THE ABC's OF VALUATION

VALUATION OF COMPANIES
AND THEIR SECURITIES FOR ESOP PURPOSES:
METHODS OF VALUATION

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APPROACHES TO VALUATION

Valuation firms use standard professional business appraisal methods appropriate to the purpose of the valuation. For ESOP's they follow the guidelines for seeking fair market value set forth in Revenue Ruling 59-60 of the Internal Revenue Code and subsequent rulings in the Internal Revenue Code. They also follow the 1988 proposed regulations of the Pension and Welfare Benefits Administration of the Department of Labor (29 CFR Part 2510) concerning adequate consideration in the valuation of closely held companies for ESOP purposes. BVI also follows valuation and report guidelines and suggestions published by The Institute of Business Appraisers, The Appraisal Foundation, and the American Society of Appraisers.

First Steps

Following standard practice we analyze, adjust, and restate the financial statements of the company to clarify the underlying or true earnings capacity of the company. This involves the elimination of non-recurring and extraordinary expenses from earnings. Certain expenses over or under industry and regional norms are normalized. Adjustments may also be made to some income statement and balance sheet items and classifications to make them comparable with either industry practices or accounting methods of publicly held companies used as guidelines.

Market Approach

In the Market Approach**,** acquisition prices for companies or their publicly traded securities are used as guides for pricing closely held companies or their securities. In using the Public Guideline Company Method within the Market Approach, the company's financial performance and investment risk is compared with the performance and risk of similar publicly held companies. The multiples of earnings, equity, and sales of the public companies are then used as guides in choosing multiples for the earnings, equity, and sales of the subject company. This is often used when valuing minority interests. When valuing controlling interests, the Acquisition Price Method is used. This uses the acquisition multiples of the sales and earnings of the selling company as guides in establishing the enterprise value of a company considered as a whole.

Income Approach

The Income Approach employs market derived capitalization or discount rates applied to current earnings or to a stream of future earnings or cash flow. The Discounted Cash Flow Method uses present value techniques to determine the current value of the company's projected future free cash flows or earnings. Projections are made under differing assumptions as to growth rate, margin, reinvestment needs, etc. In the Capitalization Of Earnings Method the company's net operating profit after taxes (NOPAT) is capitalized at the company's weighted average cost of capital adjusted for long term growth expectations.

Net Asset Approach

The Net Asset Approach, sometimes referred to as the Adjusted Book Value Approach, attempts to set market values on the company's individual assets and liabilities. The resulting revised equity can then be further adjusted to take into account the company's rate of return on the revised equity. (Intangible assets can be valued independently or estimated by a capitalization of surplus earnings [or deficit] given a benchmark rate of return on equity or capital.) The approach is used primarily for holding companies or very capital intensive companies such as excavating contractors.

Choice of Approach

Any given valuation will use as many of these methods as are meaningful given the purpose of the valuation, the type of company and the specific circumstances. In general, going concerns are more appropriately valued by the Market Approach and the Income Approach than by the Net Asset Approach. This is because the value stems from the earning capacity of the company, rather than from its assets, and appropriate rates of return are highly dependent on the industry and other circumstances peculiar to the company being valued. The Capitalization of Earnings method is usually appropriate when a company has reached a steady, sustainable rate of growth and earnings or specific forecasts are not available. When growth rates and/or margins are subject to year-to-year changes, the Discounted Cash Flow method is more appropriate. In most valuation reports pertaining to ESOP's, both the Market Approach and the Income Approach will be attempted**.**

NORMALIZATION OF EARNINGS

Year	1999	2000	2001	2002	2003	Normal
Sales	17,770	18,303	18,852	19,417	20,000	20,000
Reported Operating Earnings	1,174	660	783	965	1,735	1,900
Adjust: Excess Compensation	50	60	70	80	85	
Adjust: Unusual Legal Expense			100			
Adjust: Contribution to ESOP for loan	500	500	500	500		200
Adjust: Environmental Cleanup			200	300	100	
Adjust: Moving Expense			100			
Adjust: Business Disruption		500				
Adjust: LIFO to FIFO						
Adjusted Operating Earnings	1,724	1,720	1,753	1,845	1,920	1,700
Adjusted Operating Margin	9.70%	9.40%	9.30%	9.50%	9.60%	8.50%
Average Adjusted Operating Margin, EBITDA					9.50%	
Less depreciation expense						(400)
Normalized earnings before interest and taxes, EBIT	Margin = 6.50%					1,300
Less interest expense at 8.00%						(120)
Normalized earnings before taxes, EBT						1,180
Less income taxes at 40%						(472)
Normalized earnings after taxes, EAT						708

RISK FACTORS: Factors that cause earnings variability or threaten business failure

EXTERNAL

- General economic conditions and trends
  - Inflation & interest rates
  - Credit availability
  - Wars & rumors of wars
  - Recessions & recoveries
  - Capital market conditions (stock & bond markets)

- Industry economic conditions and trends
  - Technology changes
  - Tariffs and import duties
  - Raw material or business services availability
    - Dock strikes
    - Skilled employees
  - Outsourcing trends
  - Industry consolidation: suppliers, competitors, or customers
  - Foreign competition
  - Logistics or quality problems with suppliers
  - Competition based on price or quality or service

INTERNAL

- High fixed operating costs, capital intensive or professional labor intensive
- High fixed financial costs, high financial leverage
- Lack of diversification:
  - Over dependence on a few customers
  - Over dependence on a few suppliers
  - Over dependence on a few employees
  - Over dependence on a few product lines
  - Over dependence on few geographical territories
- Lack of depth or experience in management group
- Under capitalization
- Nature of products or services: necessity or discretionary
- Current high profitability may not last unless barriers can be maintained or created
- Low margins relative to competitors

ESOP RISKS, TRUSTEE RESPONSIBILITY

- Initial overvaluation
- Feasibility, cash flow adequacy to pay down debt
- Repurchase obligation
- Executive compensation
- Inconsistent valuation methods

INVESTMENT RISK ASSESSMENT

Risk assessment is an integral part of the valuation process. An investor wants to know how risky the business is relative to other business in which he could invest. If business A is more risky than business B, the investor would ask if business A offers more return on a dollar of investment and is that extra return sufficient to make neutral the decision to invest in A or B?

Investment risk is commonly defined as the degree of uncertainty of realizing an expected return on a given investment. Since we are talking about future events, the uncertainty or probability of those expected events cannot be measured directly. Various means of measuring investment risk usually involve the measurement of the variability of past returns to investors or the use of some other metric such as the variability of sales, or earnings, or return on equity over several business cycles.

The relative investment risk of publicly held companies in a portfolio context can be measured by the relative variance of its total returns to stockholders over some period of time. [Total return is the return from both dividends and capital appreciation and the period of time usually used is 60 months (five years)]. For closely held companies, that method cannot be used directly. Instead, its variance of past returns is estimated by using the variance of returns of publicly held companies that have characteristics similar to those of the privately held company.

Variability of past returns is not a complete or sufficient indicator of investment risk. Companies can change their investment risk characteristics, although rather slowly in most cases. Also, there are investment risks that do not show up in past patterns of returns. These risks are those events that could occur or are likely to occur in the future that could prevent the achievement of an expected return on investment, but that have not happened or have happened very infrequently in the past. These risks concern vulnerabilities or dependencies relating to customers, key people, suppliers, and competitor activity. How dependent is the company on a key salesman or account executive? How much of total sales comes from one or a few customers? Are there any critical supply needs that are available from only one or two suppliers? When and how will competitors react to your new product with its currently very high margins? The investor or valuator will need to use common sense and his business experience decide how much more return relative to other investment returns will be required to offset these risks.

In the valuation process, the degree of risk is reflected in the required rate of return (RRR) necessary to induce investors to invest in the stock of your company. In practice, the RRR is usually calculated as the weighted average cost of capital (the WACC) by assigning costs to the market values of the debt and equity of the company. The cost of debt is the company's cost of debt augmented to convert that cost to a long term, non-amortizable bond rate. The cost of equity is often calculated by adding up several factors reflecting increasing degrees of risk. Those factors include the long term government bond rate (the risk free rate), the large stock or market risk premium, a risk premium for relatively small size, and another risk premium for the specific investment risks, if any, of this company (high debt, key people, few customers, etc.).

Cost of Equity Capital, Two Methods

Commercial Printers, SIC 2750	CAPM	Buildup	Source
Current long term riskless rate	4.85	4.85	Current 20 year Gov't bond rate
Return on market (large stocks)	12.40	12.40	80 year arithmetic average, SBBI
Less P/E expansion effect	-1.25	-1.25	per Ibbotson SBBI Valuation Edition
Less income return on gov't bonds	-5.20	-5.20	80 year arithmetic average, SBBI
Equity risk premium for large stocks	5.95	5.95	
Industry Beta for company to be valued	0.640		per Ibbotson Cost of Capital book
Industry risk premium for company		-2.02	per Ibbotson SBBI Valuation Edition
Equity risk premium for company	3.81	3.93	
Small stock risk premium	4.15	4.15	80 year arithmetic average, SBBI
Specific risk premium for company	2.00	2.00	valuator's judgement
Cost of equity for company	14.81	14.93	
Rounded	15.00	15.00	

CONSTANT GROWTH VALUATION MODEL

Value = Earnings * (1 + g) / (r - g),
where r = required rate of return for the risk assumed,
g = growth rate, and E * (1 + g) gives next period earnings

Rearranging:
Value / Earnings (P/E ratio) = 1 * (1 + g) / (r - g)

Or:
r = (E / V) * (1 + g) + g = r

SINGLE STAGE DCF VALUATION MODEL No Growth Version

	Actual	Actual Wts	Market Val	Market Wt	Target Wt	Cost	After Tax	Wtd Cost
Debt	1,500	0.27	1,500	0.25862	0.25862	0.08000	0.04800	0.01241
Equity	4,000	0.73	4,300	0.74138	0.74138	0.16465	0.16465	0.12207
Capital	5,500	1.00	5,800	1.00000	1.00000		WACC =	0.13448

Tax Rate	0.40	Sales , Next Period	20,000
Unlevered Cost of Equity	0.1500000	Current Assets	3,333
Levered Cost of Equity	0.1646512	Current Liabilities	1,667
WACC	0.1344828	Net Working Capital	1,667
Growth Rate = g	0.00	Fixed Assets	3,833

	FCF to Cap	FCF to Eqty
EBIT, Next Period (6.5% of Sales)	1,300	1,300
Interest	0	120
EBT	1,300	1,180
Tax	520	472
NOPAT or EAT	780	708
Add Depreciation & Amortization	400	400
Less Capital Expenditures	(400)	(400)
Less Change in Net WorkingCapital	0	0
Change in Debt		0
Free Cash Flow	780	708
Value of Capital	5,800	
Less Debt	(1,500)	
Value of Equity	4,300	4,300

Value Calculation for Capital FCF/(WACC-g)

Value Calculation for Equity FCF/(Cost of Equity-g)

Return on Beginning Capital		
No Growth	14.18%	
Growth	14.60%	
Return on Beginning Equity		
No Growth		17.70%
Growth		18.28%

SINGLE STAGE DCF VALUATION MODEL Growth Version

	Actual	Actual Wts	Market Val	Market Wt	Target Wt	Cost	After Tax	Wtd Cost
Debt	1,500	0.27	1,500	0.21650	0.21650	0.08000	0.04800	0.01039
Equity	4,000	0.73	5,428	0.78350	0.78350	0.16161	0.16161	0.12662
Capital	5,500	1.00	6,928	1.00000	1.00000		WACC =	0.13701

Tax Rate	0.40	Sales , Next Period	20,600
Unlevered Cost of Equity	0.1500000	Current Assets	3,433
Levered Cost of Equity	0.1616058	Current Liabilities	1,717
WACC	0.1370099	Net Working Capital	1,717
Growth Rate = g	0.03	Fixed Assets	3,783

	FCF to Cap	FCF to Eqty
EBIT, Next Period (6.5% of Sales)	1,339	1,339
Interest	0	120
EBT	1,339	1,219
Tax	536	488
NOPAT or EAT	803	731
Add Depreciation & Amortization	400	400
Less Capital Expenditures	(412)	(412)
Less Change in Net WorkingCapital	(50)	(50)
Change in Debt		45
Free Cash Flow	741	714
Value of Capital	6,928	
Less Debt	(1,500)	
Value of Equity	5,428	5,428

Value Calculation for Capital FCF/(WACC-g)

Value Calculation for Equity FCF/(Cost of Equity-g)

Return on Beginning Capital		
No Growth	14.18%	
Growth	14.60%	
Return on Beginning Equity		
No Growth		17.70%
Growth		18.28%

MARKET APPROACH (GUIDELINE COMPANY METHOD)

APPLYING GUIDELINE COMPANY MULTIPLES	EAT	EBT	EBIT	EBITDA	EQUITY	SALES
Normalized financials of company	731	1,180	1,339	1,739	4,000	20,000
Average multiples of guideline companies	12	7.8	8.2	6.3	2.1	0.43
Value of company before adjustments	8,777	9,204	10,980	10,956	8,400	8,600
Company returns / guideline returns					1.1	1.2
Adjusted multiples					2.31	0.516
Values adjusted for return differences	8,777	9,204	10,980	10,956	9,240	10,320
Less debt			(1,500)	(1,500)		(1,500)
Equity values	8,777	9,204	9,480	9,456	9,240	8,820
Adjust for risk & growth differences	0.62	0.62	0.62	0.62	0.62	0.62
Fully adjusted equity values	5,479	5,746	5,918	5,903	5,768	5,506
Average of all six values						5,720

CALCULATION OF THE ADJUSTMENT FOR DIFFERENCES		
Guideline company average expected growth rate		0.05
Guideline cost of equity = r = [(earnings / value) * (1+g)] + g	r=	0.1375
Add company specific risk premium		0.03
Company cost of equity		0.1675
Company expected growth rate		0.03
Company P/E = (1+g) / (r - g) = (1+.03) / (.1675 - .03)	P/E =	7.49
(Company P/E) / (Guideline P/E) = adjustment for risk & growth differences		0.6242424

SIX VALUE DRIVERS

- Market determined cost of capital or return required by investors to assume the risk inherent in the asset.
- Market determined length of time the company will enjoy high growth and earn more than its cost of capital
- Growth rate during specific forecast (high growth) period
- Reinvestment needs, working capital, capital expenditures for plant & equipment in relation to growth rate and level of sales
- Profit margins expected in the future
- Target financial leverage, debt as a percent of total permanent capital

THE VALUATION PROCESS

- Financial statements, expense detail, projections, etc.
- Governing documents, ESOP document for example
- Management interviews concerning operations and outlook
- Industry research
- Risk profile, dependencies on major customer, key employee, key supplier, business cycle, age and condition of plant and equipment, leverage, etc.
- Strengths and weaknesses, competition, market share
- Analysis of financial condition and normal earnings capacity
- Other factors and considerations discovered during valuation process

THE VALUATION REPORT

- See sample table of contents
- Certain items required by IRS and DOL: history and nature of the business, dividend paying capacity, the economic outlook in general and the condition and outlook of the specific industry in particular, the book value of the stock and the financial condition of the business, the earning capacity of the company, its trend and outlook, whether or not the enterprise has goodwill or other intangible value, past sales of the stock and the size of the block to be valued, and the market price of stocks of corporations engaged in the same or similar line of business having their stock actively traded in a free and open market, either on an exchange or over-the-counter. *Sources: Revenue Ruling 59-60 and the DOL proposed regulations concerning adequate consideration and the valuation of closely held companies for ESOP purposes.*

FEASIBILITY STUDY

- Determine preliminary range of values
- Determine ability of company to service the ESOP debt after initial transaction
- Determine the ability of the company to grow and maintain competitive position after ESOP debt burden is imposed
- Avoid “Fraudulent Conveyance” situation

SAMPLE TABLE OF CONTENTS

REPURCHASE OBLIGATION, DCF METHOD

Repurchase obligation not specified

Year		0	0.5	1.5	2.5	3.5	4.5
Sales		20,000	20,600	21,218	21,855	22,510	23,185
Cost of operations		18,100	18,643	19,202	19,778	20,372	20,983
Retirement plan contributions		200	206	212	219	225	232
Earnings before depreciation, EBITDA		1700	1,751	1,804	1,858	1,913	1,971
Depreciation		400	412	424	437	450	464
Earnings before interest expense, EBIT		1,300	1,339	1,379	1,421	1,463	1,507
Assumed income taxes		520	536	552	568	585	603
Net operating earnings after tax, NOPAT		780	803	828	852	878	904
Add back depreciation		400	412	424	437	450	464
Less change in net working capital		0	(50)	(52)	(53)	(55)	(56)
Less capital expenditures		(400)	(412)	(424)	(437)	(450)	(464)
Free Cash Flow		780	753	776	799	823	848
Present value factor			0.9278347	0.7987518	0.6876273	0.5919627	0.5096072
Present value of annual cash flows			699	620	550	487	432
Terminal value							8,162
Sum of the annual present values		2,788					
Present value of the terminal value		4,159					
Value of the capital (debt + equity)		6,947					
Less Debt		(1,500)					
Value of the equity		5,447					

Repurchase obligation specified

Year		0	0.5	1.5	2.5	3.5	4.5
Sales		20,000	20,600	21,218	21,855	22,510	23,185
Cost of operations		18,100	18,643	19,202	19,778	20,372	20,983
Retirement plan contributions		200	206	212	219	225	232
Additional retirement plan contributions		0	213	220	226	233	240
Earnings before depreciation, EBITDA		1,700	1,538	1,584	1,631	1,680	1,731
Depreciation		400	412	424	437	450	464
Earnings before interest expense, EBIT		1,300	1,126	1,159	1,194	1,230	1,267
Assumed income taxes		520	450	464	478	492	507
Net operating earnings after tax, NOPAT		780	675	696	717	738	760
Add back depreciation		400	412	424	437	450	464
Less change in net working capital		0	(50)	(52)	(53)	(55)	(56)
Less capital expenditures		(400)	(412)	(424)	(437)	(450)	(464)
Free Cash Flow		780	625	644	663	683	704
Present value factor			0.9278347	0.7987518	0.6876273	0.5919627	0.5096072
Present value of annual cash flows			580	515	456	405	359
Terminal value							6,775
Sum of the annual present values		2,314					
Present value of the terminal value		3,453					
Value of the capital (debt + equity)		5,767					
Less Debt		(1,500)					
Value of the equity		4,267					

WHAT IS VALUE ?

It is sometimes said that price is what you pay, value is what you get. For emphasis, we can say: Price is what you pay NOW, value is what you get in the FUTURE.

A definition of value capable of being written in mathematical terms and used by appraisers specifically when using the Discounted Cash Flow Method of valuation is: The value of an asset is the sum of the present values of all future free cash flows to the owner, discounted at a rate sufficient to compensate the owner for the investment risk involved. Free cash flows are cash generated by the asset over and above the amounts that must be reinvested in the asset in the form of working capital and plant and equipment to maintain the planned growth rate.

STANDARDS OF VALUE

- Fair Market Value, used for ESOPs and gift and estate tax valuations
- Fair Value, defined by state law and by courts of equity, divorce, bankruptcy, etc.
- Liquidation Value, orderly or forced
- Fairness from a Financial Point of View, used in mergers and acquisitions

DEFINITION OF FAIR MARKET VALUE

Fair market value is defined as in Revenue Ruling 59-60 of the Internal Revenue Code and widely accepted elsewhere as: "the price at which an asset would change hands in a transaction 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, and both parties are able, as well as willing, to trade and are well informed about the asset and the market for that asset." Some definitions add the comment that buyer and seller are hypothetical and not specific parties in the transaction.

PREMISES AND LEVELS OF VALUE

- Synergistic Value, not considered under fair market value definition, involves specific buyer and seller
- Financial or Investment Value, company continues as independent enterprise
- Marketable Minority Interest of Closely Held Company
- Non-Marketable Minority Interest of a Closely Held Company

LEVELS OF VALUE

STRATEGIC BUYER OF CONTROL
Includes expected future cost savings and possible synergies
Fair Value ... not Fair Market Value Standard

▲ Premium for higher cash flows
▼ Discount for lower cash flows

FINANCIAL BUYER OF CONTROL
Fewer expected future cost savings and no synergies
Fair Market Value Standard

▲ Premium for higher cash flows and no agency costs
▼ Discount for lower cash flows and agency costs

MARKETABLE MINORITY INTEREST
No expected cost savings (unless specified) and no synergies
Fair Market Value Standard

▲ Premium for ready active market
▼ Discount for possible long holding period and no dividends

NON-MARKETABLE MINORITY INTEREST
No expected cost savings and no ready market for stock
Fair Market Value Standard

Discounts and Premiums should be justified by some demonstrable evidence of economic value to be lost or gained and by risk to be shed or assumed.