyers and sellers, and what to expect in the future of the industry. This webinar is offered on the ZweigWhite website for purchase in CD form for \$195.

A publication on a similar topic by ZweigWhite is called *2009 AEC Industry Outlook: Strategy and Insight for Design and Construction Firms*, which was published in January of this year and is available on the ZweigWhite website for \$295.

ZweigWhite offers numerous other publications that may be informative to the valuation practitioner



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including, but not limited to, *Report 2020: The U.S. Environmental Industry & Global Markets*; *Report 2020B: The U.S. Environmental Industry Overview*; and several publications on salary surveys, exit strategies and transition issues for firm owners.

## OTHER TRADE PUBLICATIONS

Other organizations also provide research that may be of use to the valuation analyst, including the American Institute of Architects, the publication *DesignIntelligence* and the American Society of Landscape Architects.

### American Institute of Architects

The American Institute of Architects (AIA) offers an annual compensation survey on its website ([www.aia.org](http://www.aia.org)) called the *AIA Compensation Report: A Survey of U.S. Architecture Firms*.<sup>3</sup> The survey includes breakdowns of compensation data for several job functions and many geographic breakdowns, by state and major metropolitan areas.

It begins with an overview of the current compensation and employee

*Continued on next page*

## expert TIP

There is an abundance of resources that can be used to value engineering and architectural firms.

benefits in U.S. architectural firms based on survey data. This summary overview is followed by a detailed breakdown of the annual compensation for many positions from intern up to CEO/President. It is separated first by firm size and then by regions, cities, and states and includes a range of compensation values from the lower quartile to the upper quartile. This report can be purchased from the AIA website. It costs \$195 for members and \$249 for non-members.

The AIA has other interesting information on their website. For example, there is currently a presentation called "Business Trends and the Outlook for Architecture Firms," dated March 26, 2009 by Kermit Baker, chief economist of the AIA. This cites the "AIA Consensus Construction Forecast Survey for 2009 and 2010" that was based on December 2008 survey data. It also cites the AIA Architecture Billings Index, which is routinely released by the AIA. The Billing Index is also discussed at length in the article, "Architecture Billings as a Leading Indicator of Construction," published in the October 2005 issue of *Business Economics* by Kermit Baker and Diego Saltes of the AIA and reprinted on the AIA website.

The AIA also publishes a "Business of Architecture" survey every three years. The last one that was published was for the year 2006, and was reported to be "essential reading for the profession's observers because it is the most complete benchmarking of trends such as firm size, economy, project delivery method, and many other practice concerns."<sup>4</sup> It is estimated that the 2009 survey will soon be available in PDF form on the AIA website.

### Design Intelligence

Another compensation survey is published by DesignIntelligence. The *DesignIntelligence: 2009 Compensation and Benefits Survey* provides statistics about the current economic situation, its effect on firm growth, and the outlook for the architecture industry. The survey includes current compensation



averages for staff positions ranging from intern up to CEO and is broken down by region and by years of experience. It then includes a projection of the expected future compensation for each staff position and provides the average benefits received by each staff member across the nation. The survey concludes with a few articles, which address the current economic situation's affect on the industry and provide a list of suggestions to maximize firm growth, profits, and development moving forward. This survey is available for \$69.99 at [www.di.net](http://www.di.net).

### American Society of Landscape Architects

Compensation trends for landscape architectural firms are available through the American Society of Landscape Architects (ASLA); their website is located at [www.asla.org](http://www.asla.org). Released every two years, this survey provides data on market trends and firm growth. It includes information on salaries, market sectors, clientele, billing rates, profit margins, and other relevant business data on firms across the US. The salary information is broken down by region, state, firm size,

gross revenue, staff position, and years of experience in that position. The ASLA National Salary and Business Indicators Survey is currently priced at \$150 for members and \$300 for non-members.

In addition to the above, industry data can be obtained through several of the more well known sources that sell research, such as First Research, IBIS World, Integra Information (Microbilt), and others.

*Author's Note: Thanks to Seth Fishman for assistance with this article.*

- <sup>1</sup> The items listed in this article are not intended to represent an all-inclusive list.
- <sup>2</sup> ZweigWhite, Merger & Acquisition Survey of Architecture, Engineering, Planning & Environmental Consulting Firms, (Natick, MA: ZweigWhite, 2009), p. 37.
- <sup>3</sup> Baker, Kermit and Riskus, Jennifer, AIA 2008 Compensation Report: A Survey of U.S. Architecture Firms, (Washington DC: AIA, 2008).
- <sup>4</sup> "New AIA firm survey indicates that while business is good, the profession itself changes slowly", Andrew Pressman FAIA, Architectural Record, March 2007 [<http://archrecord.construction.com/practice/firmCulture/0703AIAfirm-1.asp>]

## Valuation Services Engagement Control (the Basics)

Managing multiple valuation services engagements in an effective and efficient manner is a challenge for valuation analysts. Risk management, fees, collections, overruns, budgets, reviews, reports, technical quality, etc. all have to be regularly monitored. The use of a simple engagement control program will help ensure that what is supposed to get done does get done. Adherence to such a program keeps the valuation process moving in the right direction.

### ENGAGEMENT SELECTION

■ **A relationship check should be performed** to determine if there are any potential conflicts of interest. A list of names of the client, attorneys, accountants and any other interested parties should be obtained before you are engaged to prepare a valuation. When initially contacted by an attorney in a litigation matter, it is usually best that the attorney give you the names before going into any detailed discussion of the case. This can help avoid any later problems if you do find there is a conflict of interest, particularly with an existing engagement.

■ **An engagement letter is then issued** and must be executed by the client. If applicable, the engagement letter should contain an indemnification section, detailed fee and retainer arrangements, valuation date, a process for resolving disputes, e.g., mediation, type and timing of the report, a statement that a relationship check was performed, restrictions on the intended use and users and a clause that allows you to discontinue services and retract your analyses and reports if fees are not paid when due. If a report is requested, many analysts attach a sample set of assumptions, limiting conditions and valuation representation such as the example language (paragraph 65 and appendix A) in the *AICPA Statement on Standards for Valuation Services (SSVS) No. 1, Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset*.

### ENGAGEMENT PREPARATION

■ **An initial information request is sent to the client** that asks for data such as: fiscal year end financial statements, interim financial information at the valuation date and the prior year period, tax returns, company brochures, budgets, projections, forecasts and business plans, nonoperating assets and liabilities, list of top customers/clients, primary competitors, contracts, owners and senior management, intellectual property, prior equity transactions, prior acquisitions or offers, articles of incorporation (partnership/member agreements), by-laws and buy-sell agreements.

■ **Establish important factors with the client and relay to all staff.** These factors include the valuation date, delivery dates for analysis and, if requested, the report, standard and premise of value and how they are defined.

■ **Determine how business valuation standards such as SSVS No. 1 apply.** This includes the type of engagement—valuation or calculation; the type of report—detailed, summary or calculation; and whether the reporting exemption for certain controversy proceedings applies. If the valuation analyst belongs to multiple national valuation associations, he/she must also address how the standards of those groups apply as well. It is important to take this seriously. In litigation matters, many attorneys ask the experts they hire to prepare standards compliance reviews to determine whether the other expert is properly following the standards. Many analysts think they are in compliance and are surprised when proven otherwise.

### ENGAGEMENT TECHNICAL REVIEW

■ **Determine what valuation methods will be employed.** The analyst will consider the income, market and asset approaches in each engagement and then select the appropriate methods within each approach. The methods applied will be based on the availability and reliability of the required data. In some instances the data may be so poor that the analyst rejects

the method. Some analysts will do almost anything to keep a method. Avoid this if you can. It is easier to defend why a method was rightfully rejected than to defend an unreliable method.

■ **Reconcile the results from each method.** The analyst will then determine the weight given each valuation method either by making quantitative or qualitative methods. A quantitative weight would be percentages applied to the result of each method such as 60% to the capitalized cash flow method, and 20% each to the guideline company transaction method and the net asset method. The qualitative version would be a discussion along the lines of “I put more emphasis on the capitalized cash flow method because I had good data and I put less emphasis on the guideline company transaction and net assets methods because of lack of support for the underlying data.

■ **Check and foot the analysis.** The numbers in the schedules should be checked and footed. Whoever does the numerical footing should also look for logic errors, which are applications and/or assumptions that appear to be unsupported or don't make common sense. It is unfortunate that many analysts still do not check their work. This is time consuming but important and well worth the peace of mind and reduced risk of errors.

### REVIEW OF ANALYSIS/REPORT

■ **Determine who will review the report and document that the report was reviewed.** The responsible analyst should reconcile all comments received by all reviewers. He/she should also ensure that all standards have been adhered to and that the analysis and, if applicable, the report, are in full compliance.

■ **A draft report is sent to the client for review.** The client should review the analysis and report and help ensure the accuracy of the information relayed to the analyst. Many analysts only issue the final report after being paid in full. ☺

## What the Expert Witness Should Know About the Cross-Examiner's Trial Tactics

Just as we expert witnesses have our own "do's and don'ts" checklist, so does the trial lawyer who cross-examines you. Cross-examination is such an important part of the trial process that entire books have been devoted to the subject. I thought it would be of interest to aspiring (and even experienced) expert witnesses to obtain a view from "behind the scenes" and to see what rules and maxims have been established for the trial attorneys themselves.

In this article, I have taken material from the writings of two Canadian and two American legal authorities: Former Supreme Court of Canada Justice John Sopinka (when he was a practicing trial lawyer) in *The Trial of An Action*<sup>1</sup> and Ontario District Court Judge Roger E. Salhany in *Cross-Examination: The Art of The Advocate*.<sup>2</sup> The American authors are Peter Brown in *The Art of Questioning*<sup>3</sup> and the nineteenth-century trial lawyer, Francis L. Wellman, in his 1903 classic, *The Art of Cross-Examination*<sup>4</sup>, Part I of which is entitled "The Principles of Cross-Examination" (243 pages) and Part II, "Some Famous Examples of Cross-Examination" (229 pages). Wellman had examined and cross-examined some 15,000 witnesses in his 25 years as a litigator.

This article consists of a "pot-pourri" of maxims and anecdotes shared by these renowned trial lawyers with their fellow attorneys. These provide some insight as to the cross-examiner's thought process — where he or she is "coming from" and why. Needless to say, these rules are by no means exhaustive. Whenever expert evidence is involved, I have included the relevant maxims.

Sopinka, in *The Trial of An Action*, gives several pages of advice (as an attorney) for preparing a trial lawyer's own witness for cross-examination:

In order to further neutralize the terror generated by the witness

box the witness should be given a preview of the cross-examination. When the witness is a main witness and will be subjected to a searching cross-examination, it is often productive to plan the examination which is expected from opponent's counsel and subject the witness to it ...

Apart from being given a preview of the examination there are a number of 'good pieces of advice' about behaviour from which a witness can profit ... Don't fence with the cross-examiner. Don't lose your composure. ... no matter how much you dislike the cross-examiner treat him with respect. All of this will help to create a favourable impression on the tribunal.

Those of us who have given expert witness testimony know first-hand that the foregoing instructions are those typically suggested by counsel preparing his or her expert for cross-examination.

Sopinka notes that a witness' evidence can be contradicted or impeached by (a) previous inconsistent statements, (b) other evidence, (c) contradiction in the witness' own evidence or inherent improbabilities therein, or (d) attacking his or her memory, power of observation and credibility. As regards an expert witness (as opposed to the fact-witness), he makes the following suggestions to his fellow counsel:

- To cross-examine effectively, you must be schooled by an equally competent expert.
- The object is to flaw him/her so that your expert is preferred.
- The easiest way of discrediting the expert's opinion is to refute a basic assumed or found fact, which may be done in cross-examination or by other evidence.
- If a basic assumed fact cannot be



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refuted, attack the theory of the expert [presumably relying upon counsel's own expert].

### SHOULD COUNSEL CROSS-EXAMINE?

Sopinka says that while there are many styles and techniques of cross-examination, it must serve at least one of three purposes:

- To obtain helpful admissions or evidence.
- To contradict or impeach the witness.
- To create an impression or atmosphere for the judge or jury.

But first the attorney must make the decision as to whether to cross-examine the expert at all, and, if so, what it will accomplish. In making such a decision, counsel must consider whether, by *not* cross-examining, it will imply to the court that the expert's evidence is accepted.

Wellman even suggests that nothing could be more absurd or a greater waste of time than cross-examining a witness who has testified to no

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## expert TIP

**Knowing the tactics that attorneys use in cross-examination can help financial experts better prepare their testimony.**

material fact against the lawyer's case. He observes that the courts are full of lawyers who seem to feel it is their duty to cross-examine every witness who is sworn; they appear afraid that their clients will suspect them of ignorance or inability to conduct a trial.

In *The Art of Questioning*, Peter Brown gives the following advice:

the early masters understood better than today's professors the importance of foregoing cross-examination and the stupidity of having an adverse witness repeat and thus reinforce all that was said so damagingly on direct ...

More cross-examinations are suicidal than homicidal. When in doubt don't ask a question. When in doubt don't cross-examine. Do only what's necessary, and then get the hell out.

Brown states that if the witness whom counsel is about to cross-examine has demonstrated that he is a good citizen, decent and unbiased, ... and has not harmed the case in any essential way, counsel should not cross-examine him. If he/she does, it should be for a specific purpose and that purpose should always be a significant material gain for the client's cause. In this connection, he refers to the comments of another American trial lawyer, Max Steuer, with forty years of experience as a cross-examiner:

...cross-examination should be pointed to two objectives: either to destroy the story told by the witness or to destroy the witness himself. If neither of these objectives is attainable (and if you have properly prepared your case, you should know the prospect) a pointless and scoreless cross-examination does your case more harm than good. And when you have scored your point on cross-examination, for heaven's sake, quit.

This brings us to the basic "rules" that the cross-examiner should follow, over and above such obvious ones as "Be prepared."

## RULES FOR THE CROSS-EXAMINER

### 1. Don't ask a question in a courtroom context without knowing the answer first.

Sopinka believes that while this rule may generally apply, there might be exceptions:

The truth lies in between. In a strong case, not dependent on cross-examination, the cross-examiner should take no chances. He should restrict his questions to matters that are either not capable of doing damage or in respect of which the witness is constrained by previous statements. But in a case that depends on cross-examination this approach is too stultifying. The cross-examination must be built up on probabilities. The cross-examiner tries to foresee the different answers that may be given and formulates questions to meet them. Eventually, despite the fact that the desired answer is not obtained, the witness' response runs counter to the probabilities of the situation.

As one renowned trial lawyer, Emory Buckner, put it: "When the cross-examiner rises and does not know exactly what to ask or where to begin, he should say 'no cross-examination!'"

### 2. Size-up your witness.

In his book, Judge Salhany categorizes certain witnesses under the following headings, among others:

- The brilliant witness.
- The garrulous witness.
- The reluctant witness.
- The flippant answer lying witness.

Each of these witness categories requires a special approach by the cross-examiner in attempting to destroy the witness' testimony.

### 3. Begin the cross-examination dramatically.

Sopinka believes that the best technique is a dramatic beginning: This is when counsel has the attention of the judge and when the witness is most

vulnerable. Counsel should not permit the witness to become acclimatized and gain confidence, rather, put to the witness an early series of questions that go to the heart of the matter.

### 4. Cross-examine in plain English.

Sopinka recommends that counsel should force an expert to use non-technical language. If the suggestions put forward by counsel in cross-examination are logical, the judge will prefer them to the expert's negative response couched in abstruse technical language: "The advantage you have is that the judge ... [speaks] your language, while the technical jargon is as foreign to [the judge] as it was to [the attorney]."

### 5. Show that the expert's conclusion is erroneous not because the expert is not qualified but because the facts relied upon are inadequate to draw such a conclusion.

Wellman says that it is generally unwise for the cross-examiner to attempt to cope with a specialist in the latter's own field of inquiry. Lengthy cross-examinations along the lines of the expert's theory are usually disastrous and should rarely be attempted and that "[w]hen the cross-examiner has totally failed to shake the testimony of an able and honest expert, he should be very wary of attempting to discredit him by any slurring allusions to his professional ability ..."

Attacking the expert's expertise will force the cross-examiner to deal in areas where the expert clearly has the edge. But by simply sticking to the facts, the cross-examiner may attempt to neutralize it and retain control of the cross-examination.

Salhany states that the foundation for an expert's opinion and its subsequent validity will depend entirely upon the establishment of the underlying facts. If those facts have been misstated by counsel or it turns out they are not proved or accepted by the judge, then the entire opinion will crumble. It is crucial, therefore, that an attack be made on the proof of the

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underlying facts. Salhany gives an example of how cross-examination might proceed in this respect:

**Counsel:** If I understand your opinion correctly, it was your opinion that ... (opinion is stated).

**Witness:** Yes.

**Counsel:** That opinion, of course, depends entirely upon your assumption of the truth of the facts that my learned friend has related to you.

**Witness:** Yes.

**Counsel:** And those facts are (each underlying factual assumption is listed).

**Witness:** Yes.

**Counsel:** So it is fair to say then that if it turns out that any one of those factual assumptions is not correct, then your opinion might be different?

Judge Salhany continues:

This question puts the witness in a dilemma. It may be that his opinion is not dependent upon every one of those facts. The question, however, is only designed to establish that the opinion might be different. If counsel asked if his opinion would be different, then the witness could properly say in response 'not necessarily so.' This would place the examiner in the position of having to ask 'Why do you say that?' This would leave the witness in a position of having the opportunity of expanding his answer much more fully.

On the other hand, by asking simply whether his opinion 'might be different' leaves it open for counsel in re-examination to ask the following question:

**Counsel:** In response to my learned friend's question as to whether your opinion might be the same if all of the assumed facts did not exist, you answered 'no.' Would it necessarily be different?

This would give the witness the opportunity to expand fully on his answer.

The cross-examiner who is secure in his position should pursue the issue and determine what assumed facts are essential to the opinion. He can ask the expert to state what facts he relies upon to support his position. Once he does so then counsel is able to ask the question:

**Counsel:** Is it fair to say then that if any one of those facts is not true, then your opinion would not be the same?

**Witness:** Yes.

What the cross-examiner must then do is attack the evidence in proof of one of those facts. He will then be able to go to the judge ... and argue that [the judge] should reject the testimony of the expert because it was dependent upon proof of certain facts which were not established.

#### **6. Work with the skill of a surgeon.**

Brown refers to the comments of Lloyd Paul Stryker in *The Art of Advocacy*:

[A cross-examiner's education] never ends, and each witness called affords him a new study. Each one presents the problem: Has he told the whole truth or only part of it? Has he tried to give his honest recollection, or is it only the fallibility of memory that has interfered? Is he testifying from some bias that even he does not appreciate? Is there something he has omitted that would be helpful to your client?

Brown describes Stryker as the keen observer who would watch carefully how the witness behaved in the courtroom and on the stand:

[Stryker] would rivet his eyes on the quarry during direct examination. He did not, as most of us do, sit there, eyes down, making notes. He studied the specific

mannerisms of the witness. He looked for clues in the ways the individual expressed herself or himself. He listened for the variations in tone of voice caused by the tightening of vocal cords. He noticed pauses. He noted flashes of anxiety, dryness of mouth, moistening of lips, hesitations, discomfort, and uncalled-for repetitions of coached material. He watched for stammer and for needless reference by the witness to counsel's name ... Eyes were of particular interest. How and when did pupils shift and dart? When did eyes narrow or blink? The giveaway laugh and wipe of forehead. Hands wring, cling, scratch, and readjust. Legs shuffle. A hand touches the pocket with notes taken from his lawyers on what to avoid at all costs ...

Brown concludes his observation with: "Observe your subject, and then go for the jugular!"

#### **7. Use the opposing expert to help your own cause.**

Wellman suggests that the art of the cross-examiner should be directed to bring out such scientific facts from the knowledge of the opposing expert as will help his or her own case, and thus tend to destroy the weight of the expert's opinion.

No question should be put to an expert which is in any way so broad as to give the expert a platform to expatiate upon his own views, and thus afford him an opportunity in his answer to give his reasons in his own way, for his opinions, which counsel calling him as an expert might not have fully brought out in his examination (or, as noted earlier, to provide the expert an opportunity to repeat and reinforce). Wellman would warn his colleagues that:

The professional witness is always partisan, ready and eager to serve the party calling him. This fact should be ever present in the mind of the cross-examiner. Encourage the witness to betray

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his partisanship; encourage him to volunteer statements and opinions, and to give unresponsive answers. Jurors always look with suspicion upon such testimony. Assume that an expert witness called against you has come prepared to do you all the harm he can, and will avail himself of every opportunity to do so which you may inadvertently give him. Such witnesses are usually shrewd and cunning ... , and come into court well prepared on the subject concerning which they are to testify.

**8. Don't put the evidence of your own expert to the expert you are cross-examining.**

According to Sopinka, any direct reference to counsel's own expert should be limited to an admission (which will normally be forthcoming) by the opposing expert on the witness stand that counsel's own expert is well-qualified and highly regarded: "While much of the substance of your expert's theory will be put to the witness, a specific identification of your expert's evidence in the question may result in getting a rebuttal in advance."

**9. Exercise self-control when you have elicited a damaging answer to your cause.**

Both Brown and Wellman note that rather than showing surprise, an experienced trial lawyer (rather than being pulverized by a damaging answer) will appear to take the answer as a matter of course, let it fall perfectly flat and proceed with the next question as though nothing had occurred, or simply say "uhm-mm." Again, the essential thing for the trial lawyer is not to lose control of the witness. Sopinka gives the following advice:

Develop a stoical attitude to bad answers. Go on to something else without apparent emotion. If you think of something to dilute the bad answer, come back to it. Avoid long awkward pauses... try to finish on a positive note.

**10. Don't ask why.**

According to Brown, the only times when you can ask "why" in cross-examination is when the adverse witness is inextricably "impaled" or if counsel's pre-trial examination-for-discovery and other testimony has made him or her aware of facts that the opposing party simply cannot explain away. In this latter context the question "why" is rhetorical and the witness' silence tells the tale.

Once the witness/evidence has been discredited, don't ask more questions. If cross-examining counsel continues to ask more questions once the adverse witness or his/her testimony has been discredited, the witness may be afforded an opportunity of explaining away prior admissions. Similarly, counsel should not over-stress, as this may provide the witness an opportunity of qualifying his or her answer or shrewdly placing the matter in another context.

As Peter Brown notes, "you will have plenty of opportunities to emphasize the damaging admission or testimony in summation to the court."

Max Steuer has written a chapter in Wellman's book, in which he states that if, through cross-examination, the integrity or truthfulness of the witness is destroyed, the examiner has greatly helped his case, but there remain two dangers:

- (a) To cross-examine when it is unnecessary; and
- (b) To over-do the cross-examination.

**11. Don't ask open-ended questions.**

Brown suggests that the attorney's questions should be short, definite, clear, pithy, without characterization, and close-ended. He suggests that counsel does not ask general questions that the witness can answer with a speech. This would give the hostile witness a chance to bring in testimony otherwise inadmissible and self-serving. The cross-examiner must control the opposing witness on cross-examination or the witness will destroy the questioner and, in turn, the client's

cause. For the hostile witness, leading questions (permitted in cross-examination but not in direct) or close-ended questions are those that call for a "yes" or "no" response such as "Isn't it correct ... ?" In fact, all questions in critical areas should be close-ended. By carefully limiting the answers, counsel can successfully preclude the expert from expounding on his or her theory and may even succeed in planting seeds of doubt in the court's mind about the expertise of the witness.

Open-ended questions simply give the expert an opportunity of reasserting his/her opinions and explanations.

**12. Don't be indignant.**

The late British barrister, Clifford Mortimer, stated that "the secret of cross-examination is not to examine crossly." The advice to trial lawyers is that indignation can destroy one's objectivity and judgment. This rule applies no less importantly to expert witnesses, whose objectivity and credibility are at stake. In the case of counsel during cross-examination, judgment is also at stake.

**13. Make the point with silence.**

Brown suggests that when the opposing witness during cross has finally been "coaxed or coerced" into making a material admission that is important to the cross-examiner's case, it is often effective to stop asking questions for a moment and let the response sink in with the court. "A moment of quiet in the courtroom can be startling ..."

As Wellman puts it: "It cannot be too often repeated ... that saying nothing will frequently have a better result than hours of questioning. It is experience alone that can teach us which method to adopt." He refers to the story of John Philpot Curran, known as the most popular advocate of his time, who once indulged himself in the silent mode of cross-examination but who had made the mistake of speaking his thoughts aloud before he sat down:

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'There is no use asking you questions, for I see the villain in your face.' The witness replied with a smile: 'Do you, Sir? I never knew before that my face was a looking-glass.'

#### **14. Avoid petty points.**

Brown recommends that when a witness in direct examination has scored a direct hit on the cross-examiner's case, and the cross-examiner knows that the witness cannot effectively be turned around, the attorney should resist the temptation of bringing out trivial inconsistencies in the direct testimony in the hope that they would discredit the witness and his evidence:

That would amount to answering a strong argument with a weak one. The contrast will only make matters worse for your client. Rise, say firmly, 'no questions.' Get on with the case, your face unconcerned and free of redness.

Counsel should avoid descending to the use of petty points in questioning instead of foregoing cross-examination unless there is something of substance to cross-examine on.

#### **15. Consider timing.**

During cross-examination Brown suggests that counsel look for a high peak (if there is one) upon which to terminate and sit down.

Keep an eye on the clock, because it is always best to finish a session strong and, in some cases, to have overnight for honing of further cross-examination. Try to have your best thought come just before you finish the day's session.

While the foregoing comments were taken from the writings of Canadian judges Sopinka and Salhany and American trial lawyers Wellman and Brown, there are also a few other suggestions that have been made by other cross-examiners and which have appeared in *For the Defense*, a monthly publication of The Defense Research Institute in the U.S.:

#### **16. Never pass up an opportunity to expose the ... expert as a "professional witness."**

While the expert's qualifications should not, as noted earlier, be attacked on cross-examination, counsel should instead challenge the motivation for the expert's testimony. This can be accomplished by having the expert reveal the amount of his or her fee, the income earned by the expert during the preceding year from testifying or consulting with attorneys in litigation matters, the number of times he/she has testified for plaintiff's lawyer and defendant's lawyer, the manner in which he or she attracts clients (e.g., advertising, seminars, or direct contact with attorneys). This is to have the judge infer that, not only is the expert paid for his/her services as would be expected, but that the expert has a vested interest in pleasing the attorney and continuing to cultivate the "business" as a professional witness.

#### **17. Never leave the floor open.**

When a question has been asked in cross-examination and the expert has given a response, don't allow there to be silence following such response. If the cross-examiner does, the expert may decide to add further explanations to the answer just given. Therefore, while the cross-examiner may be considering the next question he/she can forestall the situation after a question and answer by simply saying "Now let me ask you this ...", or words to that effect. This way, should the expert decide to add further comments while counsel may be considering what the next question is, counsel could immediately respond "Excuse me ... let me ask my question." This technique should enable the cross-examiner to prevent additional, unwanted testimony by the expert.

#### **18. Word the questions in the form of statements.**

To avoid giving the expert an opportunity of explaining his or her views, word questions as much as possible in the form of statements from prior testi-

mony, followed by reflective rejoinders such as "Isn't that right?" or "Didn't you?" These questions can easily be answered yes or no and are least likely to invite or allow explanation.


#### **19. Drive home a point more than once by asking a series of questions (to which you know the answers).**

Rather than asking a "tail-end" question such as, "You did not do any verification of the company's results before January 2004, did you?" and risk a simple admission from the expert that "No, it wasn't necessary," a series of questions would better emphasize the point. For example, you could take a "slice" of the answer by asking, "You didn't do any verification around X date, did you?" and "And you didn't do any objective verification around Y date, did you?" Thus, slices of the same point can be driven home to the judge in a negative way.

#### **20. Save a little for re-cross-examination.**

The cross-examiner should select testimony that he or she is willing to lose if no re-direct examination is undertaken or if it does not touch upon the subject matter which has been saved. By saving at least a small portion of cross-examination for re-cross is to assure that the cross-examiner has some solid material to end the expert's testimony on a note that is positive for the cross-examiner.

#### **Conclusion**

While the expert should try as much as possible to familiarize himself/herself with the courtroom techniques of the cross-examiner, there is no substitute for very thorough and careful preparation for trial and having first-hand knowledge of the underlying facts, issues, and context of the litigation. 

<sup>1</sup> John Sopinka, QC, *The Trial of An Action*, Butterworth's (Toronto: 1981).

<sup>2</sup> Roger E. Salhany, *Cross-Examination: The Art of the Advocate*, Butterworths Canada LTD. (Toronto: revised 1991).

<sup>3</sup> Peter M. Brown, *The Art of Questioning*, Collier Books, Macmillan Publishing Co. (New York: 1987).

<sup>4</sup> Francis L. Wellman, *The Art of Cross-Examination*, Fourth Edition (New York: 1936).

<sup>5</sup> Lloyd Paul Stryker, *The Art of Advocacy*, Simon & Schuster (New York: 1954).

# Eleven Ways that Attorneys Kill Their Own Experts

Those of us who have had significant experience in the courtroom typically employ proven approaches and protocols and embrace the highest level of professional standards as we strive to formulate and deliver opinions that will withstand the most rigorous challenges, pretrial and in court. Our focus is typically upon "our" protocols, "our" procedures, and "our" standards. On the (hopefully rare) occasions when things may go sour, we again look back at what it is that we may have done differently.

Occasionally that which should have been done differently rests primarily in the lap of retaining counsel. Sometimes counsel is unaware of the expert's time and evidentiary requirements. Sometimes counsel embraces an inappropriate view of the expert's role. And sometimes counsel's focus upon budgetary issues translates into a less than ideal environment for the expert.

The following outlines 11 practices of litigation counsel that become most problematic for an expert and easily impair the expert's effectiveness.

## 1) Retaining the Expert at the Eleventh Hour

Experienced experts cringe when counsel phones and says "I need to designate an expert by 5 pm today. Please fax or email me your CV and your rate sheet."

Since the cutoff for expert discovery soon follows, there may not be sufficient time for the expert to be fully prepared in time for his or her deposition. Accordingly, the expert's opinions may be severely limited or unfounded.

## 2) Establishing Unrealistic Budgets

An expert needs the appropriate resources in order to formulate opinions that will withstand the rigors of the legal process. Sometimes counsel

will ask an expert to limit the expert's fees to a very modest predetermined amount. Often this is the result of limited client funds or limited understanding of the required expert services. When an expert must work within too low a budget, the expert may take short cuts in preparation, which are typically accompanied by the risks of performing below the professional standard of care. Unless the restrictions on the budget are accompanied by a narrowing of the scope of the expert's work and opinions, inattention, sloppiness and lack of thoroughness are likely to work their way into the expert's work product.

## 3) Providing the Expert with Unreasonable Assumptions

It is not uncommon for counsel to ask an expert to incorporate certain assumptions into his or her work when formulating expert opinions. When the assumptions are reasonable, and are supported by the evidence, the expert's opinions are likely to support counsel's case and at the same time be resistant to opposing counsel's attack. However, when the assumptions incorporated into an expert's work are unreasonable, the expert's opinions become nothing more than unsupported hypotheticals. An expert who delivers unsupported hypotheticals instead of well-founded opinions is easily impeached.

## 4) Preparation of Expert Witness Designation Without Soliciting the Expert's Input

Often counsel will prepare and serve an expert witness designation without first consulting with his or her expert to confirm that the scope of the expert's testimony as described in the designation is consistent with the expert's understanding of the scope of the testimony. Absent this confirmation the expert's opinions may be narrower or more inclusive than the scope



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described in counsel's designation. Should opposing counsel focus upon this disconnect, it may be the subject of a motion in limine to limit the expert's testimony or even to exclude the expert altogether. This risk can be minimized or eliminated if the expert has the opportunity to review the description of his or her anticipated testimony, before the designation is served.

## 5) Asking the Witness to Testify about Issues Beyond the Expert's Area of Expertise

Occasionally a matter may have budgetary constraints that limit the amount of funds allocable to experts. These constraints sometimes encourage counsel to streamline the expert list and forego an otherwise important expert with the expectation that another expert already on board may give testimony that fills the gap. When this happens, the retained expert is sometimes asked to stretch the limits of his or her expertise so that the expert may deliver certain additional opinions that

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## expert TIP

Experts need to beware of the ways a retaining attorney can hurt them.

are arguably outside of the expert's customary area of expertise. Should the expert agree, the expert will have increased the likelihood of jeopardizing his or her credibility and in turn tainting the expert's otherwise solid opinions within the expert's customary areas of expertise. Effective cross-examination will easily reveal that the expert has stepped over the line and will suggest to the judge or jury that all of the expert's opinions should be rejected.

#### **6. Allowing the Discovery Cutoff to Pass Without First Obtaining the Expert's Wish List**

Experts typically know what they need in the way of evidence to support their expert opinions. This is particularly true of financial experts and other experts who must perform an established protocol or precise analytical procedures as part of the formulation of their opinions. Although counsel may generally know what an expert needs, experts can usually provide a more extensive and better-defined list of relevant evidence required to support the expert's opinion. Without sufficient relevant evidence the strength and scope of an expert's opinions may be severely compromised.

#### **7. Responding to a Motion to Exclude the Expert Without First Soliciting the Expert's Input**

Among an expert's greatest fears is that a motion to exclude him or her will be granted. The exclusion, being a part of the public record, will follow an expert throughout the expert's career and may become an item of concern for attorneys who are considering hiring the expert. To compound the seriousness of being excluded, web based services track the gate keeping activities of courts in many jurisdictions and publish the names of experts who have been excluded pursuant to a motion in limine and the basis for the motion being granted. Often the opposition to a motion to exclude the expert can be more effective if it includes a declaration from the expert supporting his or

her qualifications, methodology or other basis for the expert's opinions. Accordingly, some experts include language in their retention agreements requiring that counsel notify them immediately, should there be a motion in limine to exclude the expert.

#### **8. Exposing the Expert to Toxic Influences**

Litigants are often emotionally tied to the dynamics of their cases. A litigant's vision is often clouded by the emotions surrounding events leading up to the lawsuit as well as the dynamics of the litigation process. An expert who has an extended series of meetings with the litigant/client or who otherwise spends a considerable amount of time with the litigant runs the risk of becoming tainted with the litigant's prejudiced view of the evidence. An expert, whose opinions radiate the flavor of the litigant's perspective rather than that of an unbiased perspective, will likely be perceived as an advocate by the judge or jury. Accordingly, it is best to limit the expert's contact with the client and allow his or her opinions to be formulated based upon the evidence rather than the client's spin on the evidence.

#### **9. Providing the Expert with a Distillation of Evidence**

It is not uncommon for an attorney to provide the expert with excerpts from deposition transcripts, selected portions of contracts or other legal documents, or otherwise incomplete portions of evidentiary material. Often that which is not provided to the expert contains information that would be important to or otherwise influence the expert's opinion. Needless to say, an expert can be easily embarrassed in the courtroom when opposing counsel presents the omitted evidence during the cross-examination of the expert. Accordingly, it is safest to allow the expert to consider all of the potentially important evidence and select that portion that he or she considers relevant in the formulation of the expert's opinions.

#### **10. Accepting a Stipulation to the Expert's Qualifications**

Experts typically have skill, knowledge, education, experience and or training that help the trier of fact understand the evidence (and hopefully reach the correct verdict). Unfortunately, the trier of fact usually does not have a sufficient understanding of expert disciplines to enable them to properly evaluate the expert's work. Accordingly, an expert's credibility is defined not only by his or her ability to communicate expert opinions and the basis for the opinions, but also by the expert's credentials. It is therefore important for the judge or jury to learn about who the expert is and what qualifies the expert to be in the courtroom. Particularly in cases in which the two expert's qualifications are very different, entering into a stipulation as to the qualifications of the experts merely levels the playing field. Counsel who has the more qualified expert will usually be better served by showcasing the credentials of the experts.

#### **11. Allowing for Direct Examination on Friday and Cross-Examination on Monday**

There is no better way to spoil an expert's weekend than to conclude his or her direct examination on Friday. Opposing counsel will have the whole weekend to prepare. Instead of having to formulate cross-examination on a real time basis, counsel will have an opportunity to carefully evaluate the expert's direct testimony and structure more effective or creative cross-examination. Couple this with the weekend's decay of the trier of fact's memory of the expert's direct testimony, the impact of Monday morning cross can become enhanced. Remember, the judge and jury are exhausted on Friday afternoon. On Monday morning they are usually well rested and more attentive. ☞

## PANEL OF EXPERTS



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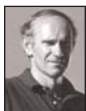
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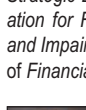
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### GUIDE TO ABBREVIATIONS

<b>ABV-</b>	Accredited in Business Valuation, American Institute of Certified Public Accountants (AICPA)
<b>ASA-</b>	Accredited Senior Appraiser, American Society of Appraisers (ASA)
<b>BV-</b>	Business Valuation
<b>CBA-</b>	Certified Business Appraiser, Institute of Business Appraisers (IBA)
<b>CDFA-</b>	Certified Divorce Financial Analyst, Institute for Divorce Financial Analysts
<b>CFA-</b>	Chartered Financial Analyst, CFA Institute
<b>CFE-</b>	Certified Fraud Examiner, Assn. of Certified Fraud Examiners
<b>CFF-</b>	Certified in Financial Forensics, AICPA
<b>CFFA-</b>	Certified Forensic Financial Analyst, NACVA
<b>CFP-</b>	Certified Financial Planner, Certified Financial Planner Board of Standards, Inc.
<b>CIRA-</b>	Certified Insolvency and Restructuring Advisor
<b>CM&amp;AA-</b>	Certified Merger & Acquisition Advisor, Alliance of Merger & Acquisition Advisors
<b>CPA-</b>	Certified Public Accountant
<b>CVA-</b>	Certified Valuation Analyst, National Association of Certified Valuation Analysts (NACVA)
<b>DABFA-</b>	Diplomate of the American Board of Forensic Accounting
<b>FASA-</b>	Fellow of the American Society of Appraisers
<b>JD-</b>	Juris Doctor
<b>MBA-</b>	Masters of Business Administration
<b>MCBA-</b>	Master Certified Business Appraiser, IBA
<b>MST-</b>	Masters of Science in Taxation

\*CPA licensure designation regulated by the State of Florida •State of Maine

## COST OF CAPITAL CORNER

# COST OF CAPITAL CORNER

	<u>Ibbotson decile<sup>(1)</sup></u>	
	<u>10</u>	<u>10b</u>
<b>R<sub>f</sub><sup>(3)</sup></b>	<b>4.0%</b>	<b>4.0%</b>
<b>RP<sub>m</sub><sup>(4)</sup></b>	<b>6.5%</b>	<b>6.5%</b>
<b>RP<sub>s</sub><sup>(5)</sup></b>	<b>5.8%</b>	<b>9.5%</b>
<b>Cost of Equity<sup>(6)</sup></b>	<b><u>16.3%</u></b>	<b><u>20.0%</u></b>

	<u>Duff &amp; Phelps 25th portfolio<sup>(2)</sup></u>		
	<u>Equity</u>	<u>Invested Capital</u>	<u>Sales</u>
<b>R<sub>f</sub><sup>(3)</sup></b>	<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>
<b>ERP<sup>(7)</sup></b>	<b><u>12.4%</u></b>	<b><u>12.0%</u></b>	<b><u>10.5%</u></b>
<b>Cost of Equity<sup>(8)</sup></b>	<b><u>16.4%</u></b>	<b><u>16.0%</u></b>	<b><u>14.5%</u></b>

	<u>Gross Domestic Product</u>	
	<u>Inflation</u>	
<b>Historical (1926-2008)<sup>(9)</sup></b>	<b>3.1%</b>	<b>3.3%</b>
<b>10 yr. forecast<sup>(10)</sup></b>	<b>2.5%</b>	<b>2.7%</b>

<sup>(1)</sup> Source: Ibbotson *Stocks, Bonds and Bills and Inflation Valuation Yearbook 2009*. © 2009 Morningstar, Inc. All rights reserved. Used with permission. To purchase copies of the *Valuation Edition*, or for more information on other Morningstar publications, please visit [global.morningstar.com/DataPublications](http://global.morningstar.com/DataPublications).

<sup>(2)</sup> Source: Duff & Phelps (D&P) *Risk Premium Report 2009*, average premiums over long-term riskless rate © Duff & Phelps LLC. All rights reserved. Used with permission. Available through Morningstar: <http://corporate.morningstar.com/ib> and Business Valuation Resources, [www.bvresources.com](http://www.bvresources.com), and ValuSource: [www.valusource.com](http://www.valusource.com).

<sup>(3)</sup> Risk-free rate, 20-year Treasury Bond Yield, Federal Reserve Statistical Release, 10/2/09

<sup>(4)</sup> "Risk Premium in the Market," *SBBI*, inside back cover

<sup>(5)</sup> "Size Premium," *SBBI*, pages 94 and 96

<sup>(6)</sup> Build up method illustration only; excludes industry risk premium and specific company risk, if any

<sup>(7)</sup> Report includes premiums where size is measured by market value of equity, market value of invested capital, 5-year average EDITDA, 5-year average net income, total assets, sales, book value of equity, and number of employees. Each measure for size organized by D&P, quintile 25 portfolio ranks, with portfolio rank 1 being the largest and portfolio 25 being the smallest. Smoothed average premiums are presented here because they are considered a better indicator than actual historical observation for most portfolio groups. Exhibits A-1, A-4 and A-7.

<sup>(8)</sup> Build up method illustration only; excludes industry risk premium and specific company risk, if any.

<sup>(9)</sup> Lawrence H. Officer and Samuel H. Williamson, Annualized Growth Rate of Various Historical Economic Series," [www.measuringworth.com](http://www.measuringworth.com), 2009. Inflation as of 2008; GDP as of 2008.

<sup>(10)</sup> Consensus Median Average, The Livingston Survey, Federal Reserve Bank of Philadelphia, June 2009, p. 4.

*Editor's Note: I highly recommend that all financial experts who rely on Morningstar and Duff & Phelps data purchase these books/studies and thoroughly understand how the data are compiled and the data choices available.*