#### **HOGE-FENTON**

# VALUATION BASICS IN M&A TRANSACTIONS

A common refrain is that valuing a company is as much an art as it is a science. There are a number of valuation rules of thumb but there are exceptions to each of these rules. Beauty may be in the eye of the beholder, but the ultimate value of a company in an M&A transaction is determined as that value upon which a willing buyer and a willing seller finally agree and conclude the transaction.

This article discusses three commonly used approaches to valuation: the asset-based approach, the income-based approach, and the market-based approach. Although the market-based approach may be the more common approach in an M&A transaction, each approach may be more or less appropriate depending on the circumstances.

Initially, however, it is important to understand the difference between valuing a company being acquired in the form of an asset purchase transaction as compared to valuing a company being acquired in the form of a merger or a stock purchase transaction. In a typical asset purchase transaction, a buyer may acquire all of the seller's assets but none of the seller's liabilities. In a merger or stock purchase transaction, a buyer acquires the seller subject to its liabilities.

Assume, for example, a company has earnings before interest and taxes (EBIT) of \$ I million and its sole liability is \$ I million in debt. If a buyer is willing to pay 3x EBIT (\$3 million) to acquire this company in a transaction structured as an asset purchase and will not assume the debt, the seller will receive \$3 million, remain liable to pay off the \$ I million debt and have \$2 million left when the debt is paid. However, if the acquisition is structured as a merger or a stock purchase transaction, that same buyer may be willing to pay 2x EBIT (\$2 million) since the buyer will acquire the seller subject to the \$ I million debt. More commonly, however, a buyer would not likely consider debt on a balance sheet to constitute the seller's sole and exclusive liability (e.g., there may be any number of potential liabilities such as for environmental damage, product liability claims, claims related to the company's relationships and dealings with its employees, suppliers, customers, investors, etc.) and a buyer may be willing to pay less than 2x EBIT for this company to offset the risks of such potential liabilities if the acquisition is structured as a merger or a stock purchase transaction.

## **Asset-Based Approach**

An asset-based valuation approach is commonly used when a business has a very low or negative value as a going concern. For example, consider the value of an airline company that has few routes, high labor and other operating costs, and is losing millions of dollars each year. Using the other

valuation approaches discussed below, the company may have a negative value. However, to one or more of the company's existing competitors, the company's routes, landing rights, leases of airport facilities, and its ground equipment and airplanes may have substantial value. An asset-based approach to valuing this company would value the company's assets separately and aside from the money-losing business in which they are presently being utilized. The asset-based valuation approach will typically result in the lowest valuation of the three approaches for a profitable company, but it nevertheless may result in an appropriate value depending on the circumstances.

Additionally, the asset-based valuation approach may be appropriate to use in conjunction with one of the other valuation approaches. For example, assume a company has a one-location retail business and it owns the real property and building in which the business operates. If the company has EBIT of \$ 100,000 and a buyer is willing to pay 3x EBIT for a similar retail business which leases its operating facilities, the buyer might value this company by adjusting EBIT downwards for the cost the buyer would have to pay if it were to lease comparable facilities, and adjusting the company's valuation upward for the value of the real property and building assets. If the buyer would have to pay \$24,000 per year to lease similar property and could sell the real property and building for \$500,000, the buyer might value this company at 3x adjusted EBIT plus the value of the real property and building, or \$728,000, i.e., 3x (\$ 100,000 - \$24,000) \_ \$228,000 + \$500,000.

## **Income-Based Approach**

The income-based approach to valuation calculates the net present value of future income by applying a particular discount rate using a particular mathematical formula. For example, if you require a 25% return (compounded annually) on your invested money, how much would you pay today for a single lump sum payment of \$1 million to be received five years from now? The answer is determined mathematically with the following formula:

 $PV FV / (1 + i)^n$ 

where

PV = present value

FV = future value

i = interest (or discount) rate per period

^n = raised to the nth power, where n is the number of compounding periods

 $PV = $1,000,000 / (1.25)^5$ 

PV = \$1,000,000 / 3.05175813

PV = \$327,680

Similarly, how much would you pay today for a stream of income consisting of \$100,000 payments each year forever if you require the same return on your investment? The following formula provides the answer:

PV = payment / interest (or discount) rate

PV = \$100,000 / .25

PV = \$400,000

Formulas similar to these are regularly used for valuing stable financial instruments such as government and high quality corporate bonds, preferred stock dividends, annuities, and similar investments. Various mathematical formulas exist for valuing a variety of payment streams, such as payments that are expected to grow at a constant rate over time (as one may hope for a company's profits), payments that continue for a specific number of years (such as redeemable preferred stock), and the like. The formulas work predictably well for valuing stable, low risk investment instruments that are widely-traded in established markets, such U.S. Treasury bonds and notes. However, in the context of valuing a company, in particular a small, privately-held, owner-managed, and/or not-well-established business, the projections of future income streams and the selection of a discount rate are often highly speculative and subjective. Thus, the formulas provide the science, but the art (of projecting the future income streams and of determining the appropriate discount rate) is equally important.

# **Market-Based Approach**

The market-based approach to valuation determines the value of a company by comparing one or more aspects of the subject company to the same aspects of other companies that have an established market value. For example, if the subject company has EBIT of \$ I million in the most recent fiscal year, and comparable companies have been sold recently for an average of 5x EBIT, the subject company's value should be about \$5 million.

The variables in the market-based approach include, first, which aspects of the companies should be compared, and second, which companies to select as comparables. As for comparable companies, it may be easy to select several public companies that are in the same or similar industry as the subject company to be valued, but if the subject company is not publicly-traded and/or is much smaller than the public companies, the comparisons may have limited usefulness. There are, however, a number of commercially available databases with statistics on companies (both public and private) that have recently been acquired such as Pratt's Stats, Mergerstat, and BizComps. Obviously, the more recent the data, and the more similar the companies to be compared (in terms of size and industry), the more useful the comparisons may be.

As for which aspects of the companies to compare, the most commonly compared aspect is some form of earnings, but in some cases, total revenue or book value may be a more appropriate aspect for comparison. Any number of other financial or other criteria may be more or less useful to compare. For earnings, it is important to compare apples to apples. Since taxable income may vary widely depending on financial and accounting considerations, one commonly used earnings calculation, at least for smaller businesses, is net income before taxes, depreciation and amortization (EBITDA) plus the value of the owner's salary and fringe benefits, sometimes collectively referred to as seller's discretionary earnings, or SDE.

Once the particular aspects to be compared are selected, the market-based approach provides the value of the subject company by relating the value of the comparable companies on the basis of the particular aspects compared. For example, if comparable companies have recently sold for 5x EBIT, the subject company's value should be about 5x its EBIT, and if comparable companies have recently sold for 2x book value, the subject company's value should be about 2x its book value. It may be helpful as well to calculate a weighted average of several criteria, like the following example:

	Sales to Price Ratio	EBIT to Price Ratio	EBITDA to Price Ratio	Book Value to Price Ratio	Total Weighted Value
Average of Comparable Companies	0.5	6	4	2	
	Subject Company's Sales	Subject Company's EBIT	Subject Company's EBITDA	Subject Company's Book Value	
	\$50,000,000	\$5,000,000	\$6,000,000	\$10,000,000	
Derived Value	\$25,000,000	\$30,000,000	\$24,000,000	\$20,000,000	
Weight	20%	20%	40%	20%	
Weighted Value	\$5,000,000	\$6,000,000	\$9,600,000	\$4,000,000	\$24,600,000

#### Conclusion

For a buyer, valuing a company is not, and should not be, merely a rote exercise of applying one formula to one set of financial criteria. Aside from the critical decisions an individual buyer must make before purchasing a small business, such as whether or not to give up the stability of a steady paycheck as an employee to work inevitably harder and longer hours running a business and his or her capabilities of managing the business successfully, a buyer of any type or size of business should also fully investigate the financial health of the proposed business, including trends in its financial situation over time as well as overall industry and macroeconomic trends, and the health of the relationships with the company's customers, suppliers and key employees. Even a limited dose of common sense would indicate that a buyer should not pay the same price for two companies with the same current EBIT if one company's EBIT has been growing 20% per year for the past five years and the other company's EBIT has been declining and interviews with its customers suggest problems with the quality of the company's products or services. A professional valuation of a company may certainly prove valuable, but that should not take the place of a thorough due diligence investigation of the subject company and the application of common sense.

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Steven D. Siner