

The Three Approaches to Business Valuation

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There are three basic approaches to business valuation: the income approach, the asset-based approach, and the market approach. Within each of these approaches, there are various methods for determining the fair market value of a business. Each valuation approach and method has advantages and drawbacks, which must be considered when applying them to a particular subject company. Appraisal standards suggest that an appraiser applies as many methods as may be suitable based on the facts and circumstances of the appraisal assignment. It is then up to the appraiser's informed judgment to decide how these values will be reconciled in deriving a final estimate of value.

1 The Income Approach

Income valuations are based on the premise that the current value of a business is a function of the future value that an investor can expect to receive from purchasing all or part of the business. They are generally used for valuing businesses that are expected to continue operating for the foreseeable future. The greatest advantage of the income based methods is that they account for the relationship between the value of the company and the earnings or cash flow it produces which is why income valuations are the most widely used type of valuation in the context of a business acquisition. Revenue Ruling 59-60 (Internal Revenue Service, 1959) states in section 5: "In general, the appraiser will accord primary consideration to earnings when valuing the stocks of companies which sell products or services to the public."

This approach is based on the assumption that income streams are generated by operating assets. The value derived from applying an income approach equals the value of the operating assets less operating liabilities of the enterprise. The value of the net non-operating assets less the non-operating liabilities has to be added to the result to obtain the value of the entire equity.

Income valuation methods include

1.1 The capitalization of earnings method

A capitalization model uses a current benefit stream and assumes that this particular stream of income will be received into perpetuity. Where a company is expected to exhibit no growth or stable

growth rates in the future, the capitalization of earnings method is usually suitable since it is a “single-period” valuation model.

1.2 The discounted future income method

The Discounted Future Income Method sets the value of a business at the sum of the present values of the net cash flows in the forecast period plus the present value of the residual value (or “terminal value”) at the end of the forecast period. The residual value should represent the income stream one year after the business is in a stabilized and sustainable condition (t+1). An advantage of the discounted future income method is that it allows for the use of variable future growth rates. Strong growth never lasts forever! In practice, the most common projection period is five years. However, anything from two years to ten years could be feasible.¹ Each of these future annual income streams is then discounted back (often using the “build-up method” or the “weighted average cost of capital”) to arrive at their present value. The greater the uncertainty about the projected cash flows, the higher the discount rate used.

No appraiser has a crystal ball to see into the future which makes this method more “speculative” than others. However, the fact that the future cannot be fully known does not mean that it should be ignored. Ultimately, it is the future cash flows that attract buyers to an acquisition target, so basing the value of a company on its future cash flows makes financial sense. This also makes this method the most logical one to apply in a company acquisition scenario.

The formula for the discounted future earnings method is as follows:

$$\sum_{n=1}^{n=t} \frac{En}{(1+k)^n} + \frac{FV_{t+1}}{(1+k)^t}$$

E = Forecast Income

n = Year in which the income is achieved

k = Discount Rate

FV = Terminal Value, which is the estimated income during a stabilized period

t = Year of stabilization

Build-up method²

The buildup method is an additive model to determine a key component of the discounted future earnings formula: k = the discount rate. The discount rate is calculated by adding up several risk premiums. Each added premium represents the reward an investor receives for taking on a specific

¹ Understanding Business Valuation, Second Edition, by Gary Trugman, page 293

² 2007 Yearbook, Valuation Edition, by Morningstar, Inc., Page 37

risk. The building blocks are summed arithmetically to form an estimate of the cost of capital or discount rate.

Risk-free rate (usually the 20 year government bond rate)
+ Equity Risk Premium
+ Company Specific Risk
+ Industry Premium
+ Small Stock or Size Premium
= Discount Rate

There is consensus among most appraisers, buyers and sellers that the required rate of return (RRR) on an equity investment in a small closely-held business is typically in the range of 20-40% with the exact amount depending on the degree of risk associated with the investment. That's not to say that a specific equity investment with an usually high or low amount of risk involved could not warrant a RRR outside of that range.

A source commonly used among appraisers to determine the riskless rate, equity risk, industry premium and size premium are the valuation yearbooks published by Ibbotson SBBI, a wholly owned subsidiary of Morningstar, Inc.

The risk-free rate of return is also referred to as the “safe rate” or the “cost of money”. This is the minimum return that an investor can expect for an investment that is virtually risk-free such as an investment in long-term (20 years) government bonds. Intermediate-term rates (1-10 years) might be appropriate where the expected holding period of the investment is short (e.g. acquisitions by private equity or Venture Capital groups who usually have a holding period of 5 years or less).

The equity risk premium is also referred to as the “general risk premium”. As implied by the name, the equity risk premium covers the general risk associated with investing into equity.

The small stock or size premium covers the specific risk involved into investing into small companies. Since the typical small business is associated with more risk than the typical S&P 500 firm, investors require a higher rate of return than the one represented by addition of the risk-free rate and the equity risk premium. However, it should be noted that average market capitalization of a “micro-cap” firm listed on the NYSE is significantly higher than a typical small, privately held business. The definition of micro-cap of Ibbotson SBBI in their 2009 Valuation Yearbook includes companies with a market capitalization of up to approximately \$450 million with the very smallest having a market capitalization of \$1.85 million.

The industry premium covers the risk associated with the specific industry that a company operates in. Industry premiums, just as company risk, can be negative and therefore reduce the overall discount rate.

The company specific risk covers the specific risk associated with the appraisal subject. It is the most controversial component of the build-up method since selecting this rate requires subjective judgment by the appraiser. Adding a company specific risk premium may or may not be called for, depending on how much the company's structure and performance differs from industry peers. The

industry and size premiums already cover risks associated with a specific industry and companies of a certain size so it is important that the appraiser does not “double count” those risks by considering them again when setting the company specific risk rate. The risk associated with a specific company that performs in line with industry peers may therefore be adequately covered by just considering the industry and size specific risks. According to Gary Trugman, company specific risk can be positive or negative³, so it can be concluded that the company specific risk expresses the extent to which a specific company is stronger or weaker, and therefore more or less risky, than industry peers.

The aggregate specific risk premium for closely-held businesses is typically considered low, moderate, or high. Low risk is commonly associated with a specific company risk from zero to five percent. Moderate company risk often falls between five and ten percent. A high company risk premium is generally associated with a rate in excess of ten percent. Examples for high risk companies would be those in bankruptcy or liquidation, with multiple years of negative reported income or with negative book value.

Unfortunately, there is no objective source of data to properly quantify company specific risk. Applying a reasonable rate requires experience and a thorough analysis of the company and its industry. Factors to be included are for example:

- Diversification of product/services range, customers, suppliers
- Location
- Financial Structure
- Stability of earnings
- Earnings margins compared to industry peers
- Depth of management/reliability on key personnel
- Technology risk
- Regulatory & legal risk

Setting the company specific risk rate will always require a certain amount of subjective judgment by the appraiser. However, an appraiser should strive to limit such subjectivity by applying models that standardize the process as much as possible to make sure that all appraisal subjects are treated in a similar fashion.

³ Understanding Business Valuation, Second Edition, by Gary R. Trugman, page 331

2 The Asset Approach

The theory underlying the asset based approach to business valuation is that the value of a business is equal to the sum of its parts. Underlying question: How much was paid, or would be paid, for the assets of the business? The asset approach is also commonly known as the “cost approach” or the “replacement-cost approach”. The traditional asset approach (which excludes unidentifiable intangible assets such as goodwill) establishes the “floor value” of a going business concern and is usually only applied to companies with little value beyond their identifiable assets.

Methods under the Asset Approach include:

2.1 Adjusted Book Value Method

The objective of the adjusted book value method is to determine the book value (equity) of a company after adjusting the values of assets and liabilities to reflect estimated market values, rather than depreciated tax values, and removing non-operating assets and liabilities from the balance sheet. A drawback of this method is the fact that potentially extremely valuable assets, such as trademarks and customer goodwill, and relevant liabilities, such as pending lawsuits, are not reflected on the books and their value is therefore difficult to determine.

2.2 Liquidation Method

Liquidation value is the net amount expected to be left over after the assets are sold off and the existing liabilities have been paid. Liquidation value will depend on whether an “orderly liquidation” (assets will be marketed for a reasonable amount of time which usually assumes minimum 3-6 months) or a “forced liquidation” (assets have to be sold quickly, usually in less than 3 month) is taking place. A forced liquidation is sometimes also referred to as a “fire sale”. When considering the liquidation value method, all costs of liquidation, such as legal and accounting costs, commissions, taxes on the disposed assets etc., should be deducted. It is rare that a business can liquidate all its assets quickly and the time value of money should therefore be considered. A present value adjustment of anticipated income from liquidation might therefore be appropriate.

The liquidation value obviously doesn't represent the company's potential; it's a most pessimistic, rock-bottom value calculation and typically used only if a company is in serious financial trouble and not expected to continue business operations

It is commonly accepted in the appraisal community that for a business valued as a going concern, only in limited circumstances would primary weight be afforded to the asset-based approach. Furthermore, this approach is generally considered inappropriate for:

- Companies whose earnings or cash flow generating capacities are the primary value drivers
- Minority interests
- Companies that have a significant amount of intangible assets (most services companies fall into this category)

The asset based approach is most commonly applied to the following types of business valuations:⁴

- Not-for-profit organizations
- Holding companies
- Manufacturing companies
- Asset-intensive companies
- Controlling interests that have the ability to liquidate assets

3 The Market Approach

Methods under the market approach determine value by comparing the subject company to other companies in the same or a similar industry. Underlying question: What do others pay for similar assets or returns? This approach is grounded in the assumption that an investor would not pay more for an investment than what an equally desirable substitute investment would sell for.

Revenue Ruling 59-60 obliges the appraiser to consider market data. The market approach uses data from comparable guideline companies to develop a measure of value for a particular company. By definition, fair market value is supposed to be derived from the “market” so putting emphasize on this method makes sense.

The two most common methods within the Market Approach are:

3.1 The Guideline Public Company Method

The Guideline Public Company Method is based on the assumption that pricing multiples of public companies that are considered comparable to the appraisal subject can be used to help determine the value of the closely held appraisal subject. Public companies are required by SEC regulations to publish their financial information and M&A transaction data. Consequently, this type of data is easily accessible. However, public company data should only be used as guideline data if the public company is similar and relevant to the appraisal subject. No two companies are alike so the decision whether a public company is similar and relevant to a closely held appraisal subject is somewhat subjective. Some appraisers are of the opinion that the Guideline Public Company Method should only be applied if the appraisal subject, even though privately held, has in theory the capabilities to go public. Others think that a Guideline Public Company is only comparable if it is not more than 20 times the size of the appraisal subject (some appraiser set this number as low as 10). Factors to consider when deciding about the suitability of a public guideline company include, but are not limited to:

- Size
- Financial Position
- Past growth of sale and earnings

⁴ Understanding Business Valuation, Second Edition, Page 257 and 258, by Gary R. Trugman

- Nature and outlook of industry
- Nature of products/services offered
- Amount of investment in fixed assets
- Level of skill and technology employed
- Geographical diversification
- Quality of management
- Dividend rate and record
- Liquidity
- Years in business

3.2 The Transaction Method/Direct Market Data Method

The following section is based on the application of “Technical Studies of the IBA Transaction Database” (Miles, 1993-2007).

The Transaction Method looks at actual company sale transaction data involving companies similar and relevant to the appraisal subject. For a guideline company or transaction to be similar and relevant, it must satisfy two requirements:

- The nature of the company itself must be similar to the appraisal subject, and
- The kind of transaction from which the value of the guideline company is determined must be relevant to the value of the appraisal subject

Factors to be considered in determining whether a transaction is similar and relevant are e.g. SIC code (nature of business), sales volume/net worth (size of business) and profitability (financial position).

Once an appraiser has selected those transactions that are deemed to be similar and relevant to the appraisal subject, the appraiser will determine whether the resulting sample size is sufficiently large enough to be statistically significant. The Institute of Business Appraisers considers 20 transactions or more to be statistically meaningful but as few as 5 transactions are deemed suitable for a basic “sanity check” of valuation estimates.⁵

Qualitative and quantitative analysis is applied to the available transaction data to determine appropriate pricing multiples for the subject company.

It should be noted that Raymond C. Miles, at the time Executive Director of the Institute of Business Appraisers (IBA), conducted a study of almost 14,000 entries in the IBA’s transaction database and demonstrated that in most industries, paid multiples are unaffected by the date of the transaction when smaller businesses are involved.⁶ Exceptions to this are industries that have

⁵ Raymond C. Miles, How to use the IBA market data base, part XXX, first published in 2000

⁶ Raymond C. Miles, “In Defense of ‘Stale’ Comparables”, IBBA Journal, September 1992, pages 17-25

undergone significant changes from e.g. regulation or elimination of markets, resulting in a profound positive or negative change in the attractiveness of the industry to investors. Also, empirical studies suggest that there is no significant correlation between the prices for which businesses sell and their geographical location.⁷ These studies establish that transactions reflected in the IBA Transaction Database, which occurred significantly earlier than the subject business appraisal date or are located in other geographical regions, can nevertheless be used for valuation purposes.

One problem with this appraisal method is that most transaction databases do not enable the appraiser to verify, or account for, all deal terms which limits the reliability and applicability of the data. For example, acquisitions frequently involve specific buyers who pay a premium for special or unique considerations, such as synergies between the two companies. The resulting price paid would therefore be representative of investment value and not fair market value. The average transaction database does not specify the definition of value applied which again limits the reliability and applicability for a fair market appraisal.

However, market transactions are assumed to be between informed buyers and sellers and consequently a good representation of fair market value occurs if there are enough transactions to be statistically meaningful⁸. This method is therefore, despite its limitations, the most direct and applicable method for valuing a small company.

The sales prices to be found in transactional databases will typically (but not always) include assets transferred in an asset sale including inventory, fixed assets exclusive of real estate, and intangible assets, or the "book of business." It is typically assumed that the seller retains cash, receivables, prepaid items, all non-operating assets and all operating and non-operating liabilities. This creates a substantial difference between the total sum of assets and liabilities included in the data set of transactions and the fair market value of the equity interest. As a consequence, the appraiser is required to apply adjustments to the calculated estimate of value to account for those differences. These adjustments can best be expressed by the following formula: Value of Stock = Multiple Value (derived from using transaction data) plus Value of Assets not included in sale minus Value of Liabilities.

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⁷ See Raymond C. Miles, Business Values in the Real World, ASA Business Valuation Conference, Houston, October 23,1993 and Raymond C. Miles, Business Appraising in the Real World – Evidence from the IBA Market data Base, IBA publication P-292.a, November 1992

⁸ Understanding Business Valuation, Second Edition, by Gary Trugman, page 253