

## VALUATION OF HIGH TECH COMPANIES FOR BANKERS

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About 100 years ago, Oscar Wilde defined a Cynic as "A Man Who Knows the Price of Everything and the Value of Nothing." Since then, there have been a lot of changes, and I personally aim to be the exact opposite of Oscar Cynic. I can reach a conclusion as to the value of just about everything, but, according to my partner, don't know the price of anything, except of course the minutest fluctuations in the price of President's Choice Decadent Cookies.

What can the Valuator give to the Banker? The accountants produce numbers, the lawyers the words, and investors the equity. What else is there to do? My job is to give you piece of mind. Intellectual insurance based on the basic principle that everyone feels more comfortable when they have a report from somebody qualified and independent setting out the facts in the appropriate content and reaching a conclusion as to the value.

As a person giving such insurance, I have to be a professional sceptic, examining and checking everything I am told. At the first meeting with a new client, I ask for only two things: the truth and our retainer. If necessary, I will accept only the retainer because eventually the truth will out.

According to Oliver Wendell Holmes, ALL VALUES ARE ANTICIPATIONS OF THE FUTURE. A wise and clever man that great US Judge was not an American relative of Sherlock's. However, his comments is even more applicable today, at a time of accelerating rates of change.

What does my firm look at in valuing a high tech company?

1. Most assets of High Tech Companies are intangible items.
2. As long as the company continues to be a going concern, these intangible items have a valuing use, which is often substantial.
3. Should the company cease business, the liquidation value is minimal.
4. In general, high tech companies consume substantial capital in their early stages.
5. Gross margins are high, but so are marketing costs. In general, it will cost at least twice as much to launch a new high tech product as it does to develop it; the ratio is even greater in the case of software programs, where buying shelf space and channel position can be prohibitive.
6. There are at least seven generally accepted methods for valuing software and software development companies. Most of these can also be used for other high tech entities.
  - a. A multiple of revenues;
  - b. Capitalization of Net Income (Net Income Value);

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- c. Capitalization of EBDIT (Earnings Before Interest, Depreciation, Amortization and Taxes);
  - d. Replacement Value (reflecting total costs to replace both the technology and the customer/dealer base, including an allowance for the time necessary for the replacement, and the length of the window of opportunity);
  - e. Net Worth/Goodwill Value (book value adjusted to reflect the going concern value of all tangible and identifiable intangible assets, together with the liabilities, plus an estimate of the Goodwill usually based on the excess earnings approach.
  - f. Transaction Based Value. This uses transactions in securities of similar companies, sales of comparable software and any internal transactions in the shares of the company;
  - g. Discounted Cash Flow Value. The traditional projection period of five years has to be substantially reduced for high tech companies. I believe that beyond three years, one is only guessing as the life cycle of a high tech product is perhaps three to four years for hardware, and two to three years for software.
7. The most common approach is a multiple of revenues. According to a survey of Venture Capitalists by QED Research Inc., Palo Alto, CA, they valued their investments using revenue multiples that varied with the rate of growth in revenue.

<b>Revenue Growth</b>	<b>Mean Multiple</b>	<b>Median Multiple</b>
50%	1.4 X	1.2 X
100	2.2	1.5
150	2.9	2.0
200	3.5	2.5
250	4.3	3.0
300	5.0	3.5

8. Net Income Value is the second most common for high tech companies and the general standard elsewhere. The two key factors are: What are the earnings? and, What is the appropriate multiple?

The adjustment of earnings of private companies to reflect appropriate costs must be second nature to an experienced banker. However, while companies in many industries need to be adjusted for excessive management salaries and personal items, such as maids on the payroll. For high tech companies, the situation is often the opposite. The owners, in many cases, do not take competitive salaries, as they are relying on sweat equities as an important source of finance.

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Multiples in publicly traded software companies range from 10 times to 50 times earnings. For private companies, the range is much less. In part, because of the lack of liquidity discount which, in the United States is about 43% and, in Canada probably more. Another way of looking at this is to say that any company increases in value by 75% once it has access to capital through a public market for its securities.

High tech private companies usually sell from 10 to 20 times trailing 12 month earnings, i.e., their capitalization rates range from 5.0% to 10.0%. I find it much easier to compare capitalization rates, adding or subtracting premiums for various risks than to compare price earnings ratios. I strongly recommend that you consider this.

In comparing companies in the high tech field, we look at ten risk areas and the growth rate. The risk areas are:

- Management
  - Size
  - Capitalization
  - Product Range
  - Customer Diversification
  - Location
  - Environmental Impact
  - Industry Ease of Entry/Competition
  - Technology in Use
  - Profit Margins and Variability
9. Capitalization of EBDIT is based on the assumption that all the cash flow from operations is available for servicing debt and that a company is basically worth as much as a lender would advance against its cash flow. This method may be known to bankers from the leverage buy-out transactions of the 1980s, when this was the most common, if not at times, the only method adopted.
- The classic multiples are 3 to 8 times projected EBDIT for the next year, with the average for software development companies being about 5 to 6 times.
10. Replacement value is much harder to determine for a high tech company than for an industrial enterprise. There one considers both the reproduction cost, which is to build the same plant again and the replacement cost, which is to create the same productive capacity using the latest technology. For high tech companies, replacement value is one of the most

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difficult but important approaches. It is particularly significant for a young software company or any firm that has a substantial investment in proprietary technology.

A young company may not have much in the way of sales, customer base, or dealer organization, but they could have spent an extraordinary time and energy in developing a significant proprietary capability in their product. Thus the replacement value might be key factor because a limited operating history prevents other methodologies being applied.

One proxy for replacement value is to use a multiple of the R & D expenditure to date, whether capitalized or expensed and without deducting any grants or other government assistance. The normal multiple for successful software is 3 to 5 times development costs. This reflects the fact that for successful companies R & D is only a small proportion of the total replacement cost, which includes the customer base, the marketing organization, the brand name, and the future plans. In addition, there is a critical issue of time to market and the window of opportunity until a competitor jumps in with both feet.

11. Net Worth/Goodwill Value is often overlooked. As I mentioned previously, we restate assets and liabilities to their going concern value and then look at any identifiable and tangible items, such as software, patents, trademarks, licenses, and, finally, we add and estimate of the goodwill, which exists for nearly every company.

Our approach is based on dividing the Sustainable Net Income into the portions arising from tangible assets which are easily valued and against which the liabilities are allocated to give the tangible Net Worth, the identifiable and tangible items such as those listed above, which in many cases can be valued by some form of implicit royalty, and, finally, the excess earnings which arise from the Goodwill.

In estimating the portion of Sustainable Net Income relating to tangible Net Worth, we normally use 85% of whatever Capitalization Rate has been established for the Net Income Value. To obtain the second tranche from the identifiable and tangible items, we use a rate of 125% of the Capitalization Rate. To give the Goodwill the final portion of the Sustainable Net Income is capitalized at 150% at the Capitalization Rate.

12. Transaction Based Values are very important. They reflect the real world as opposed to the notional world constructed by valuers aided and abetted by Revenue Canada. We track a number of public companies in the software field and, where possible, private companies. We also access other people's databases and look at reported mergers and acquisitions. It is also absolutely essential to look at any transactions in the company's shares which can help establish a minimum value.

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13. Discounted Cash Flow Values are intellectually the most appropriate for high tech companies and if you can solve the quality problems with respect to the Financial Projections they are the most satisfactory. We use them all the time, but don't necessarily believe the client's projections. Somehow or another, their Revenue Forecasts have an annoying similarity to a hockey stick and margins constantly increase with sales per employee, sometimes exceeding those of Microsoft.

Our approach is to use three years of projections, massage them so that they are reasonable, and apply a high Discount Rate (30 - 50% after tax) to the Projected Cash Flow. For the Terminal Value, we are very conservative and use 1.2 to 1.3 times the third year's revenue.

14. Finally, you must put the pieces together. For this, the weighted average seems the most satisfactory with the greatest weight being given to the Discounted Cash Flow Value (around 30%), and the lowest to the Net Worth/Goodwill Value about 10%.

THANK YOU