

THE ROLE OF THE VALUATOR IN FINANCINGS

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About a hundred years ago Oscar Wilde defined a cynic as "a man who knows the price of everything and the value of nothing." there have been some changes since then, and I personally am the exact opposite of Oscar Wilde's cynic. I know, or am able to reach a conclusion as to the value of just about everything, but, according to one authoritative source, don't know the price of anything; except, of course, the most minuscule fluctuations in the price of president's choice decadent chocolate chip cookies.

How is that done? What do I do? My children used to explain that as "dad talks on the telephone and writes reports". But how would this help the entrepreneur? After all, the accountants produce the numbers, the lawyers the words, and the investors the money. What's left to do?

The real answer is that I give peace of mind! Intellectual insurance, based on a couple of basic principles: every investor wants to avoid paying too much, and every entrepreneur wants to avoid leaving money on the table. They feel much more comfortable when they have a report from somebody, qualified and independent, setting out the facts in the appropriate context and reaching a conclusion as to the value of software, patents, manuscripts, technology, a company, some share, even an idea.

As a person giving such insurance, I have to be a professional cynic, examining and checking everything I am told. When I get a new client, in our first meeting I ask for only two things: the truth and our retainer. If the worst comes to the worst, initially 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, the great us judge was not an American relation of Sherlock's, even though he, Oscar, and the famous detective were roughly contemporaries at the end of the last century; at that time the pace of change was slow and certain truths were assumed to be eternal.

With the notorious assistance of two global wars, along came the modern world with our accelerating rate of change, especially in technology. We can no longer expect solid continuity proceeding at the tempo of a pachyderm, but must almost look into a crystal ball in determining values, and anticipate what will happen next. Usually we look at several alternatives, giving each an appropriate probability. In considering the future, we must remember, in the words of the Mexican philosopher Octavia Paz, "the supreme value is not the future but the present".

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And yet, it is precisely the past that has great influence on what I do at present. When I prepared my first valuation in 1959, I used a slide rule and log tables; today a DX66 sits by my desk. This machine has more power and a lot more memory than the IBM 1402 mainframe for which I wrote simple FORTRAN programs in the early 1960's. Allowing for inflation, it costs very little more than the \$600 I paid for my first electronic calculator in 1970. Was I glad to get rid of that damn slide rule!

Now to a bit of theory. The key assumptions underlying any valuations are that the value of a business or asset reflects:

1. Each party has other alternatives in any contemplated transaction.

This is known as the principle of alternatives and simply means that if the seller doesn't like the price offered, he can wait. As shown by the second principle, the buyer always has the option of going elsewhere.

2. The cost of acquiring an equally desirable substitute.

This is known as the principle of substitution, and stresses that every buyer has a wide choice of investments. Obviously there are certain special purchasers for any asset or business. For instance, these may be the direct competitor, and are normally excluded in determining "fair market value", the most commonly used measure.

3. The present value of the anticipated future benefits available for the owners.

This is the principle of benefits where we start looking into the future. The anticipated benefits state not only the immediate returns in cash and perks, but also the gain on an eventual sale. As the owner will be receiving a stream of benefits over a considerable period; the time cost of money as well as the risks must be considered. These are reflected in the discount rate used to determine the present value.

To put it another way:

$$\frac{\text{value} = \text{return}}{\text{risk}}$$

Enough of theory, let's go back to the real world. I spend a lot of time looking at what is likely to happen, making rational projections as to the most probable results and the associated risks. The hardest part is to avoid the trap of treating the future as a continuation of the past.

- a trend is a trend

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- until it must end
- and it always does

My major doubts usually relate to management's forecasts of sales, profits, and cash flow, which are generally far too optimistic. Sales, profits and especially cash flow are the lifeblood of the anticipated benefits.

Now I am going to show you how some of us spend long week-ends; with the weather absolutely perfect, I sat behind my computer and completed a draft valuation report of a new high tech company. As so often happened, someone, somewhere, naturally anonymous, had made a mistake and our firm was informed only on Sunday that the deal would crater if our report was not at the lawyer's on Tuesday morning. The overhead sets out the actual numbers for sales and pre-tax profits or losses by quarter projected by the management.

Quarter Ending	Sales \$000	Profit/(Loss) \$000
March 1994	0	0
June 1994	0	0
Sept. 1994	355	(5)
December 1994	<u>530</u>	<u>16</u>
Year 1994	855	11
March 1995	1,280	152
June 1995	1,880	308
September 1995	2,580	473
December 1995	<u>3,433</u>	<u>700</u>
Year 1995	9,173	1,633

Source: Management Projections

Look at those numbers! Management expects a trebling of quarterly revenues between the first and last quarters of 1995, accompanied by a four-fold growth in profits. Would you believe them? Frankly, my associate working on the project, nor I did. In fact, we considered that only a 5% probability exists they would be achieved and were forced to come up with our own projections.

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Quarter Ending	Sales \$000	Profit/(Loss) \$000
March 1994	0	0
June 1994	0	0
September 1994	100	(48)
December 1994	<u>375</u>	<u>(4)</u>
Year 1994	475	(52)
March 1995	375	(15)
June 1995	775	54
September 1995	750	51
December 1995	<u>800</u>	<u>60</u>
Year 1995	2700	150

Source: CVS Projections

And all this time you have been wondering why a valuator like me, with such a wholesome, fresh face would be a cynic.... Let's look at where we can actually get useful information. There are basically only two approaches to determine the values of a business or asset.

1. Adjustment of prices obtained from actual transactions.
2. Financial analysis using the tools of the investment dealer, such as price earning ratios.

Transaction based values have two advantages:

- they reflect the real market
- they use actual sales

However, the disadvantages are substantial:

- while U.S. databases exist, Canadian information is sparse
- each transaction is different from every other transaction. Therefore, actual sales data may need major adjustments to be comparable

The difficulties of obtaining timely comparable data, make use of transaction based values much less common than most valutors would like, and this is especially true in the complex world of intellectual property.

We are therefore forced to use investment based values.

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- they are easier to determine
- they can specifically include all risks

However, there are some serious disadvantages:

- they relate to a notional market
- they often rely on projections which are intrinsically unreliable, no matter how carefully done

The first version of this speech ran for forty pages, had 17 overheads, and would have been on nearly the same level as the world's best soporific. I wanted to tell all, about the woodstove producer we valued, about the little cheesemaker, a turkey farm, an upholstery manufacturer; but, as this is a high-tech seminar in the midst of Markham, I limited my comments to valuing software, one of my firm's specialties, and growing by leaps and bounds. In the last year, our valuations gave so much comfort to investors that they committed over \$25 million to software financings.

The wise choice of location should perhaps be mentioned here; the name "Markham" goes back to the late eighteenth century; the town is named after a dignitary adhering to an equally abstract, but equally promising idea, that had as long a run as software is likely to have: William Markham was archbishop of York for thirty years, but of course, the church of England has been around a lot longer.

The software industry has grown because it provides solutions to more and more business problems, which is a prime example of the current, exhilarating rate of change. A ruthless but succinct way of putting it would be that it demonstrates the creative destruction of old industries by new technology. Joseph Schumpeter, the founder of the Austrian school of economics, and later a professor at Harvard said:

"...in capitalist reality, as distinguished from its textbook picture, it is not (price) competition which counts but the competition from a new commodity, the new technology, the new source of supply, the new type of organization..."

All of these are aided by software.

To make things even more appealing, selling prices of software are constantly declining along with the costs of hardware. IBM has just introduced new pricing policies for its mainframe systems, and quantity discounts, site licenses, and other bulk arrangements are becoming commonplace. In the pc shrink-wrapped market, the situation is chaotic. Effective the end of June, Microsoft will no longer have list prices, and retailers can sell for whatever price they can get.

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Yesterday, I called around to check the price of Microsoft word 6.0, which has a list price of \$666.00. The lowest I was quoted was from a mail order shop at \$50.00; the highest was a computer store around the corner from my downtown office, which wanted \$130.00 for an upgrade, and \$399.00 for the new user. This last price was particularly weird, as for \$329.00, they would sell me Microsoft office, which includes excel 5.0, and PowerPoint 4.0 as well as word 0.6; from the mail order dealer, this package cost \$175.00. It takes a lot of ongoing support to justify such enormous differences.

Not only are prices going crazy for pc software, but merger mania is breaking out throughout the North American industry also has an influence. In the first three months of 1994, Novell announced it was acquiring WordPerfect; Adobe and Aldus got together to control the high end desktop publishing field; the combination of Symantec and central point will ensure domination of the utilities market, while electronic arts expanded its educational line by buying Broderbund.

In addition, several well financed outsiders entered the pc software market through acquisitions. Pearson plc is in the process of acquiring software Toolworks; EDS, a subsidiary of general motors, will add Peachtree, while Reuters, the worldwide electronic distributor of news and financial information, is going to absorb reality technologies.

To show you my absolute impartiality, let me assure you, including all of today's speakers, that I have not been involved in valuing any of those companies.

In light of these developments, the declining prices and growing consolidation, the question arises as to what a software business can do to maximize its value.

The first and most important criterion is to be in a high growth sector. All opportunities arise from problems, so my first piece of advice is: "find a software solution to a huge problem," and in doing so, you will become what I describe as a large-'p' company", and the world will flock to your door....

Investors and acquirers will always pay a premium if the company has enormous potential, even if no real results have yet been achieved. At the moment, I see three large-"p" segments of the software industry.

- speech recognition
- imaginative multimedia
- telecommuting

The first two are reasonably well known. Speech recognition is on the way; the technology is well known, but the necessary computing power is lacking. This should arrive with the P6 chip, the

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next generation from Intel. Multimedia is the flavour of the month, but most manifestations are not visually appealing. Telecommuting, however, is not much discussed - yet! And by the way, I did value a number of us multimedia titles.

The enormous effect of the existing rudimentary telecommuting activity can be seen in the building on Bay Street in which we have our offices; it has half its floors unoccupied, and there is space available in each of the attractive four bank complexes at King and Bay. More and more, people manage to work out of their homes, cutting down on overhead while still able to communicate as required.

By the end of the century, in just over five years, I am convinced that a significant portion of the knowledge workforce will be telecommuters. This does not only include professionals, but also skilled technicians, such as the miners who recently demonstrated the operation of underground equipment in Sudbury from Toronto, courtesy of Bell Canada.

In addition to a large 'p' market, the other important factors for a software company are:

- the elegance of the solution ('s');
- this represents two distinct factors:
- the chosen technology ('t') and
- the intended delivery mechanism ('d')
- the ability of the management ('a')

A key determinant of the ranking of any technology is its degree of protection or non-duplicability. Something that can be patented or otherwise protected is worth an immense premium, but there is not much need for 'ja' (just another) solutions; these types of enterprises get a zero ranking for 't'.

The delivery system is also important. The production and distribution costs of floppy discs and printed manuals are such that distribution of software through CD-ROMs has now become cost effective. There is a universe of over 4 million CD-ROM equipped PC's and Mac's out there, growing at over 50% a year.

The ability of management is the last, but by no means the least of the factors affecting the returns from a business. The team needs a well balanced mix of skills, with experience in the industry, demonstrated enthusiasm, stamina, and the ability to recover after a series of whammies.

These relationships can be expressed in a formula:

return is related to: $2p \times (t + d) \times 2a$

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By ranking each factor on a scale of 1 to 10, expressed in units of 0.5, this formula, which has a maximum value of 1,000, can be used to give a rough and ready comparison of the likely return from any new economy, business, or asset.

Finally, to turn to risk. The five primary risks for each major product of a business are set out below

- Development: can the desired product be developed in the planned time
- Production: can it be delivered at an acceptable cost
- Marketing: can it be sold to enough customers at an adequate price
- Business: can everything be done with the funds available
- Growth: how fast can it grow

We also consider the following ten secondary risks for every business:

- Size: is the company large enough to survive adversity? What is the relative size of the direct competitors
- Capitalization: is the debt/equity ratio appropriate for its stage of development? Is the cost of capital comparable with that of thee competitors
- Product range: is it a balanced product range? How much of the profits come from the largest selling items
- Dependence: is there any significant dependence on a single customer or a key supplier
- Location: is the location appropriate considering the markets, shipping costs and availability of experienced employees
- Environmental: are there any adverse environmental impacts, even though all current activities may have the necessary approvals?
- Ease of entry: how easy is it for a new competitor to enter the industry?
- Profit margins: are profit margins comparable with those of competitors?
- Cost structure: what is the impact on profits of a 10% decline in revenues?
- Regulatory: to what extent is the industry now regulated or likely to be so in the future

You may be able to develop a brilliant piece of software flying by the seat of your pants, but if you don't take into consideration all the risks and manage to control them, you'll never get to fly the Concorde. As was said before, we don't know how to fly the Concorde either, but we know what you must do to get there.