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## CORPORATE VALUATION METHODOLOGIES

“What is the business worth?” Although a simple question, determining the value of any business in today’s economy requires a sophisticated understanding of financial analysis as well as sound judgment from market and industry experience. The answer can differ among buyers and depends on several factors such as one’s assumptions regarding the growth and profitability prospects of the business, one’s assessment of future market conditions, one’s appetite for assuming risk (or discount rate on expected future cash flows) and what unique synergies may be brought to the business post-transaction. The purpose of this article is to provide an overview of the basic valuation techniques used by financial analysts to answer the question in the context of a merger or acquisition.

### Basic Valuation Methodologies

In determining value, there are several basic analytical tools that are commonly used by financial analysts. These methods have been developed over several years of research and refinement and are based on financial theory and market reality. However, these tools are just that – tools – and should not be viewed as final judgment, but rather, as a starting point to determining value.

It is also important to note that different people will have different ideas on value of an entity depending on factors such as:

- ◆ Public status of the seller and buyer
- ◆ Nature of potential buyers (strategic vs. financial)
- ◆ Nature of the deal (“beauty contest” or privately negotiated)
- ◆ Market conditions (bull or bear market, industry specific issues)
- ◆ Tax position of buyer and seller

Each methodology is fairly simple in theory but can become extremely complex. These tools include:

- ◆ **“Trading Comps”** – Analysis of Selected Publicly Trading Companies
  - ▶ Implied values based on multiples of comparable companies that are publicly traded
  - ▶ Very relevant especially if there are publicly traded competitors
- ◆ **“Deal Comps”** – Analysis of Selected Acquisitions
  - ▶ Implied values based on multiples and premia of acquired private and public companies
  - ▶ Very relevant in absence of public traded competitors
  - ▶ Information can be very scarce and unreliable depending on company and / or industry
- ◆ **“DCF”** – Discounted Cash Flow Analysis
  - ▶ Free cash flows to firm discounted over projection period
  - ▶ Especially relevant especially where there aren’t any comparable companies
- ◆ **Other Methods**
  - ▶ Break – up Analysis – sum of parts valuation based on different business lines
  - ▶ Asset Valuation – analysis of tangible assets such as auto plants and refineries
  - ▶ LBO Valuation – financial engineering based on leverage or use of debt



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## Valuation Multiples

Inherent in all valuation methodologies is the idea of a “multiple”. A multiple is simply a ratio of value to a financial statement statistic such as Revenue, EBITDA and EBIT and Price / Earnings (PE) multiple. For example, the PE multiple is a multiple of earnings; however, there are numerous other multiples, such as Revenue, EBITDA and EBIT multiples. Generally speaking, the name of the multiple is simply the denominator of the ratio; the numerator will vary according to the denominator.

For purposes of valuing entities that are “cash-based” businesses (such as an insurance brokerage), a multiple of EBITDA is typically utilized. EBITDA is an accounting term that is defined as: Earnings Before Interest, Taxes, Depreciation and Amortization and is sometimes used as a proxy for cash flow. However, depending on the industry, other multiples are also important. For example, during the Technology boom, revenue multiples were crucial for valuing and benchmarking unprofitable businesses. Also, in the insurance industry, Price / Book multiples are typically used to value insurance companies because of the relatively stability of book value.

Multiples are either forward-looking or backward-looking: backward-looking multiples, or “trailing” multiples, use statistics that have been realized, such as last full year earnings or a last twelve months (LTM) statistic. For example, if a stock price is \$20 per share and last year’s earnings per share (EPS) was \$1, the PE is  $20/1 \rightarrow 20x$ . Forward-looking multiples, or simply “forward” multiples, use estimates. For example, if a stock price is \$20 and is estimated to have EPS of \$2 this year, the PE is  $20/2 \rightarrow 10x$ . Thus, it’s important to clarify not just the multiple, but also exactly what is being measured within that multiple.

In general, the higher the multiple, the higher the value ascribed to future earnings or cash flow of a company; in other words, the higher the multiple, the more an investor is paying for the stock or the company. A higher multiple is usually attributed to younger, high growth companies whereas a lower multiple can be attributed to a mature, slow growth or negative growth company.

If a company’s LTM EBITDA was \$100 million and if comparable companies were trading at a 7x EBITDA multiple, the company would have an implied value of  $\$100 \text{ million} \times 7x = \$700 \text{ million}$  based on an LTM or trailing basis. EBITDA multiple ranges are based on either comparable publicly traded companies or past transactions of similar companies. This provides a valuation range based on the market’s perception of the growth potential and profitability of “similar” publicly traded companies at a given point in time.

The following steps and methodologies would be applied using a multiples approach:

- ◆ Review historical numbers to understand operating performance
- ◆ Perform adjustments to latest twelve month (LTM) results to arrive at “Pro Forma” results that depict the core profitability or natural run rate of the company
- ◆ Determine a range of values usually based on a multiple of EBITDA
- ◆ Balance sheet adjustments are made to value such as excess cash, working capital requirements and contingent assets and liabilities, etc

There are two basic methodologies in selecting appropriate comparable multiples: trading comps and deal comps.



## Trading Comps

Trading Comps or Analysis of Selected Publicly Traded Companies are multiples comparisons with other similar or comparable companies. This method utilizes benchmark multiples based on publicly traded companies. The multiples derived from this analysis are at a given point in time and generally change over time. It is important to note that trading multiples do not reflect control premiums or potential synergies from a buyer.

The following steps and methodologies would be applied in a “comps” analysis, in addition to the process described in the multiples approach:

- ◆ Determine the universe of comparable companies
- ◆ Gather all necessary information, usually 10K’s, 10Q’s, other SEC filings and press releases
- ◆ “Normalize” the financials to adjust for one-time / non-recurring items that temporarily distort earnings
- ◆ Calculate relevant multiples
- ◆ Determine implied valuation ranges

It is not enough to simply use the same multiple as another publicly traded company. In most, if not all cases, the multiples that the “comps” universe is trading at must be subjectively adjusted for factors including, but not limited to:

- ◆ Public vs. private status – generally, publicly traded companies have had a longer track record of disclosure and familiarity in dealing with the investment community and thus, would command a premium over smaller, private companies
- ◆ Liquidity – the stocks of publicly traded companies are significantly more liquid than that of private companies and thus, would command a premium over private companies
- ◆ Size – generally, public companies are larger than private companies and thus, would be able to absorb negative shocks more easily than private companies
- ◆ Access to resources – generally, publicly traded companies have greater access to cheaper sources of capital than private companies
- ◆ Imperfect comparables – very rarely are there two identical companies; thus, adjustments should be made to reflect differences, such as business mix and geographic spread

A major disadvantage of this valuation method is that often, it is difficult to determine “the right comp”. Multiples are sensitive to the following qualitative factors when comparing similar companies:

### Operations

- Relative competitive position
- Industry
- Products
- Markets
- Distribution channels
- Customer base
- Seasonality
- Cyclical

### Financial Aspects

- Size
- Leverage
- Margins & Profitability
- Growth prospects
- Shareholder base
- Market conditions
- Consideration paid
- Surrounding circumstances



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## **Deal Comps**

Deal Comps or Analysis of Selected Acquisitions are very similar to trading comps except deal comps utilize actual transactions instead of publicly traded companies as the universe of comparable companies. All else being equal, deal comp multiples can be higher than trading comp multiples due to control premiums (premiums paid for a controlling stake in a company) and / or potential synergies, such as cost savings and revenue synergies resulting from a combination of the two entities. They can also be lower due to lack of liquidity and smaller size, etc.

Deal comps are highly subjective in nature due to numerous factors:

- ◆ Industry trends – did the transaction take place at the high or low of industry cycles?
- ◆ Nature of transaction and negotiations – was it a “beauty contest” or a hostile deal?
- ◆ Consideration – was cash or stock or a combination used?
- ◆ Structure – was transaction structured as an asset sale or stock sale? Were earnouts based on future performance used?

The process of compiling deal comps is not unlike that of trading comps. However, data can be more difficult to locate. Sources of information for public deals include press releases, 8K’s, Proxy’s and other SEC filings.

## **Discounted Cash Flow Analysis**

In addition to the multiples approach to valuation and especially relevant for purposes of internal buy-sell agreements, a Discounted Cash Flow (“DCF”) analysis is often utilized. The DCF approach is among the most scientific and theoretically precise valuation methodologies because it relates specifically to the profitability and growth of the business being valued.

In a DCF analysis, free cash flows are modeled over a projection horizon and then discounted to reflect its present value, or value in today’s dollars. In addition to these cash flows, a value must be determined for the cash flows generated beyond the projection horizon, commonly called the “terminal value”. Thus, DCF accounts for time value of money and relative risk of investment, but is highly sensitive to the discount rate.

Despite rigorous theoretical foundations, the valuation parameters derived through the DCF methodology are driven primarily by long-range forecasts (usually produced by company management) which attempt to model the numerous company and industry-specific factors and macroeconomic trends that exert varying degrees of influence on the company’s results. The terminal value component of a DCF analysis generally accounts for the majority of the ultimate implied value and is extremely sensitive to the cumulative effects of the underlying operating assumptions. Consequently, the long-term projections and choice of terminal value exit multiple and / or perpetuity growth rate occupy a central role in determining a company’s value under this analytical framework.



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The following steps and methodologies would be applied in a DCF analysis:

- ◆ “Free cash flows to firm” are projected, typically for a five year period and discounted back at an appropriate discount rate
  - ▶ Typically requires a projection model of the company’s operations with assumptions such as growth rate, margins, capital needs, etc
- ◆ Terminal value is determined based on one of two methods:
  - ▶ Multiples method which assumes the business is sold or valued as if it were sold at the end of the projection period
  - ▶ Perpetuity growth method which assumes a certain growth rate in free cash flows from the end of the projection period to infinity

The following inputs are required for a DCF analysis:

- ◆ Free Cash Flows to Firm – projected cash flows available to the entire firm
- ◆ Terminal Value – remaining value of the firm beyond projection period
  - ▶ Exit Multiple – appropriate multiple used to determine terminal value
  - ▶ Perpetuity Growth Rate – assumed growth rate of free cash flows to determine terminal value
- ◆ Discount Rate – rate or range of rates used to discount a series of future values to the present

The selection of the discount rate is extremely important to a DCF and there are countless publications on the theory and applicability of discounts rates. The following inputs are required for calculating the discount rate, or WACC (weighted average cost of capital):

- ◆ Interest rate of debt, if applicable (cost of debt)
- ◆ Interest rate of preferred, if applicable (cost of preferred)
- ◆ Estimate of the cost of equity, including the following assumptions
  - ▶ Beta – measures the systematic risk of a security, or its relationship with the overall market
  - ▶ CAPM – Capital Asset Pricing Model used to approximate a company’s cost of equity

### Other Methodologies

In addition to trading comps, deal comps and DCF, there are several other valuation methodologies that can also shed additional insight. These other valuation methodologies include break-up analysis, asset valuation and leveraged buyout analysis (LBO). A break-up analysis is simply a sum of parts valuation based on different business lines. Each “part” would be valued separately utilizing above methodologies and then “summed” together. This is very relevant for companies with disparate business lines; however, the methodology for valuing each part still remains the same.

Asset valuation applies to companies that have hard assets, such as manufacturing plants or refineries. Asset valuations are rarely used in relationship-based businesses except in certain distress situations. The valuation methodologies for specific types of assets vary significantly among industries and are generally highly specialized. For example, one could place a value on Toyota’s automobile manufacturing plants based on number of autos produced and some efficiency factor of the assembly line.

Another valuation methodology sometimes utilized is a fairly complex financial engineering – the Leveraged Buyout or “LBO” analysis. Leverage is simply the use of debt; an LBO is the purchase of a company through the use of borrowed funds, or debt. This is also known as “Going Private” as the target company is usually public and the public equity is being bought out, and thus, going private. In most cases, an LBO requires and involves strong management support and participation and thus, is also referred to as an “MBO” or Management Buyout.



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The idea behind an LBO analysis is to use cash flows generated by the company to pay off debt over time, thus, maximizing equity value. This is purely a financial transaction and usually sets the floor, or minimum, valuation. In most cases, an LBO requires a financial sponsor that is usually a private equity firm with high rates of returns. These new investors lend credibility to a transaction, which helps attract other financing sources and also bring valuable expertise to the table to help position the target strategically and financially.

### **Summary**

While there are numerous valuation methodologies that can be utilized to begin establishing value, not all methodologies would be appropriate for all situations. Each methodology provides additional clarity on valuation and evaluating results of numerous methods provides a better understanding of a business' true "worth". A fair amount of experience, judgment and corporate finance and equity markets skill is required in each case as even the seemingly straightforward tools contain several hidden layers of complexity and subtleties.