



GROSSMAN YANAK & FORD LLP
Certified Public Accountants and Consultants

*Thorny Issues with Applying the
Income Approach in a Legal Setting*

Attorney CLE Series



GROSSMAN YANAK & FORD LLP
Certified Public Accountants and Consultants



Robert J. Grossman
CPA/ABV, ASA, CVA, CBA



Melissa A. Bizyak
CPA/ABV/CFF, CVA



Brad W. Matthews
CPA, CVA

Attorney CLE Series



*Thorny Issues with Applying the
Income Approach in a Legal Setting*

INTRODUCTION



Thorny Issues with Applying the Income Approach

INTRODUCTION

- ***Fundamental precept of valuation:***
 - All value is “forward-looking”
 - Determined by expectations of future performance
 - Measured through estimates of expected future economic benefits, which must be tempered by the risk associated with realization



Thorny Issues with Applying the Income Approach

INTRODUCTION

- ***Same principle applies to publicly and privately held companies***
 - Public companies must report to SEC, so more data available
 - Private companies must rely more upon professional judgment



Thorny Issues with Applying the Income Approach

INTRODUCTION

- ***Income approach is simplest way to determine future economic benefit streams as well as the associated risk assessment***
- ***Two primary methodologies***
 - Discounted future economic benefit method (net free cash flow)
 - Capitalized future economic benefit method
- ***Prognostication and prediction inherent in both methods***



Thorny Issues with Applying the Income Approach

INTRODUCTION

- *To properly determine value, as much external, supportable information as possible should be considered*
- *Financial forecasts and analyses can be manipulated and interpreted in various ways, leading to wide variances in conclusions*
- *Risk rate determinations can also lead to a wide range of calculation results based upon inputs and models used*



Thorny Issues with Applying the Income Approach

INTRODUCTION

- *This program will cover the following topics*
 - Standards of Value and Levels of Value
 - Basics of the Income Approach
 - Complexities and Issues Relating to the Numerator
 - Complexities and Issues Relating to the Denominator
 - Cases Illustrating Issues Addressed by the Court
 - Conclusion and Practical Considerations



*Thorny Issues with Applying the
Income Approach in a Legal Setting*

STANDARDS OF VALUE
& LEVELS OF VALUE



Thorny Issues with Applying the Income Approach

STANDARDS OF VALUE

- *Standards = Definition*
- *No “Value” is useful until it is understood exactly how “value” is defined*
- *Business valuers provide technical definition requirements to attorneys*
- *Attorneys provide guidance as to the proper standard for the subject legal matter*



Thorny Issues with Applying the Income Approach

STANDARDS OF VALUE

- ***Most commonly used standards of value:***
 - Fair Market Value
 - Investment Value
 - Fair Value (under State Statutes)
 - Fair Value (for financial reporting)
 - Intrinsic or Fundamental Value



Thorny Issues with Applying the Income Approach

STANDARDS OF VALUE

- ***Fair Market Value – Definition:***

“The price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts.

Court decisions frequently state in addition that the hypothetical buyer and seller are assumed to be able, as well as willing, to trade and be well informed about the property and concerning the market for such property.”



Thorny Issues with Applying the Income Approach

STANDARDS OF VALUE

- ***Fair Market Value***
 - Assumes a hypothetical sale transaction between “willing and able” buyer and seller
 - Does not consider motivations of specific buyers or sellers
 - Anticipates value under prevalent economic and market conditions at particular date of valuation
 - Assumes payment in cash or its equivalent at date of valuation (no deferred financing or special purchase agreements)
 - Must allow reasonable time for exposure in the open market



Thorny Issues with Applying the Income Approach

STANDARDS OF VALUE

- ***Investment Value***
 - The specific value of an investment to a particular class of investors or a specific investor
 - Differs from fair market value since it is buyer-specific
 - Also referred to as synergistic or strategic value due to the benefits one particular buyer may bring to the negotiations
 - In most cases, investment value will exceed fair market value due to supply and demand
 - This standard of value is nearly always the value that motivates buyers and sellers in the merger and acquisition markets



Thorny Issues with Applying the Income Approach

STANDARDS OF VALUE

- ***Fair Value (under State Statutes)***
 - In most states, is the statutory standard used in the resolution of shareholder disputes, however, there is little authoritative guidance on the computational aspects
 - Thus, a legally-developed standard of value
 - Generally defined with respect to value of dissenter's shares as:
The value of shares immediately before effectuation of the corporate action to which the dissenter objects



Thorny Issues with Applying the Income Approach

STANDARDS OF VALUE

- ***Issues Relating to Standards of Value***
 - Proper standard to use should be determined prior to commencement of valuation procedures
 - For gift and estate tax purposes, fair market value is always used
 - For litigation, various standards can be used
 - For shareholder disputes, first consider entity formation documents and state statutes that may be applicable; in PA, fair value is used



Thorny Issues with Applying the Income Approach

LEVELS OF VALUE

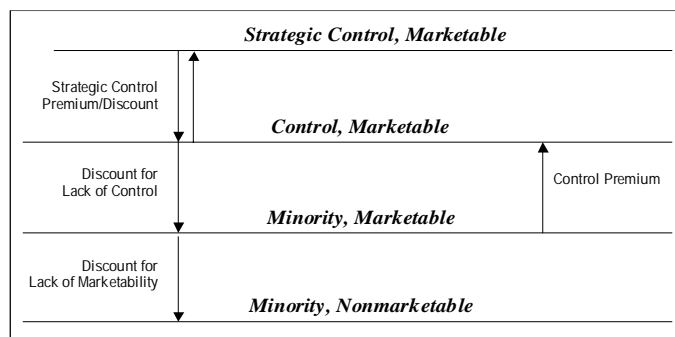
- *Relates to the characteristics of the ownership interest*
 - Level of control
(ability to influence the operations of the business)
 - Marketability of the interest
(ability to quickly convert interest to cash at a minimal cost)



Thorny Issues with Applying the Income Approach

LEVELS OF VALUE

- *Expanded Model*





Thorny Issues with Applying the Income Approach

LEVELS OF VALUE

- *Issues Relating to Levels of Value*
 - Valuation analyst must determine whether value is on a controlling or minority basis
 - Results of income approach always presumed to be on a marketable basis
 - Determination of control is based on whether normalization adjustments are made when quantifying the benefit stream
 - Agreements or other limitations on control must be considered



Thorny Issues with Applying the Income Approach

LEVELS OF VALUE

- *Final Thoughts*
 - To determine the proper standard of value and level of value, legal counsel should consider:
 - The purpose of the valuation assignment
 - Formation documents that speak to control and marketability attributes of the subject ownership interest
 - Corporate agreements that may define the proper standard of value or control the procedures to be completed by the valuation analyst
 - Judicial precedence relating to the specific case



*Thorny Issues with Applying the
Income Approach in a Legal Setting*

INCOME APPROACH BASICS



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

- *All value is “forward-looking” – based on economic principle of anticipation*
- *Primary drivers for calculating value:*
 - Numerator: Future expected economic benefit stream
 - Denominator: Risk associated with realization of future economic benefits
- *Rate of return incorporates investor expectations, which include:*
 - “Real” rate of return: essentially rent paid for use of funds
 - Expected inflation: time-value of money
 - Risk: uncertainty of timing and amount of return on investment
- *Past performance has little to no relevance*



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

- **Methodologies**
 - Capitalized cash flow (CCF) method
 - Single calculation with growth presumed to be constant
 - Discounted cash flow (DCF) method
 - Series of calculations over discrete period with terminal value



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

- **Application of the CCF method**
 - Select benefit stream and construct selected benefit stream on a year-by-year basis
 - Make normalization adjustments, as necessary
 - Chose selected weighted economic benefit stream as base
 - Calculate discount rate and convert to a capitalization rate
 - Divide economic benefit stream by capitalization rate to produce value of the operating enterprise
 - Add or subtract non-operating assets and liabilities



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

▪ **CCF Formula:**

$$PV = \frac{NCF_1}{K - g}$$

Where: PV = Present value

NCF₁ = Expected economic income in the full period immediately following the effective valuation date

k = Present-value discount rate

g = Expected long-term growth rate in NCF



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

EXAMPLE: CALCULATION USING THE CCF METHOD

Assumptions:

Discount rate (k)	24%
Long-term growth rate (g)	4%
Year 0 cash flow	\$1,000

Capitalized Cash Flow Method:

Year 0 cash flow	\$ 1,000
One year growth factor	1.04
Year 1 cash flow	1,040
Capitalization rate	.20
Value Result	<u>\$ 5,200</u>

See page 17 in *handout*



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

- *Notes on using the CCF method*
 - Cash flow benefit stream can either be available to all invested capital (debt and equity holders) or equity capital
 - Method can be applied on end-of-year or midyear convention



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

- *Two components of DCF method*
 - Discrete period forecast
 - Terminal period
 - Terminal value is extremely important as it typically represents a substantial portion of total value of an entity



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

▪ *Application of the DCF method*

- Select benefit stream and construct discrete period forecast of the selected benefit stream on year-by-year basis to a point of stabilization
- Determine terminal value
- Calculate discount rate to match the selected benefit stream
- Discount discrete period economic benefit streams and terminal year to present value
- Add/subtract non-operating assets and liabilities



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

▪ *DCF Formula:*

$$PV = \sum_{i=1}^n \frac{E_i}{(1+k)^i}$$

- Where:
- PV = Present value
 - Σ = Sum of
 - n = The last period for which economic income is expected
 - E_i = Expected future economic income in the i^{th} period in the future
 - k = Discount rate
 - i = The period in the future over which the prospective economic income is expected to be received



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

- *The formula can be expanded:*

$$PV = \frac{E_1}{(1+k)^1} + \frac{E_2}{(1+k)^2} + \dots + \frac{E_n}{(1+k)^n}$$



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

EXAMPLE: CALCULATION USING THE DCF METHOD

Assumptions:

Discount rate (k) 24% Long-term growth rate (g) 4% Year 0 cash flow \$1,000

Discounted Cash Flow Method:

Projected year	1	2	3	4	5	Terminal yr*
Cash flow (CF)	1,040	1,082	1,125	1,170	1,217	6,327
Present value factor	.8065	.6504	.5245	.4230	.3411	.3411
Discounted cash flow	839	704	590	495	415	2,158
Value Result (rounded)	\$ 5,200					

*Terminal Year: $CF_n \cdot (1+g)/k-g = \$ 6,327$

See page 19 in handout



Thorny Issues with Applying the Income Approach

INCOME APPROACH BASICS

- *Final thoughts*

- The CCF and DCF methods, using the same assumptions, will produce identical conclusions of value
- Method should be selected based upon future growth expectations of the benefit stream
- DCF more accurately calculates the value of a business which expects to experience non-linear growth in its benefit stream
- As such, one method should not be used to confirm the other



Thorny Issues with Applying the Income Approach in a Legal Setting

COMPLEXITIES AND ISSUES RELATING TO THE NUMERATOR



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- ***Value is predicated on the present worth of an anticipated series of future income streams***
 - What economic benefit does the buyer receive as a return on investment after accounting for risk?



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- ***Most common definitions for future economic benefits:***
 - Net income: measure of an entity's operating performance; can be pre-tax or after-tax
 - Free cash flow: generally represents the amount of cash that can be distributed to equity owners without threatening or interfering with future operations
- ***In many small companies, these are similar or the same***



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- ***Normalization adjustments***
 - Made by valuation analyst to information provided on income statements and/or balance sheets
 - Goal is to present information on the basis that a potential investor could expect to receive as return



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- ***Common normalization adjustments made for:***
 - Ownership characteristics (control v. minority)
 - GAAP departures, extraordinary, nonrecurring and/or unusual items
 - Non-operating assets and liabilities; related income and expenses
 - Taxes
 - Synergies from mergers and acquisitions



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- ***Normalization Adjustments***
 - Generally, the second, third and fourth categories are made in every valuation
 - Choosing to make certain adjustments will have an influence on the level of value
 - Users of valuation reports should review all normalization adjustments to evaluate reasonableness



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- ***Defining Free Cash Flow***
 - Defined differently depending on income approach method used
 - Definition also varies depending on whether the desired free cash flows benefit the equity capital holders or invested capital holders
 - Cash Flow Direct to Equity (Direct Equity Method)
 - Cash Flow to Invested Capital (Invested Capital Method)



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

Direct Equity

Net income after tax

Plus: Depreciation/amortization,
other non-cash changes

Less: Incremental working capital

Plus: New debt principal

Less: Repayment of debt principal

Equals: Net cash flow to direct equity

Invested Capital

Net income after tax

Plus: Interest expense (tax-affected)

Plus: Depreciation/amortization,
other non-cash changes

Less: Incremental "debt-free"
working capital

Less: Incremental capital expenditures

Equals: Net cash flow to invested capital



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- *Analyses for Application of the Income Approach*

	Direct Equity	Invested Capital
CCF	1	2
DCF	3	4

– In all four types of analysis, the valuation analyst uses normalized historical data, management insights and trend analyses to analyze formal projections for the explicit period



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- ***CCF Model versus DCF Model***
 - CCF: single measure of the expected annual future economic benefit
 - DCF: discrete expected future economic benefits projected for a set number of years, then, single measure selected for use into perpetuity after specified period
 - Primary difference: stability in future growth of benefit stream



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- ***CCF Model versus DCF Model***
 - Where growth is erratic or non-linear in the near to mid-term, the DCF is more appropriate
 - Judges and triers of fact have been skeptical of the DCF model
 - By capitalizing historical cash flow, we are, by definition, making a prediction about future results



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

▪ ***Duration of Forecast Period***

- Discrete period should include years of non-linear growth until a year of stabilization is achieved
- Typical 5-year forecast may not work – number of periods should be meaningful rather than arbitrary
- After discrete period is determined, the next step is the terminal year calculation



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

▪ ***Quality and Validity of Forecasts of Future Benefits***

- Ability to forecast with accuracy in out years diminishes as range of possible outcomes widens
- Each of the financial items related to the generation of cash flow must be carefully considered and analyzed
- Valuation analyst should review forecasts and underlying assumptions for reasonableness



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- ***Quality and Validity of Forecasts of Future Benefits***
 - In determining reasonableness of forecasts, valuator must:
 - Understand Company background and history
 - Analyze the industry and economy
 - Perform an in-depth historical financial statement analysis
 - Undertake site visit and interview key members of management



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE NUMERATOR

- ***Common Issues and Mistakes***
 - Forecasting growth without proper funding of growth
 - Forecasting non-operating items
 - Operating profits growing in line with revenue
 - Using goal-oriented forecasts
 - Controlling vs. non-controlling cash flow



*Thorny Issues with Applying the
Income Approach in a Legal Setting*

COMPLEXITIES AND ISSUES
RELATING TO THE DENOMINATOR



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- *3 main categories that influence capitalization or discount rate*
 - External Factors
 - Internal Factors
 - Investment Factors
- See pg. 32 in book for a more detailed list of factors



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- ***Discount Rates and Capitalization Rates***
 - Risk rate is defined as discount rate in context of valuing privately-held businesses and interests in those business as well as economic damages and lost profits cases
 - Discount rate reflects risk in attaining projected future economic benefit streams
 - Discount rate is limited to DCF method under income approach
 - DCF method is most appropriate in cases where growth over near-term to mid-term could vary



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- ***Discount Rates and Capitalization Rates***
 - Under CCF, to calculate value of a business, it is necessary to apply a capitalization rate
 - Capitalization and discount rates are related by growth factor, but are NOT identical



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- ***Discount Rates and Capitalization Rates***
 - Growth is accounted for differently in two methods under income approach
 - Under DCF method, growth is considered in the expected future benefit stream
 - In CCF, growth is considered in the capitalization rate itself



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- ***Basic Tenets of Risk Rates in Valuation & Economic Damages Matters***
 - Higher the risk rates, the lower computational conclusion
 - Capitalization rates are not the same thing as a discount rate
 - Discount rates consider growth in expected future benefit stream and capitalization rates includes growth in risk rate
 - Capitalization rates are observable in marketplace
 - Capitalization rates are inverse of acquisition multiples



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- ***Basic Tenets of Risk Rates in Valuation & Economic Damages Matters (cont.)***
 - Most determinations of risk rates are based on economic models for developing a discount rate from which growth may be deducted to derive a capitalization rate
 - Capitalization and discount rates can be developed specifically for determining the cost of equity capital or invested capital (WACC)



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- ***Construction of a Discount Rate***
 - Three primary models
 - Modified Capital Asset Pricing Model (MCAPM)
 - Build-Up Model (BUM)
 - Weighted Average Cost of Capital (WACC)
 - » WACC is not a method for determining an equity rate but, rather, an overall invested capital rate encompassing both debt and equity capital



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

■ *Construction of a Discount Rate*

– MCAPM v. BUM

- Only difference between the two models is the use of the beta in MCAPM, where none is used in BUM
 - » Beta measures systematic risk
- Comparisons of such market movements are based on a factor of 1.
- In BUM, there is a presumed beta of 1.



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

■ *Modified Capital Asset Model:*

$$K_e = R_f + \beta R_{pm} + R_{ps} + R_{pu}$$

Where: K_e = Discount rate applicable to future cash flow

R_f = Risk-free rate (Treasury Bond rates)

β = Beta

R_{ps} = Risk premium for size, and

R_{pu} = Specific-industry/company risk



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

▪ *Build Up Model:*

$$K_e = R_f + R_{pm} + R_{ps} + R_{pu}$$

Where: K_e = Discount rate applicable to future cash flow

R_f = Risk-free rate (Treasury Bond rates)

R_{pm} = Equity risk premium (market over risk-free rate)

R_{ps} = Risk premium for size, and

R_{pu} = Specific-industry/company risk



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

▪ *Construction of a Discount Rate*

– BUM

- When using BUM to develop the appropriate risk, the rate used to discount the expected future cash flows to present value is the estimated rate of return currently available in the market or alternative investments with comparable risk
 - » Risk-free rate is developed by starting with 20-year U.S. Treasury Bond yield as of the date of valuation
 - » Premium is then added to compensate for differences between average market returns in the stock market and investments in “safer” Treasury bonds



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- *Example of the computation of a discount rate under the BUM*

EXAMPLE: CALCULATING DISCOUNT RATE USING THE BUILD UP MODEL

Valuation date (February 10, 2017) long-term U.S. Treasury Bond Yield	2.75%
+ Equity risk premium-stocks over bonds	6.03%
Valuation date average company return	8.78%
+ Risk adjustment for size in relation to comparative companies	5.60%
+ Other risk factors specific to the company	4.00%
= CASH FLOW DISCOUNT RATE – EQUITY	18.38%



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- *Weighted Average Cost of Capital (WACC)*

- Combines the cost of equity (determined by the BUM), and the net “after-tax” cost of debt in proportions that are representative of future expected debt/equity structures
 - First step in determining WACC is to develop cash flow discount rate applicable with holding an equity capital position in the company
 - Second, identify company’s borrowing rate at the date of the valuation
 - Third, consider debt/equity mix for company



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- **Weighted Average Cost of Capital (WACC)**

- Assume the prime rate is 3.75%

$$\begin{aligned} \text{After-tax borrowing rate} &= k_d (1-t) \\ &= 3.75\% (1 - 35\%) \\ &= 3.75\% (65\%) \\ &= \underline{2.44\%} \end{aligned}$$

Where: k_d = Cost of debt
 t = Tax rate



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- **Weighted Average Cost of Capital (WACC)**

- Final step is to apply appropriate weights to equity capital and the debt capital to produce weighted average cost of capital.
- Weights assigned to each element of capital are based on the industry standards
 - Example on next slide notes that debt is assigned a market weighting of 51% and equity at 49%.



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- *Weighted Average Cost of Capital (WACC)*

$$\begin{aligned} \text{WACC} &= (K_e * W_e) + [(K_{\text{dpt}} (1-t)) * W_d] \\ &= (18.38\% * 49\%) + [(3.75\% * (1 - 35\%)) * 51\%] \\ &= 9.01\% + [(3.75\% * 65\%) * 51\%] \\ &= 9.01\% + (2.44\% * 51\%) \\ &= 9.01\% + 1.24\% \\ &= 10.25\% \end{aligned}$$



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- *Weighted Average Cost of Capital (WACC)*

Where:

K_e	=	Cost of equity
W_e	=	Weight of equity
K_{dpt}	=	Pre-tax cost of debt
t	=	Tax rate
W_d	=	Weight of debt



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- ***Potential Issues in the Build-Up Rate***
 - Using wrong economic benefit rate
 - Failing to acknowledge size properly
 - Failing to properly assess industry risk



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

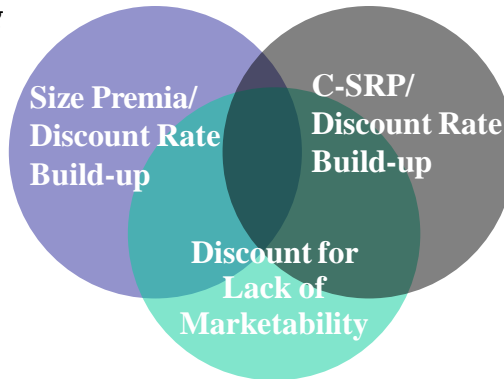
- ***Potential Issues in the Build Up Rate***
 - Company-Specific Risk Premium
 - Continuation of customer base
 - Key person dependence
 - Key supplier dependence
 - Abnormal present or pending competition
 - Pending regulatory changes
 - Pending lawsuits
 - Other factors that exist, which may lead to the ending of a business



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- *Double Dipping*



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- *Final Thoughts*

- Matching discount rate/capitalization rate with proper numerator
- Make certain inflation assumption are consistent
- Tie risk rates to time periods under consideration
- Confirm beta from a variety of sources



Thorny Issues with Applying the Income Approach

COMPLEXITIES & ISSUES RELATING TO THE DENOMINATOR

- *Final Thoughts*
 - Geographical
 - Company specific risk
 - Test reasonableness



Thorny Issues with Applying the Income Approach in a Legal Setting

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

- *Support for Using More than One Method*

- [Chemtura Corp, October 2010](#)

- Both experts used a DCF model with a similar range of discount rates and relied on the same set of forecasts
 - The experts differed significantly in their calculation of terminal value
 - One expert applied a multiple to the final forecasted year earnings, the other expert applied a multiple to mid-cycle normalized EBITDA to determine terminal value



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

- [Chemtura Corp](#)

- Business cyclicality and economic uncertainty weighed heavily on the DCF method
 - Final forecast year EBITDA was higher than any historical values achieved by the company, potentially overstating the value of the company
 - Using mid-cycle normalized EBITDA was thought to potentially undervalue the company



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

Chemtura Corp

- The Court favored the mid-cycle normalized EBITDA multiple as it accounted for the cyclical nature of the business
- The Court found the comparable company analysis more meaningful than the DCF method as the DCF approach is susceptible to uncertain projections



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

▪ ***Expert's Solid DCF and Industry Research Sways Court***

Wright v. Irish (Hudson Valley Clean Energy, Inc.), November 2014

- Petitioner's expert relied primarily on DCF analysis using 5-year projections approved by management, a company specific risk premium to account for forecast risk, and terminal year growth estimated as inflationary growth only
- Petitioner's expert attributed the DCF methodology 75% weight in his opinion of value and applied a DLOM to only the company's goodwill



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

Wright v. Irish (Hudson Valley Clean Energy, Inc.)

- Respondent's expert used the capitalization of weighted earnings method with no growth rate included, which assumes the company would experience long-term stable cash flow
- During cross examination, the expert conceded that the cash flows and earnings of the company were not stable in recent years
- The expert did not consider management's projections and admitted he was unaware of the current growth strategy in place
- The respondent's expert applied a DLOM to the entire equity value



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

Wright v. Irish (Hudson Valley Clean Energy, Inc.)

- The Court discredited the respondent expert's valuation for its many errors and failure to consider critical facts
- The Court adopted the opinion of the petitioner's expert almost entirely, but found that the DLOM should be applied to the entire equity value and not just the goodwill of the company



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

- *Blindly Accepting Projections*

GreatBanc, June 2014

- Suit alleged that GreatBanc (trustee) failed to meet its fiduciary requirements when it did not adequately inquire into the report of an independent appraiser that was found to contain overly aggressive projections
- As a result, GreatBanc allowed the ESOP to pay more than fair market value for the company's stock



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

GreatBanc

- DoL and GreatBanc reached a settlement, whereby GreatBanc agreed to follow numerous protocols in its future dealings as an ESOP Trustee covering the following topics:
 1. Selection and Use of a Valuation Advisor
 2. Oversight of a Valuation Advisor
 3. Financial Statements
 4. Fiduciary Review Process
 5. Preservation of Documents
 6. Fair Market Value



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

- ***Issues in Estimating the Discount Rate***

- [Bachrach, October 2012](#)

- Two experts using the same cash flow projections and DCF analysis arrived at significantly different enterprise value estimates, the higher being in excess of six times higher than the lower
 - The Court found this to highlight the importance of using more than one valuation approach as well as the ability to manipulate the output of a DCF model



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

- [Bachrach](#)

- The differences in the expert's discount rates was primarily attributable to different inputs for capital structure, estimation of the equity risk premium, and the estimation of the size premium
 - The Court ultimately ruled in favor of the lower discount rate and higher valuation as the expert had stronger supporting arguments for their inputs
 - Specifically, the favored expert had utilized the company's actual capital structure (as opposed to an industry average), a shorter historical period in calculating the equity risk premium (thought to be more reflective of the current economic environment), and a more conservative and statistically significant size premium



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

- *À la Carte Valuation*

- Gallagher, June 2011

- The Tax Court reviewed and selected components of both an IRS expert's and taxpayer expert's valuation in determining their own valuation
 - The Tax Court ruled in favor of the IRS expert's DCF inputs for projections, tax affecting, normalization adjustments, and cost of capital estimates
 - The underlying theme of these selections was that the taxpayer's expert was inconsistent lacked sufficient support for his assumptions (burden of proof is generally borne by the taxpayer for federal tax litigation)



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

- Gallagher

- Projections – taxpayer's expert failed to include a planned acquisition of a target company in its projections and lacked sufficient support for his estimation of future revenue growth, operating income margins and his exclusion of other income from cash flow
 - Tax-Affecting Earnings – taxpayer's expert inconsistently applied two different tax rates for cost of capital and cash flow estimates and failed to provide support for ignoring the benefit inherent in S Corporations (tax affecting was determined by the Court to be unjustified and inappropriate)



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

Gallagher

- Normalization Adjustments – taxpayer’s expert made assumptions lacking sufficient support for working capital and capital expenditure needs (IRS expert relied on historical trends)
- Cost of Capital – taxpayer’s expert relied on CAPM for estimating the cost of equity (determined by Tax Court to fail to capture the characteristics of privately held companies) and utilized capital structure weightings of guideline companies that were deemed incomparable under the expert’s own guideline publicly traded company method



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

▪ ***Delaware Chancery – Merger Price***

Huff Fund Investment Partnership, May 2014

- Delaware Court of Chancery found that the merger price, rather than the value resulting from DCF analysis was the most reliable indicator of the fair value of the subject company
- Debate over whether management’s revenue projections were a true prediction of future revenue or a marketing ploy (to generate a high bid) resulted in the Court dismissing both expert’s DCF analysis
- DCF was excluded from consideration as it may produce meaningless values without reliable projections



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

- ***Company-Specific Risk Premium***

- Delaware Open MRI Radiology Associates, April 2006

- Differences in two valuation expert's estimates of cost of capital highlight the subjective nature of developing cost of capital estimates for small privately owned companies
 - Both experts relied on the BUM to estimate the cost of equity capital
 - The BUM diverges from CAPM in that it does not incorporate a beta, rather it considers a size premium and a highly subjective estimate of company specific risk (company specific risk is inconsistent with CAPM)



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

- Delaware Open MRI Radiology Associates

- The Court ultimately selected the expert's estimate that was deemed to most appropriately capture the logic behind the CAPM in an instance when CAPM could not be applied in its pure form
 - The selected approach was perceived to have correctly captured the following risk elements:
 1. Inclusion of a small stock premium (consistent with significant literature and thinking on CAPM)
 2. Inclusion of industry-specific risk (viewed as being a fair proxy for beta under a circumstance where beta cannot be measured directly)



Thorny Issues with Applying the Income Approach

CASES ILLUSTRATING ISSUES ADDRESSED BY THE COURT

Delaware Open MRI Radiology Associates

- The selected expert included a company specific risk premium of 2.0%, that the Court noted could not be explained by objective factors
- The Court did not object to the inclusion of the company specific risk premium in this case as it reinforced the conservatism of the expert's final cost of capital
- The decision did, however, note that, "To judges, the company specific risk premium often seems like the device experts employ to bring their final results into line with their clients' objectives, when other valuation inputs fail to do the trick."



Thorny Issues with Applying the Income Approach in a Legal Setting

CONCLUSION AND PRACTICAL CONSIDERATIONS



Thorny Issues with Applying the Income Approach

CONCLUSION AND PRACTICAL CONSIDERATIONS

- *Best way to fully understand the Income Approach is to interact mechanically*
- *Offers direct relationship to expected future returns*
- *Brings real-life evaluation techniques into the courtroom*
- *Very popular among valuation and financial analysts as well as business valuation report users*



Thorny Issues with Applying the Income Approach

QUESTIONS?



GROSSMAN YANAK & FORD LLP
Certified Public Accountants and Consultants

*Thorny Issues with Applying the
Income Approach in a Legal Setting*

THANK YOU!

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