VALUING GROWTH COMPANIES - PART II OF III

James P. Catty

In view of recent events, growth in most industries cannot be expected to take place at the same rapid rate as it has over the past decade, but new technologies will continue to arise and result in growth companies, which at some stage or other must be valued. It is very important to keep in mind that with present uncertain-ties, money must be spent wisely in order to achieve growth in revenues and protect profit margins.

Other Multiples

Today, in many technology-oriented industries, especially software, capital expenditures in the form of R&D are written off as incurred, as required by GAAP. The same is true for many other growth companies, where large amounts are spent on marketing to create the Customer Base, which is a significant contributor to a firm's value. In both cases, substantial losses are the result.

The following table shows the various profit levels of a business:

	Sales	
less	Cost of Sales	
	Gross Profit	
less	SG&A Expenses	
	Operating Cash Flow	(EBITRAD)
less	Research & Development	
	Business Cash Flow	(EBITDA)
less	Depreciation & Amortization	
	Operating Profit	(EBIT)
	Interest	
	Pre Tax Profit	(EBT)
less	Income Taxes	
	Net Income	

When there is no bottom line to which a multiple can be applied, many valuators have moved to a different profit level, such as: Sales, EBITRAD, EBITDA or EBIT. Of those, the most common is EBITDA, which is related to Enterprise Value ("EV" = the total of all debt, preferred shares and common equity at market values). One application of the EV/EBITDA Ratio is shown below, which, on a simplified basis, compares Emission (a communications firm) with Colline (a mining company).

$million	**Emission**	**Colline**
Net Income	(100)	50
Per Share $	(0.55)	0.33
Depreciation	500	200
Interest	400	150
Tax	-	20
EBITDA	800	420
Debt at Bank	5,000	2,000
Equity at Market	4,000	5,000
	9,000	7,000
PER	na	100
EV/EBITDA	11.3	16.7

This example shows that an exaggerated Price/Earnings Ratio can be-come a comprehensible EV/EBITDA ratio. Sometimes, such as in valuing software companies, it is preferable to go up one level and use EBITRAD, which also adds back R&D, if such costs are effectively capital expenditures in that industry.

From a strategic point of view, managers of Emerging Activities are right to keep spending on marketing, even though this results in accounting losses. By definition, such businesses are still in their infancy and anxious to achieve rapid growth. The general view is that enterprises which are the first to move into a market and are willing to back up their undertaking with sufficient funds, manage to capture the highest number of customers at the lowest cost.

Even though the Internet has speeded up many activities, it takes time to build a real business online. From its founding in 1985 until 1996, AOL did not make a profit. In 2000, with only modest earnings, it had a multi-billion dollar market capitalization based on a multiple of sales and was able to acquire Time Warner, the world's largest media company, to which the stock market had given a lower value. The essential question in such circumstances is how long an Emerging Activity should 'investment-spend' on market development and be willing to accept continued losses.

In the three segment model of corporate activity, Emerging Activities should be expected to become profitable after two to three years. Any additional investment funds should be allocated to Future Opportunities which may take up to five years to yield results.

Equity Cash Flow

In valuing a company, one must ask the basic question as to what this bundle of Existing Operations, Emerging Activities and Future Opportunities is worth. At other times, in particular

when dealing with joint ventures, partnerships or strategic alliances in which ownership of the activity is shared with other parties, a different question has to be asked, namely what would be the value of an equity claim on this bundle of operations and opportunities?

In valuing such enterprises, it is necessary to establish not merely the value of the activity as a whole, but also that of the company's interest. The usual way is to estimate its share of the expected cash flows and discount them at an appropriate rate. It is often referred to as the Equity Cash Flow ("ECF") method and is analogous to the "cash-on-cash" return used in real estate.

In this, both the cash flows and the discount rate differ from those of the traditional or APV approaches. The cash flows must include all fixed charges, such as interest and principal payments, and the discount rate must reflect the effect of the financial leverage. When leverage is high, the shares are effectively a call option on the business. If profits are achieved, the option is exercised by repaying some of the loans; if there are no profits, the firm will be reorganized and the debt-holders will obtain control, with the shareholders receiving very little - probably only for the tax losses which remain in the corporation.

Economic Value Generated

Many large, well-known companies do not generate any economic value for their shareholders. Siemens, the international electrical/ electronics giant, which has been around for 150 years, announced in 1999 that by 2001, it would have a positive EVG. Great faith is expected from the shareholders!

We consider EVG a management tool that:

- Measures the owners' benefits
- Accounts for the Cost of Capital
- Reduces effects of accounting differences
- Reflects creation or loss of wealth.

Profits are earned when a product or service is sold for more than its total cost of production. Economic Value is generated when a business has a cash return that exceeds the total cost of the capital employed (often called the Capital Charge). The cash return is net revenue less: cash operating costs, maintenance capital expenditures, and taxes paid on operating profits. The Capital Charge is the total capital (both debt and equity) employed, multiplied by the desired after-tax rate of return.

EVG applies to any operation; let us look at a convenience store, which is essentially a cash business:

	$'000
Sales	180
Cost of Sales	105
Gross Profit	75
Operating Costs	50
Operating Profit	25
Interest	5
Pre-Tax Profit	20
Income Tax	5
Net Income	15

If the prime rate is 6%, what return should we look for? Say between twice and three times prime, i.e. 12% to 18%; let us settle on 15%.

.	$'000
Our Investment	60
Expected Return (15%)	9
Actual Return	15
Excess	6

Things went well! We earned $6,000 more than expected, a 10% abnormal return. This is the Economic Value Generated by the business.

Non-Financial Factors

A number of studies, including one in "Measures that Matter" by Ernst & Young in 1999, have demonstrated that "non-financial factors can be used as leading indicators of future financial performance", and, when such factors were taken into account, earnings forecasts were more accurate, reducing risk. Some important non-financial factors are:

- Quality of Management
- Effectiveness of Product Development
- Market Share
- Brand Image
- Management Credibility
- Quality of Products & Services
- Ability to Attract & Retain Qualified People
- Customer Satisfaction

The PEG Ratio

In establishing appropriate Capitalization Rates or their more common reciprocal Price/Earnings Ratios ("PER"), the most important single factor is probably the growth rate. The PEG ratio, obtained by dividing the PER by the growth rate, is used by financial analysts to compare the relative "expensiveness" of shares.

The following table, using 2000 figures, looks at four "growth stocks", two US and two Canadian; it shows that when growth is rapid, a three-figure Price/Earnings Ratio, such as that of JDS Uniphase, may not result in an "expensive" stock in two years' time.

	PER	Growth Rate	PEG	2 Years Forward PER
Coca Cola	40	8%	5.0X	34X
Microsoft	80	35	2.3X	44X
Nortel	90	25	3.6X	57X
JDS	120	80	1.5X	37X

Growth v Value

As mentioned previously, investors often divide publicly traded shares into Growth or Value stocks. One use of PEG is to compare the estimated "target prices" in two years' time of a growth stock with a value stock. For convenience, each company has current EPS of $1.00. At that time, the growth stock is expected to be worth 3.6 times the value stock.

Economy	Base EPS	Growth Rate	PEG	PER	Target Year 2
New	$1.00	20%	1.5	30	$43.20
Old	$1.00	10%	1.0	10	12.10

Caution

It is essential to apply a "smell test" to all valuations. To demonstrate the improbability of some valuations, John Kay, a Director of the London School of Economics, in the Financial Times used the example of "C.com", a world leader in a growing market, which by 2010 is expected to have an annual volume of US $500 trillion.

If C.com can maintain its current 5% market share and earn a 1% net margin in that year, its prospective annual profit will be US $250 billion. Assuming a market growth of 5% thereafter and a 10% Dis-count Rate, the present value of C.com is US $5,000 billion, more than ten times that of any existing company.

C.com is actually a real business, the foreign exchange trading operations of Citigroup, which, including all other banking and insurance activities, is valued at about US $170 billion.

There are two problems with such a value for C.com: the first is mindlessly projecting trends, "a trend is a trend, but always must end"; the second is that, over time, margins "revert to the mean".

Reality Checks

Our final item describes two useful reality checks. The first is the "Q" ratio, developed by Nobel Prize-winning economist James Tobin. The second is to determine the implicit Discount Rate between the current and future values of a share.

The "Q" ratio measures the relationship between a company's Enter-prise Value and the cost of replacing its physical assets. The importance of knowledge to software companies is shown by their high "Q" ratios of seven or more. Old economy companies, such as those in the forest products industry, which is dominated by plant, equipment and timber properties, have "Q" ratios of around one.

Some years ago a mini-mill steel company with a capacity of 400,000 tons a year was accorded a Net Income Value of $700 million by a major accounting firm, using a PER of 14.6X, based on comparable public companies. Adding $100 million of debt resulted in an Enterprise Value of $800 million, or $2,000 per ton of capacity.

At about the same time, another steel company was increasing its output by 140,000 tons at a cost of $50 million, or $357,000 per ton. Using this as the "replacement cost", the company being valued had a "Q" ratio of 5.6X, a level more common for technology than steel companies; on this basis the original valuation was successfully attacked by a disgruntled shareholder.

Please look for the third and final instalment of this presentation in the next issue of this newsletter.

