

# Every Software Company Owner Wants to Know: How Much Is My Company Worth?

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Every business owner wants to know "What's my company worth?" In addition to a natural curiosity about the value of our companies, we need knowledge about our company's value to make decisions about taxes, employee stock options, business plans, mergers, acquisitions, and strategic alliances.

The most difficult part of valuing a company is understanding that the process is very subjective and varies depending on the purpose of the valuation. Valuations performed for tax purposes, financial reporting purposes, divorces, or a merger or acquisition could all result in different value conclusions about the worth of the company. Valuations performed for different purposes are controlled by different guidelines. For example, tax valuations are controlled by the tax code and regulations, IRS pronouncements, and tax court opinions, while valuations for divorces are controlled by state laws and family court decisions, which vary from state to state.

Whereas, valuations for tax purposes envision "hypothetical buyers and sellers" who have no synergies and no special compulsion to make a deal. In merger and acquisition transactions, synergies and various pressures to make a deal frequently enter the picture. Prospective buyers and sellers often arrive at very different ideas about the value a company because they approach the company from different perspectives and have conflicting goals. Deals are completed when both parties can arrive at a win-win value conclusion.

Value conclusions for software companies largely depend on qualitative, not quantitative, analysis of the company. The story behind a financial metric is more important than the actual numerical result. This story includes all the underlying factors such as market synergy, technology, patents, distribution, user base, and the management team.

The buyer who will normally pay the most for your company is the one with the most synergies, the one for whom the purchase of your company will generate the most sales and earnings. This is why earnings focused valuation methods, especially discounted cash flow models, are used most often.

There are nine methods commonly used to value software companies. Two methods are focused on the company's assets, five methods are focused on similar or comparable companies, and two methods are focused on the earnings or cash flow generated by the company. The methods are:

- Earnings Focused Value Methods
  - DCF – Discounted Cash Flows
  - Free Cash Flow
- Asset Focused Value Methods
  - Replacement Value
  - Liquidation Value
- Market Focused Value Methods
  - Internal Transaction Price
  - Public Company Revenue Multiple
  - Private Similar Company Earnings Multiple
  - Public Company Earnings Multiple
  - Private Similar Company Revenue Multiple

Many in the industry discuss two additional methods. However, they are probably the methods least used by professionals in the industry and can be misleading about a software company's real value. The first method is the company's book value on its financial statements. It is typically misleading because it does not reflect any of the company's intangible assets or the company's potential in the future.

The second method is based on "Rules of Thumb," for example, a prescribed multiple of revenue. A prescribed multiples of revenue assume that all software companies are homogeneous and have the same profit structures, quality of technology, and future potential. As a result, rules of thumb should be used with great care or, even better, they should be avoided.

### Earnings Focused Methods

In the merger and acquisition world, the earnings focused methods are the most common methods utilized. These methods are highly sensitive to their underlying assumptions. Therefore, careful analysis should be used to understand and support any assumptions used in the method's development.

#### *Free Cash Flow Model*

The free cash flow model has two variations, but both are based on the company's cash flow. The first variation uses a rule of thumb that a company is worth three to eight times its cash flow represented by EBITDA (earnings before interest, taxes and depreciation and amortization). The valuation process starts with a multiple of approximately four to six times EBITDA and is adjusted upward or downward based on the qualitative aspects of the company. In this variation, it is assumed the investor will be happy receiving his/her capital back in three to eight years depending on the risk assumed.

EBITDA Rule of Thumb Example:

#### Determination of EBITDA:

Net income:	\$400,000
Plus: Taxes	100,000
Plus: Interest expense	50,000
Plus: Depreciation and amortization	<u>250,000</u>
EBITDA	\$800,000

#### Determination of company value –

EBITDA	\$800,000
Times: Rule of thumb multiple, adjusted for qualitative aspects of the subject company	<u>5</u>
Indicated value	<u>\$4,000,000</u>

The second variation, often referred to as the leverage buyout (LBO) model, is based on the company's free cash flow or net free cash flow. Free cash flow is defined as:

Start with:	Net income
Plus:	Taxes
Plus:	Interest expense
Plus:	Depreciation and amortization
Plus:	Increase in debt (or less decrease in debt)
Less:	Capital expenditures
Less:	<u>Increase in working capital (or plus decrease in working capital)</u>
Equals:	Free cash flow

In this model, the investor assumes that the company's worth is equal to the down payment plus the debt that the free cash flow will support after reserving some of the cash flow (typically 5% - 15%) as a margin for error.

LBO example:

Determination of annual free cash flow –

Net income:	\$400,000
Plus: Taxes	100,000
Plus: Interest expense	50,000
Plus: Depreciation and amortization	<u>250,000</u>
EBITDA	\$800,000
Less: Capital expenditures	(50,000)
Less: Increase in working capital	<u>(30,000)</u>
Net free cash flow	\$720,000

Determination of annual amount available to service debt –

Times: Portion available for debt repayment	<u>85%</u>
Amount available to service debt	\$612,000

Determination of supportable debt –

Interest rate	9%
Repayment period	6 years
Present value of amount available to service debt (supportable debt)	\$2,745,400

Determination of company value –

Down payment assumed (approximately 30%)	\$1,200,000
Plus: Supportable debt	<u>2,745,400</u>
Indicated value	<u>\$3,945,500</u>

As can be seen in either variation, the free cash flow model is based on several very broad assumptions (including no debt assumed by buyer) and can easily be varied by either the buyer or seller. For litigation and tax valuation purposes, the free cash flow model is more often used as a sanity check for a value conclusion, than as a valuation model.

***Discounted Cash Flow***

Discounted cash flow (DCF) is the most common method used in mergers and acquisitions and is being used more often for other valuation purposes, especially for larger companies. Without a doubt, this is the best method for a buyer to use.

In this method:

- The value of the company is based on the free cash flow to investors, expected to be generated in the future.
- The value is the sum of the net present values projected for future years (normally 3 to 5 years) plus the value of “continuing operations” after the projected period.

This method is frequently the only method applicable to companies in the start-up stage and to companies expected to have extremely high growth rates driving even larger growth in their profit margins. The difficulty in using this method primarily relates to determining the risk that the company will not achieve its projections. The old adage that the higher the risk, the higher the return, really applies in the DCF model. Thus, the greater the risk of not achieving the projections the higher the required return required (discount rate).

Discount rates applicable to DCF models for most software companies will vary from 20% to 70% depending on the risk to be assumed by the investors. The better management can support the projection's assumptions, the lower the discount rate required and the higher the value indication for the company.

Management needs to pay particular attention to assumptions concerning:

- The potential user base and its size;
- The justification for how the company expects to achieve projected growth;
- The historical growth rates (if product is being shipped) and the reconciliation of these rates with projected growth rates;
- The sales and marketing costs required to achieve the projections;
- The company's infrastructure and its ability to support the projected growth;
- The future research and development costs required to continue the development and enhancement of the products' features.

A simple DCF model can be illustrated by the following example:

Revenue Growth Rate	1.1	1.1	1.1	
	Year	Year	Year	Continuing
	1	2	3	Operations
Revenue	3,200,000	3,520,000	3,872,000	4,259,200
	20.0%	20.0%	20.0%	20.0%
Net Income	640,000	704,000	774,400	851,840
Plus:				
Depreciation	250,000	225,000	200,000	200,000
Less:				
Changes in Debt	75,000	75,000	75,000	75,000
Changes in Working Capital	30,000	32,000	35,200	38,720
Capital Expenses	100,000	125,000	150,000	200,000
Net Free Cash Flow	685,000	697,000	714,200	738,120
Value Multiple				8
Value of Continuing Operations				5,904,960
Present Value Factor @30%	0.76923	0.59172	0.45517	0.45517
Present Value	526,923	412,426	325,079	2,687,735
Total Present Value				3,952,163

The DCF model should be applied by an experienced practitioner familiar with its many variables and complications. The illustration above is a very simple format which does not consider many issues, such as should the model be developed on an equity basis or on a debt free/invested capital basis.

## **Asset Focused Methods**

Every investor is concerned about the value of the booked or identifiable assets to be acquired. The more tangible the assets (real property and equipment) the less risk an investor generally considers they are assuming. Goodwill or blue sky is generally considered to have the highest risk of all assets purchased. If the identifiable assets are valued then the investor can quantify what portion of the purchase price is supported by the highest risk assets (goodwill/blue sky).

Two asset-focused methods are generally considered when valuing a software company. They are the replacement cost method and the liquidation value method.

### **Replacement Cost**

The replacement cost method is based on the assumption that the company is worth what it would cost to replace all of the company's identifiable assets. Replacement cost values tend to be most useful in two situations:

- First, for young software companies, with few, if any, sales, user base or dealer base. This may be the highest value indication possible when the primary investment has been in the technology or product.
- Second, in a company with an operating history which does not reflect its investment (time and money) in its product. The company maybe making a major business model change in its platform, versions or distribution channel.

Tangible assets can generally be estimated from the costs of purchasing a comparable replacement item, but the technology is generally more difficult to value. Most often the starting point for software value is the cost to recreate. The cost is generally computed in dollars per labor year to create or dollars per line of executable code. One of the more advanced methods to determine software development costs is the CoCoMo II Model developed at the University of Southern California.

The problem with the replacement cost method is that it does not reflect the loss in value, because of the time-to-market delays. Valuable windows of opportunity will probably be lost, by any party recreating the software.

This method is most often used when making buy (acquisitions) versus make (create it ourselves) decisions. Obviously, the time to market and lost opportunity costs are a major part of the decision.

### **Liquidation Value**

The second asset-focused method is the liquidation value. Liquidation value is the value of the individual assets if the company were to be liquidated today.

Again these values are easier to obtain for the tangible assets than they are for the intangible assets, including the technology. Often in a liquidation scenario, the technology/software may have no practical value. This method generally produces the lowest value for the firm. Liquidation value should not be used unless the company is considering liquidation.

## **“Market Focused Methods”**

Market focused valuation methods are based on the concept that a company's value is equal to the price that an investor would pay for a similar company or investment. There are five market focused methods normally used in valuing software companies.

In recent studies of publicly-traded software companies, we found the highest statistical correlation to the price to book value multiple. This is counter intuitive and not accepted by most professionals, but merits additional study and may be a useful method in certain situations.

### Internal Transaction Price

The first market focused method is the internal transaction price. This method assumes the stock's current price should at least be equal to the last price paid for the company's stock or the last transaction price.

The last transaction may have been a sale of company stock, or the price at which incentive stock options were granted. The company's value is determined by multiplying the stock price by the total number of shares outstanding.

This method in the negotiation process is often referred to as a "negotiating floor value." The analyst should carefully consider if the transaction price paid was an arms-length transaction or a bargain price which was utilized to accomplish another purpose. Another issue to be considered is changes in the company which would affect its value since the transaction took place.

### Public Company Revenue Multiple

The second market focused method is the public company revenue multiple. This method looks at public software companies and calculates a revenue multiple by dividing the public company's market capitalization by its revenue. For example, if a company had a market capitalization of \$10,000,000 and revenues of \$3,000,000, its revenue multiple of 3.33 times.

Company market capitalization (same as in the revenue multiple calculation)	10,000,000
Company's latest 12 months revenues	3,000,000
Revenue multiple	<u>3.3 x</u>

This method is most often used because of its simplicity, but its simplicity comes with difficulties in its application. In order for the revenue multiple to be applicable, it assumes the various companies produce the same or similar profit margins and cash flow. Would you pay the same revenue multiple for a company that produced \$.40 profit for each dollar of sales and one that produced \$.20 profit for each dollar of sales?

In addition, comparability in the size of the market place, growth rates, market penetration, user base, and distribution channels must be considered, as multiples of revenue paid by investors, are based on many factors.

Experience shows us that private companies normally have lower revenue multiples than public companies. These lower multiples result from the fundamental differences between public and private companies. These differences result from public companies typically having more access to investment capital and financing, depth of management, larger revenue bases and many other advantages over private companies.

These private company multiple differences are generally adjusted for by various means, such as fundamental adjustments, size adjustments, and/or growth rate adjustments. In the software M&A world, the fundamental discount is often used for its simplicity. A simple valuer's subjective discount is applied to the multiple, thereby lowering the public company value indication by the discount percentage. Fundamental discounts are generally considered to begin at 25%. Although the fundamental discount is used in the software M&A world, other adjustment methods are more commonly used for tax and litigation valuation purposes.

## Private Company Revenue Multiple

The private company revenue multiple method is very similar to the public company revenue multiple method. The primary difference is that instead of the multiple being derived from the publicly traded stock prices, the multiple is developed from transactions that took place in the merger and acquisition world. The transaction price is divided by the companies revenue to derive the revenue multiple. The primary advantage of the private company revenue multiple is that there are no fundamental differences between the private transaction companies and the company being valued.

The advantage is offset by the difficulty in obtaining objective data about the transactions compared to the readily available financial data for public companies. Using professional assistance from the valuation or M&A world will generally provide the most efficient means for obtaining relevant multiples applicable to a particular company.

## Public Company Earnings Multiple

The public company earnings multiple is very similar to the revenue multiple, except it compares market capitalization to some level of company earnings. The concept behind using a multiple of earnings is that earnings more effectively reflects the difference in the return to the investor between companies than the revenue multiple. This method has two primary considerations, first the earnings period that most represents the company and the level of earnings to use in computing the multiple. The most common earnings period used is the latest twelve months, but based upon the particular situation it may be more appropriate to use: the prior year, the last fiscal year, or the next year as projected.

The appropriate level of earnings has been hotly debated. Price to net income is the most popular, but so many companies (including a little over 50% of public software companies) do not have a positive net income. Other levels of income to be considered are pretax earnings, gross cash flow, earnings before interest and taxes (EBIT), and earnings before interest, taxes, depreciation and amortization (EBITDA). The earning multiple is computed as follows:

Company market capitalization (same as in the revenue multiple calculation)	<u>10,000,000</u>
Company's latest 12 months earnings	<u>1,250,000</u>
Earning multiple	<u><u>8 x</u></u>

Another difficulty is using an earning multiple is that a private company's financial statement may not reflect the company's true earning potential. Often the financial statements need to be restated as they are artificially low. Earnings should be increased by the amount of royalties paid to the owners, excessive salaries and benefits (in excess of fair market value) paid to the owners, excess rent on facilities leased to the company and any other similar expenses recorded in the company's financial statements. Each of the historical years financial statements (up to 5) should be restated as follows:

Net Income	649,000
Add back taxes	432,667
Earnings before taxes	1,081,667
Restatements	
Royalties paid to owner	80,000
Excess rental payments	35,000
Excess compensation	150,000
Restated earnings before taxes	816,667
Restated taxes	<u>326,667</u>
Restated net income	<u><u>490,000</u></u>

Application of the earnings multiple would look like:

Restated Net Income	x	Earnings Multiple	=	Public Company Multiple Value Indication	x	Fundamental Discount	=	Value Indication
490,000	x	15	=	7,350,000	x	50%	=	\$3,675,000

Valuers should remember, that just like when using the public company earnings multiple a discount for the fundamental differences between private and public companies should be applied to the public company earnings multiple value indication.

### Private Company Earnings Multiple

Like the private company revenue multiple, the earnings multiple is derived from transactions that took place in the mergers and acquisition world. The earnings multiple is computed by dividing the transaction price by the appropriate earnings of the company.

The earnings multiple developed from private company transactions is not subject to the fundamental or other adjustments applicable when using a public company earnings multiple.

The most difficult part of using private company multiples especially multiples other than a revenue multiple, is finding reliable data to use. Today, there are several information providers who collect private company transactions data for analysis. Check with your professional appraiser or M&A professional, who have access to this data.

Although this method is not typically used by software M&A specialists, it is very commonly used in valuations prepared for tax and litigation purposes.

### Conclusion

Every company has varying value indications resulting from: the valuation methods selected, purpose of the valuation (tax regulations, court precedents, etc.), synergistic benefits considered, or if valued for total ownership or partial ownership. The company owner must understand that the company will have different values if valued for different purposes and that the value changes over time, even if the company is basically the same.