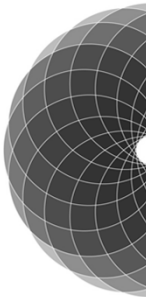
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**2014 Advanced Family Law
Issues in Equitable Distribution
School of Government, Chapel Hill, NC**

Valuation Basics And Methodologies

Jon Strickland, CPA/ABV, ASA, CVA
July 24, 2014


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Valuation Discussion  **elliott davis**


- An overview of valuation basics
- Discuss valuation methods
- Review development of a valuation
- Examples



Introduction  **elliott davis**

- A source of great contention
- Recognizing the great divide
- Facts based approach





The Foundation  **elliott davis**

Two Primary Elements of Valuation:

1. The ability to generate ongoing economic benefits
2. Risks associated with generating these economic benefits
 - I. Systematic
 - II. Company Specific


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Fair Market Value Defined  **elliott davis**

The price, expressed in terms of cash and cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts.

From the International Glossary of Business Valuation Terms



Market Approach—Publicly-Traded Guideline Company Method

The screenshot displays a detailed financial model for a publicly-traded guideline company. It includes a summary table with columns for 'Year', '2012', '2013', '2014', '2015', '2016', '2017', '2018', '2019', '2020', '2021', '2022', '2023', '2024', '2025', '2026', '2027', '2028', '2029', '2030', 'Average', and 'Median'. The rows list various financial metrics such as Revenue, EBITDA, EBIT, Earnings, and Cash Flow. Below the summary table, there are several smaller tables and notes providing further details and assumptions for the model.

The Income Approach

Earning Capacity available for distribution to investors in business

1. Capitalization of Future Economic Income Method
2. Discounted Future Economic Income Method

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Types of Cash Flows—Equity and Invested Capital

Equity Cash Flow	Invested Capital Cash Flow
Revenue	Revenue
less Cost of sales	less Cost of sales
less Operating expense	less Operating expense
Operating income (EBIT)	Operating income (EBIT)
less Interest expense	
Pre-tax income	
less Income taxes	less Taxes on EBIT
Net income	Net Operating profit after tax (NOPAT)
	plus Depreciation & amortization
plus Depreciation & amortization	Gross cash flow
Gross cash flow	less Increase in working capital
less Increase in working capital	less Capital expenditures
less Capital expenditures	less Change in debt principal
plus Change in debt principal	
Equity Net Cash Flow	Invested Capital Net cash flow

Capitalized Earnings Method

The screenshot shows a financial model for the Capitalized Earnings Method. It includes a table for 'Normalized Performance' with columns for '2012', '2013', '2014', '2015', '2016', '2017', '2018', '2019', '2020', '2021', '2022', '2023', '2024', '2025', '2026', '2027', '2028', '2029', '2030', 'Average', and 'Median'. The rows list metrics such as Total Revenue, Normalized EBITDA, and EBIT. Below this, there are several tables and notes detailing the calculation of cash flows and the application of the capitalized earnings method.

Imputed Tax Rate—Pass Through Entity

The screenshot displays a financial model for an imputed tax rate on a pass-through entity. It includes a table for 'Imputed Tax Rate' with columns for 'Year', '2012', '2013', '2014', '2015', '2016', '2017', '2018', '2019', '2020', '2021', '2022', '2023', '2024', '2025', '2026', '2027', '2028', '2029', '2030', 'Average', and 'Median'. The rows list various financial metrics and tax-related calculations. Below the table, there are several smaller tables and notes providing further details and assumptions for the model.

Discount Rates and Capitalization Rates

- Discount Rate- A rate of return used to convert a monetary sum payable or receivable in the future, into a present value.
- Capitalization Rate- A divisor (represented by a percentage) that is used to convert anticipated economic benefits into a single period of value.
- Capitalization Rate = Discount Rate - L-T Growth Rate

Definitions from American Society of Appraisers Business Valuation Standards definitions

Discount Rate and Capitalization Rate-The Cost of Capital

- Typically the cost of capital used is stated in terms of after-tax returns.
- Cost of capital determinations are made from publicly traded companies.
- The cost of capital determination is the same for minority and control investors.

Discount Rate and Capitalization Rate-The Cost of Capital

- Direct to equity versus total invested capital. What's the difference?
- Is it the same cost of capital?
- What is the weighted average cost of capital, (WACC)?

Weighted Average Cost of Capital

Weighted Average Cost of Capital Example:

Assumptions:
 Percentage of Debt: 40.0%
 Rate on Debt: 10.0%
 Tax Rate: 30.0%
 Cost of Equity: 20.0%

Capital Component	Calculation of Tax Effect of Debt	Cost of Capital Component	Proportion of Capital Component in Capital Structure	Weighted Average Cost of Capital
Debt	$(.10 \times (1-.30)) =$	7.0%	40.0% =	2.8%
Equity		20.0%	60.0% =	12.0%
Weighted Average Cost of Capital				14.8%

Discount and Capitalization Rates

- How do we determine the cost of capital?
- Build Up Method (BUM)
- Capital Asset Pricing Model (CAPM)

Build-Up Method

The RP Exhibits combine the effect of market risk and size risk.

Risk-free rate	2.5%
+	
ERP	6.1%
+	
Size Premium	6.1%
+	
Industry Risk	2.4%
+	
Company-specific risk	1.0%
Cost of Equity = 18.1%	

Capital Asset Pricing Model

The RP Exhibits reflect market risk only. Industry risk is captured by Beta.

2.5%	
+	
1.39	
x	
6.1%	
+	
6.1%	
+	
1.0%	
Cost of Equity = 18.1%	

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Discount Rate and Capitalization Rate

Component	Rate	Weight	Contribution
Cost of Equity	12%	60%	7.2%
Cost of Debt	6%	40%	2.4%
WACC			4.8%

Notes: 1. Cost of Equity = Risk-Free Rate + Beta * (Market Return - Risk-Free Rate) = 3% + 1.0 * (12% - 3%) = 12%. 2. Cost of Debt = Yield to Maturity * (1 - Tax Rate) = 6% * (1 - 0.3) = 4.2%. 3. WACC = (E/V) * Cost of Equity + (D/V) * Cost of Debt = (60%) * 12% + (40%) * 4.2% = 7.2% + 1.6% = 8.8%.

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The Discounted Future Economic Income

- Forecast future revenues, operating expenses, working capital requirements and capital expenditures
- Determine a terminal value for ongoing operations after stabilized level of operations reached
- Determine present value through discounting the forecasted periods and terminal period using appropriate discount rate

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Capitalization of Future Economic Income

- Determine single period of representative economic income
 - Stabilized and sustainable level of income
 - Consider historical performance and expectations
 - Normalization adjustments
- This determined level of income is divided by a capitalization rate to determine a present value
 - Ongoing growth rate reflected

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Discounted Cash Flow (DCF) Method

Year	CF	DF	DCF
1	100,000	0.907	90,700
2	110,000	0.823	90,550
...
Terminal	1,000,000	0.480	480,000
Total			1,771,250

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When is it appropriate to use DCF Model?

- Discounted future income- Crystal balling?
 - Is growth anticipated to be unusual in the immediately subsequent years
 - Are earnings at a stabilized level
 - Unusual Capital Expenditures or extraordinary items in the immediately following years

Any of the above could be known or knowable as of the date of separation

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The Asset Based Approach

- Adjusted Net Asset Method
 - AKA Asset Accumulation Method
- Liquidation Value Method
- The Capitalized Excess Earnings Method

The Adjusted Net Asset Value Method

- Analysis and value of the underlying assets of a business
- Fundamentally-the market value of the business's assets less the total liabilities of the business
 - Necessary to obtain appraisal of equipment, real estate and other property owned by the business on a going concern basis
 - Inventory
 - Work in Process

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The Adjusted Net Asset Value Method

- Consider assets and liabilities that are not listed on the balance sheet
 - Intangible Assets
 - Contingent Liabilities
- More involved and requires the assistance of other appraisal specialists

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Adjusted Net Asset Value (NAV)

	Book Value (1)	Adjustment (2)	Market Value (3)
Assets			
Cash	\$ 617,100	\$ -	\$ 617,100
Accounts Receivable	474,622	-	474,622
Inventory	4,570,960	87,313	4,658,273 (2)
Property, Plant and Equipment, net	3,960,190	-	3,960,190
Intangible Assets, net	32,850	(34,485)	- (3)
Other Assets	211,181	-	211,181
Total Assets	\$ 9,856,853	\$ 84,828	\$ 9,941,681
Liabilities			
Accounts Payable	\$ 289,216	\$ -	\$ 289,216
Notes Payable - Current	1,934,422	-	1,934,422
Taxes Payable	37,883	-	37,883
Notes Payable - Non-current	2,864,529	-	2,864,529
Capital Lease Obligation	2,728,861	-	2,728,861
Other Liabilities	14,259	30,000	44,259 (4)
Total Liabilities	\$ 7,869,170	\$ 30,000	\$ 7,909,170
Net Asset Value (Round)			\$ 2,032,511

Notes:
 (1) Book value per ledger by management.
 (2) Adjusted to account for the FIFO inventory & a better valuation of estimates for market value.
 (3) Based on discussion with Management.
 (4) Information provided by management on outstanding financing contracts.

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Not Forensic Analysis

- A Valuation is not a forensic engagement
- Potential Items could identify need for forensics
 - Hidden Assets (Property)
 - Unreported Income
 - Separate Property-Asset Tracing Issue
- Necessary to consider cost of analysis

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The Data Collection Process

- Two primary factors drive data collection
 - Nature of the business and its business cycle
 - Whether resulting report will be Valuation or Calculation
- Financial Information and non-financial information are relevant and necessary
- The documentation request is a dynamic process
- Organizational documents and other information is necessary
- The Management Interview / Access to CPA and CFO

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Analysis of the Subject Business

- Industry research and analysis of ratios and common size financial data
- Consideration of the economic environment
 - Economic drivers for the industry
 - Anticipated changes
- Information from management interview
 - Understanding history
 - Management philosophy
 - Competitive environment

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Analysis of the Subject Business elliott davis

- **Company Analysis**
 - Facilities
 - Vendor relationships
 - Customer base and concentrations
 - Legal or regulatory issues

- **Normalizing the financial statements**
 - Elements of owner control
 - Nonrecurring income and expenses
 - Improper or unusual accounting

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The Normalization Process elliott davis

Major consideration in controlling interest valuation:

- Contributions, donations and gifts

- Owner's compensation

- Rent expense

- Personal expenses

- Non-operating assets or liabilities

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