How to Value a Business & Situations That Give Rise to a Valuation

West TN Chapter of TSCPA

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Karolina Calhoun is a Vice President at Mercer Capital, a national business valuation and financial advisory firm headquartered in Memphis, TN. Ms. Calhoun has been involved with hundreds of valuation and litigation support engagements in a diverse range of industries on local, national and international levels. Prior to joining Mercer Capital, Karolina was a Senior Auditor at EY Memphis in their Audit and Assurance Services practice. As a member of the firm's Litigation Group, she provides valuation and forensics services for family law, gift & estate planning, commercial litigation, transactions (M&A), and further matters related to privately held businesses, dissenting shareholders, intellectual property, personal goodwill, etc. With her forensics accreditation, she provides economic and financial damages studies, asset tracing, lost profits, and lifestyle analysis.

Ms. Calhoun also provides financial reporting and valuation analyses related to mergers & acquisitions, intangible assets, private equity portfolio companies, contractual agreements, and complex capital structures. These engagements have been conducted for the purposes of mergers and acquisitions, buyouts, financial reporting, estate and gift taxes, allocation of purchase price, litigation support, shareholder dissent, buy-sell agreements, dissolutions, financing, and business planning.

Ms. Calhoun is involved with the national forensics and valuation community, serving as a member of the AICPA's Forensic and Valuation Services Conference committee. She was named one of 26 young CPAs to receive the 2018 Forensic and Valuation Services (FVS) Standing Ovation award, presented by the AICPA to professionals for significant contributions in their accounting specialty areas and in their communities. She is also the President-Elect of the Memphis Chapter of TSCPAs.

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Session Overview

How to Value a Business & Situations That Give Rise to a Valuation

The valuation of a business can be a complex process, requiring certified business valuation and forensic accounting professionals. This session takes a dive into the process and methodologies used in a valuation and situations that give rise to valuation services such as estate/tax planning, ESOP annual valuation, M&A transactions, GAAP/ financial reporting, family law marital dissolution, buy-sell disputes, commercial litigation, and other litigation and financial advisory.

Learning objectives include:

- Identify client situations which give rise to valuation needs
- Understand the approaches and methodologies implored during the valuation process
- Interpret historical and projected financials from a quantitative perspective and the qualitative trends that surround the financials
- Identify potential valuation adjustments

When & Why a Valuation Is Needed

Categories & Triggers

Valuation Triggers: 4 Basic Quadrants

	Tax		GAAP / Financial Reporting	
Regulatory Driven	Estate & Gift Taxes Charitable Gifting 409(a) Transactions IRC 367(d) "Toll Charge" Transfer Pricing	IRC 197 – Allocation of Purchase Price Corporate Reorganizations & Basis Step Ups IRC 280G "Golden Parachute"	ASC 805 - Allocation of Purchase Price ASC 350 & 360 Impairment	ASC 718 - Equity Based Compensation ASC 820 - Portfolio Valuation
	Transactional		**Litigation**	
(Generally) Not Regulatory Driven	Sale of Business (Pricing / Negotiations) Buy/Sell Agreements Stock Exchange / Public Co. / IPO	Installment Sale ESOP's Fairness Opinions Incentive / Corporate Planning	Buy/Sell Disputes Family Law Contract Disputes Business Torts Tax Disputes	Dissenting Shareholder Disputes ESOP/ERISA Disputes Bankruptcy

The Ownership Transfer Matrix

	Partial Sale / Transfer	Total Sale / Transfer
Things You Make Happen	ESOP Outside Investor(s) Sales to Insiders/Relatives Combination Merger/Cash Out Going Public	Sale of Business Stock Exchange w/ Public Co. Stock Cash Sale to Public Co. Installment Sale ESOP/Management
Things That Happen to You	Death Divorce Forced Restructuring Shareholder Disputes	Death Divorce Forced Restructuring Bankruptcy

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Business Valuation & Financial Advisory

- Recurring, Annual Valuations for ESOP Companies
- Gift, Estate, Tax Compliance Valuation
- Shareholder Transactions
- Succession & Shareholder Planning
- Buy-Sell Agreement Process
- Marital Dissolution
- Business Dissolution
- Litigation Related Expert Witness Opinions
- Small Business/ Family Business Consulting

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Transaction Advisory

- Family Business Advisory Services
- M&A and Investment Banking Services
- Fairness Opinions
- Solvency Opinions
- Buy/Sell Side Consulting

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Litigation

- Family Law – Marital Dissolution
- Business Dissolution
- Business Damages & Lost Profits
- Shareholder Disputes, Oppressed Shareholder
- Forensic Services
- Valuation, Labor & Contract Disputes
- Corporate Restructuring & Dissolution
- Financial Expert Witness
    - Deposition
    - Mediation
    - Trial & Trial Support

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Financial Reporting

- Purchase Price Allocations Post Acquisition
    - IRR
    - Intangible Valuation
    - Discounted Cash Flow Analysis
    - Review of Comparable Transactions
- Impairment Testing
- Portfolio Valuation
    - PE Funds' Portfolio Companies
    - Valuation methodologies based on capital raise history, access to capital, ability to IPO or position for strategic sell

What is Business Valuation?

What is Business Valuation?

Business valuation is the process of determining the value indication of a business, business ownership interest, security, or intangible asset.

How To Value a Business?

Three methodologies to determine a value indication of a business, business ownership interest, security, or intangible asset

Asset-Based Approach

- Based on the value of the assets net of liabilities

Income Approach

- Using one or more methods that convert anticipated economic benefits into a present single amount

Market Approach

- Using one or more methods that compare the subject to similar businesses, business ownership interests, securities or intangible assets that have been sold

Asset-Based Approach

Overview

The fundamental accounting equation expresses the relationship between the company's assets, liabilities, and equity

Adjusted Book Value : A method within the asset approach whereby all assets and liabilities (including off-balance sheet, intangible, and contingent) are adjusted to their fair market values.

- Cost approach
- Replacement approach
- Appraisal of fair market value

Income-Based Methods

Overview

Capitalization of Earnings Method

A method within the income approach whereby economic benefits for a representative single period are converted to value through division by a capitalization rate.

Capitalization of Cash Flow Method

The present value of future expected economic benefits is calculated using a discount rate.

Discounted Cash Flow Method

The present value of future expected net cash flows is calculated using a discount rate.

Market-Based Methods

Overview

Guideline Public Company Method

A method within the market approach whereby market multiples are derived from market prices of stocks of companies that are engaged in the same or similar lines of business, and that are actively traded on a free and open market.

Guideline Company Transactions Method

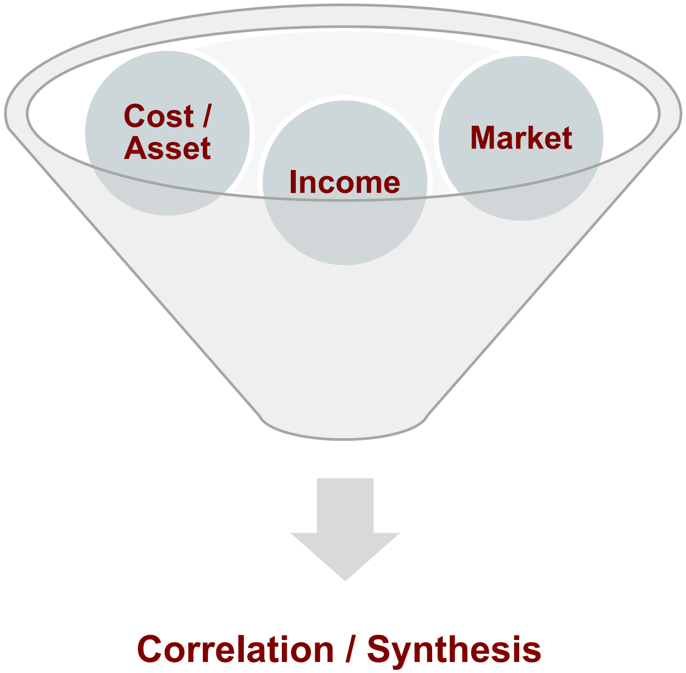
(Merger and Acquisition Method)

Pricing multiples are derived from transactions of significant interests in companies engaged in the same or similar lines of business.

Transaction Method

Develops an indication of value based upon consideration of actual transactions of the subject company.

Synthesis of Valuation Approaches



A proper valuation will factor, to varying degrees, the indications of value developed utilizing the three approaches outlined.

A valuation is much more than the calculations that result in the final answer. It is the underlying analysis of a business and its unique characteristics that provide relevance and credibility to these calculations.

Levels of Value

The Levels (Premise) of Value

Does it make a difference in value per share if you own 10% or 75% of a business? ***You bet it does.***

A 10% interest is a minority interest and does not enjoy the prerogatives of control.

How does this affect value per share?

The minority owners bear witness to a process over which they may have no control. In effect, they often play the role of silent partners; therefore, the fair market value per share of a minority owner is likely worth less per share than the shares of a 75% owner.

The Levels (Premise) of Value

Likewise, a minority owner of a private business likely does not have a ready market in which to sell their interest.

Minority ownership in a **publicly traded company** enjoys *near instantaneous liquidity* such as trading stock on organized and regulated exchanges.

The unique uncertainties related to the timing and favorability of converting a private, minority ownership interest to cash gives rise to a valuation discount (lack of marketability discount) which further distances the minority owner's per share value from that of a controlling owner's value per share.

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Illustrative Chart

Nonmarketable Minority

Discounts

Marketability relates to the liquidity of an investment relative to a comparable and actively traded alternative. A rational investor will pay less for a nonmarketable interest than an otherwise comparable interest that is freely tradable in a public market. This differential in value is commonly referred to as a marketability discount, or discount for lack of marketability ("DLOM"), and is typically stated as a percentage of the undiscounted value.

Analysts estimate the marketability discount applicable to a particular subject interest using methods associated with the market and income approaches. Within the market approach, benchmark analysis considers data from 1) restricted stock transactions, 2) pre-IPO studies, and 3) decisions rendered in court cases. Methods within the income approach are generally rooted either in option pricing theory or discounted cash flow analysis.

There are more than two dozen published methods to derive discounts for lack of marketability, and hundreds of reviews of them. In 2009, the Internal Revenue Service developed a guide for IRS staff evaluating marketability discounts; the guide was released to the public in 2011. The *Discount for Lack of Marketability Job Aid for IRS Professionals* ("the IRS Job Aid") reviewed and categorized eighteen of these methods, and each is classified as reflecting either an income or market approach to developing a DLOM.

What Gives Rise to Discount for Lack of Marketability?

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As per the 2013 AICPA Practice Aid

- The discount for lack of marketability is inversely related to the prospects for liquidity.
- Contractual terms obligating the enterprise to repurchase shares on terms favorable to the shareholder reduce the appropriate marketability discount. Contractual terms limiting the enterprise's ability to repurchase shares increase the marketability discount.
- More onerous restrictions on transfer tend to increase the appropriate discount for lack of marketability.
- The appropriate marketability discount is inversely related to the number of potential buyers for the subject interest.

What Gives Rise to Discount for Lack of Marketability? (Continued)

As per the 2013 AICPA Practice Aid

- Lower perceived risk (as potentially measured by volatility) of the subject securities tends to reduce the appropriate discount for lack of marketability
- Marketability discounts are inversely related to the size of expected distributions prior to liquidity.
- Greater concentration of ownership tends to be associated with larger discounts for lack of marketability.

Discount Rate Derivation and Application

Discount Rate =

- Cost of capital
- Required rate of return
- Cost of equity
- Weighted Average cost of capital "WACC"

A Little Theory

Discount rate originates from “Time Value of Money” :

- A dollar today is worth more than a dollar tomorrow
  - Changes in purchasing power
  - Expected returns from investment
  - Uncertainty of receiving future cash flows

$$FV = PV\ (1+i)^n$$

or

$$PV = FV\ /\ (1+i)^n$$

Theoretical Basis

Gordon Growth Model (Gordon Dividend Model)

V = CF / (r-g)

r: discount rate **g: the expected growth rate**

becomes:

Value = Earnings / (r-g) *or* **Value = Earnings x (1/(r-g))**

So, Value = Earnings x Multiple

Capitalization Rate (%) = k – g

Capitalization Factor = 1 / (Capitalization Rate) **(i.e. Multiple)**

Example of the Gordon Model

$$V = CF / (r-g)$$

Value = Earnings x Multiple

Application of the Gordon Model Value Indication	
Expected Cash Flow **(CF)**	$1,000
Constant Growth Rate of CF **(g)**	10%
Discount Rate **(r)**	20%
Capitalization Rate **(r-g)** (20%-10%)	10%
Capitalization Factor/ Multiple **(1/r-g)** (1/10%)	10.0x
Value = Earnings x Multiple ($1,000 x 10.0x)	$10,000

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How to Develop the Cost of Equity Capital, “k”

Single-Period Capitalization

Adjusted Capital Asset Pricing Model, “ACAPM,”

or the “Build-Up Method”

= Risk-Free Rate of Return

\+ Equity Risk Premium

x Long-Term Beta

\+ Small-Capitalization Stock Premium

\+ Specific Company Risk Premium

Single-Period Capitalization

Build Up Method – Equity Only – Capitalization of Earnings Method

Derivation of Capitalization Factor			References and Comments
Risk-Free Rate		3.04%	*Yield on 20-year Treasury*
Equity Risk Premium	5.50%		*Most studies suggest that the large cap ERP lies in the range of 4.0% to 7.0%*
x Market Beta	1.00		
Beta Adjusted Common Stock Premium		5.50%	
Size Premium		3.48%	*Per Duff & Phelps Cost of Capital Navigator*
Specific Company Risk Premium		6.00%	*Size, Key-man, & Customer Concentrations*
Equity Discount Rate (Required Rate of Return)		18.02%	"k"
- Sustainable/Perpetual Growth Rate in Earning Power		-4.50%	"g"
Capitalization Rate		13.52%	
Capitalization Factor		7.40	*Reciprocal of capitalization rate; 1 / (k-g)*
Capitalization Factor		**7.40**	*Rounded to: 0.05*

Determination of Value		
Ongoing Earning Power	$750,000	
Capitalization Factor	7.40	
Capitalized Earnings Value	$5,550,000	
Indicated Value: Capitalization of Earnings Method	**$5,550,000**	*Rounded to: $1,000*

Capital Structure: Debt & Equity

Discounted Cash Flow Method & Capitalization of Cash Flow Method

Weighted-Average Cost of Capital, "WACC"

- $(R_d)*(1-t)*(\%D) + (k)*(\%E)$
- Capital Structure
- Cost of Debt, R_d
- Cost of Equity, k

Cash Flows

- Projection of Discrete and Terminal Cash Flows
- Discounted Cash Flow Analysis

WACC Analysis

Discounted Cash Flow Method & Capitalization of Cash Flow Method

Cost of Debt			References and Comments
Base Cost of Debt		5.07%	*Yield on Moody's seasoned Baa corporate bonds*
Applicable Spread Over Base Cost		1.00%	*Less Access to Public Debt Markets*
Total Pre-tax Cost of Debt		6.07%	
Estimated Tax Rate	21.00%	-1.27%	
After-Tax Cost of Debt Capital		5.00%	*Rounded to: 0.05*

Weighted Average Cost of Capital (WACC)				
Capital Component	**Cost**	**Weight[8]**	**Product**	
Equity	12.00%	75.00%	9.00%	*Per Build Up Method*
Debt	5.00%	25.00%	1.25%	
Weighted Average Cost of Capital (WACC)			**10.25%**	*Rounded to: 0.05*

Derivation of Capitalization Factor		
Weighted Average Cost of Capital (WACC)	10.25%	
- Sustainable/Perpetual Growth Rate in Cash Flow	-3.50%	
Capitalization Rate	6.75%	
Capitalization Factor	14.81	*Reciprocal of capitalization rate*
Capitalization Factor	**14.80**	*Rounded to: 0.05*

Historical Financial Statement Trends

Quantitative & Qualitative

Balance Sheet Trends

Cash Trends

High balance

- Any anticipated plans for use?
  - Acquisition, expansion
  - Distributions
  - Repayment of debt
  - CAPEX

Low balance

- Operational needs of business covered?
- Frequently pay off debt?
- Excess cash paid in form of distributions?

Balance Sheet Trends

Property, Plant & Equipment and Inventory

Trends of CAPEX

- Historical and anticipated
  - Current capacity/utilization
  - Status of facilities, equipment, etc.

Depreciation

- Accelerated, straight-line, Tax v GAAP

Inventory

- LIFO, FIFO
- Inventory - just in time or storage?

Balance Sheet Trends

Debt

Leverage levels and ratios

- Compare to peers

What is debt used for?

- Expansion
- Operating or non-operating expenses

Relationships Within the Historical Financial Statements

Connecting the Balance Sheet to the Income Statement

Total Assets and Revenue

Assets are valuable to the extent that they generate (profitable) revenue.

Measuring the efficiency with which the company's assets generate revenue can be a helpful way to evaluate the success of a company's strategy over time and to compare its performance to that of peer firms.

Decreasing asset efficiency may be a sign that the company is accumulating excess, or non-productive, assets when distributing a greater proportion of earnings would be more optimal.

Connecting the Balance Sheet to the Income Statement

Revenue and Accounts Receivable

For companies that sell on credit, correlating the balance of accounts receivable to revenue over time can reveal changes in normal credit terms, and/or provide a proxy for the financial health of the company's customers.

As the average time receivables are outstanding increases, collectability becomes more difficult, and the wedge between reported earnings and operating cash flow widens.

Connecting the Balance Sheet to the Income Statement

Cost of Goods Sold and Inventory

The relationship between cost of goods sold and inventory is akin to that between revenue and accounts receivable.

If inventory balances are growing disproportionately to cost of goods sold, there may be concerns:

- production inefficiencies,
- market demand for the company's products, and
- an increasing likelihood of inventory obsolescence.

Income Statement Trends

Margins (profit, EBITDA, net income)

- Drill down on specific drivers of changes, improvements, and/or decline
- Compare to peers

Unit sales trends, if applicable

Common-sized statements

- Any material changes from year to year or over the 5 year period?

Income Statement Trends

Growth Analysis

Year-over-year

Over the period analyzed (perhaps 5 years)

What cycle is the business in? Mature, start-up?

- Is growth in line with expectations for a business in this stage?

What else is going on in the industry?

- How does the Company compare to peers?

General economy?

- How do economic factors impact the Company?

Ratio Analysis

DuPont Analysis

DuPont analysis examines the components of return on equity in a manner that helps to identify the basic plot of the company's story

$$\frac{\textit{Net Income}}{\textit{Equity}} = \frac{\textit{Net Income}}{\textit{Revenue}} \times \frac{\textit{Revenue}}{\textit{Assets}} \times \frac{\textit{Assets}}{\textit{Equity}}$$

Return on Equity = **Profit Margin** x **Asset Turnover** x **Financial Leverage**

Ratio Analysis

DuPont Analysis

Profit margin. Profit margin measures the profitability of the company per dollar of revenue. Profit margin reflects the relative competitive strengths relative to competition.

Asset turnover. Asset turnover measures the efficiency with which the company employs its assets to generate revenue. Asset turnover can reflect strategic decisions such as whether to lease or purchase facilities.

Financial leverage. Financial leverage measures the degree to which the company uses OPM ("other peoples' money") to fund operations. Financial leverage can have a multiplicative effect on return on equity, although it also increases risk.

Ratio Analysis

Other Ratios

- Working capital (as a % of sales)
- Current ratio
- Acid test ratio
- Average days outstanding (accounts receivable & accounts payable)
- Inventory turnover
- Fixed asset turnover
- Leverage ratios and interest coverage

Behind the Numbers

Qualitative Factors

What are the key business issues you are now facing?

- How are you dealing with them from a planning and operational perspective?
- Consider a SWOT Analysis (Strengths, Weaknesses, Opportunities, Threats)

Management

- Age & years of service of key personnel
- Dependency
- Key man risk

Behind the Numbers

Qualitative Factors

Top customers over the past years and respective volume

- Percentage and dollar volume analysis
- Concentrations

Suppliers/Vendors

- Relationships
- Percentage and dollar volume analysis
- Concentrations

Evaluation of Financial Projections

Key Considerations

Conceptually, one forecasts discrete earnings for as many periods as necessary until a stabilized earnings stream could be anticipated

Assumptions:

- Percentage of revenue or a dollar amount
- Can be consistent throughout projection or varying, but have a reason for why
  - Example: reduction in operating expenses as the Company reaps synergies from recent acquisition

Key Considerations

Be aware of incentives, biases, and motivations of the person providing the projection

- Have you ever seen two sets of projection?
  - “Well these are for the bank, but this set is more realistic”

Are projections prepared within ordinary course of business or specifically for your assignment?

Assess management’s forecasting ability through historical comparisons of actual vs. budget

Assessing Projections

Revenue Growth

- Starting point for nearly all projection models
- Unit growth, anticipated pricing changes
- Percentage growth
- Compare historical performance, industry and peer group trends

Gross Margin

- Driven by direct costs such as cost of materials, direct labor, fixed overhead

Assessing Projections

Operating Expenses

- Service industry where operating expenses are estimated for budget purposes
- Anticipated synergies

Profitability

- Implied margins
- Compare margins to historical performance, industry and peer group
- Pre-tax income, EBIT, EBITDA

Assessing Projections

Capital Expenditures

- Consistent or staggered?
- Expansion plans?
- Renovations, replacements, etc.

Depreciation & Amortization

- Should converge to CAPEX over the long-run

Investment in Working Capital

- Compare to historical levels, peer average, and anticipated business operations/strategies

Interest-bearing Debt

- Interest expense
- Debt structure & maturities

Financial Statement Adjustments

What’s the Point?

Develop a “public equivalent” for comparability purposes

Identify significant nonrecurring or unusual expenses (or potentially sources of income)

Reveal a reasonable earning power of the Company

Management Motivations for Adjustments

Best	Less Ideal	Worst
Adjustments provide investors and creditors with better insight into company's earnings	Adjustments that present a favorably biased view of company's performance	Managers incentivized to achieve desired outcome and/or fraud

Where is the Value Motivation?

Higher	+/-	Lower
Goodwill Impairment Testing	Litigation	Gift & Estate Tax
Personal Goodwill	Buy-Sell Agreements	Equity Comp
Other	Fairness Opinions	Other
	M&A Advisory	

Where Do We Find Potential Adjustments

Reviewing trends in the financial statements

- Material fluctuations ($ and %)

Notes to the financial statements

Management interviews and site visits

- It’s interesting what may come up during a conversation
    - “As a matter of fact, we did hire a one-time consultant for general business consulting. It was $100,000. Never again!”

Asking the question: “Any non-recurring, extraordinary, unusual expense(s)?”

Types of Earnings Adjustments

	Description	Examples
Type 1: Non-recurring, unusual items	One-time gains or losses, unusual or non-recurring items, discontinued operations, run-rate adjustments, etc…	• Sell a building; remove gain on sale • Settle a lawsuit; remove settlement expense • Adjust ongoing revenue and expenses for a mid-year acquisition
Type 2: Discretionary items	Normalizing officer/owner compensation and discretionary expenses that would not exist in a well-run, publicly traded company	• Owner takes distributions in lieu of comp or takes all profit in form of salary; normalize comp • Treat owner's condo as non-operating asset; remove related expenses

See Integrated Theory, 2nd Ed. (pp. 110-114)

Common Adjustments

Balance Sheet

- Inventory valuation method (LIFO v. FIFO)
- Depreciation method (accelerated v. straight line)
- Market value of fixed assets or investments (appraisals)
- Unrealized gains (losses) on securities
- Goodwill
- Other intangible assets
- Unrecorded year-to-date earnings (losses)
- ESOP debt not recorded on balance sheet (or not classed as equity)
- Other contingent liabilities

Common Adjustments

Income Statement

- Inventory valuation method (LIFO v. FIFO)
- Depreciation method (accelerated v. straight line)
- Excess compensation for key people (salary, bonus, dividends)
- Fringe benefits (excess)
- Excess bad debts
- Profit (loss) from discontinued operations
- Start-up costs
- Acquisition/divestiture costs
- Extraordinary legal/accounting/consulting costs
- Inventory write-downs
- Related party loans or leases not at market rates
- Other non-recurring revenue or expense

Conclusion

As a fellow colleague says, *"Talk to the numbers until they talk to you"*

Understand quantitative and qualitative trends surrounding historical financial statements and financials projections

Apprehend adjustments

Interpret evidence to the courtroom

Evaluation of assumptions and analyses of financial expert

Mercer Capital's Core Services

Valuation & Financial Opinions

- Litigation Related Expert Witness Opinions
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- Valuations for Corporate Tax Planning
- Valuations for Gift & Estate Tax Planning
- Fairness Opinions
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- Bankruptcy Related Valuation Services
- Valuations for Buy-Sell Agreements

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- Fairness Opinions
- Buy-sell Agreements & Private Company Transactions
- Strategic Assessments

Litigation Support Services

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- Family Law & Divorce
- Tax Related Controversies
- Corporate Restructuring & Dissolution
- Initial Consultation & Analysis
- Testimony & Trial Support

Financial Reporting Valuation Services

- Purchase Price Allocation Services
- Impairment Testing Services
- Portfolio Valuation Services
- Equity-Based Compensation Valuation Services

Questions?

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