

MANAGEMENT ACCOUNTING – FINANCIAL STRATEGY

Many students find intangible assets hard to handle. **William Parrott** explains three methods of calculating the total value of a firm's intangibles.

Basic valuation techniques are examined in almost every P9 paper and candidates generally fare poorly on such questions. In particular, they often fail to make any attempt to value intangible assets. Some even seem to believe that, if there are no intangibles shown in a financial statement, there are none to value. In some respects this is not surprising, because the previous time they were asked to consider intangibles was when they took P7 (Financial Accounting and Tax Principles), which would have been quite a while ago for some. As a result, they often find it hard to imagine the wide variety of intangibles that may exist. This, of course, makes valuing them all the more difficult.

Intangibles are assets that do not have a real physical presence. Brands, patents, goodwill, the knowledge of a firm's workforce and even its corporate strategy are all assets that aren't tangible but still add value. It's virtually impossible to create an exhaustive list of potential intangible assets, but it should be noted that some – eg, a firm's patents and trademarks – are more “tangible” than others – eg, its strategy and knowledge base. Indeed, where an intangible asset has a recognisable description, is capable of being owned, is transferable, is subject to legal existence and protection – and where there is tangible evidence of its existence – it can be valued separately from the business as a whole. The valuation of these separately identifiable intangibles is outside the scope of this article, but it is useful to be aware that certain components of a company's total intangibles are easier than others to value.

Ethical issues can also arise. For example, it's generally accepted that the skills, knowledge and capabilities of employees have a value to their company. But the



calculation of this value would seem to suggest that the company owns its staff, which may be distasteful to some people.

The measurement of the total value of intangibles has always been problematic. The task is made harder by the fact that values can change rapidly. For instance, the image and hence value of a brand can be seriously harmed by a product scandal of one sort or another. Equally, the value attributable to a firm's workforce could be reduced significantly by the loss of key people.

But the fact that it's hard doesn't mean that it shouldn't be attempted. The three following methods can be used to calculate the total value of a firm's intangible assets:

- Market capitalisation and tangible asset value.
- Calculated intangible value (CIV).
- Intangible to tangible asset ratio.

Method 1: market capitalisation and tangible asset value

The market capitalisation of a company is its total value, reflecting the value of both its

tangible and intangible assets. The book value of its tangible net assets can be taken from the financial statements. The difference between the market capitalisation and the tangible net assets should provide a value for the intangibles.

One problem with this approach is that the value of the tangible assets in the financial statements may be out of date. So the method can be refined to reflect the cost of replacing its property, plant and equipment. But replacement costs are themselves often hard to determine.

If the company in question is not listed, the total equity value could be calculated using another approach – the dividend valuation model or the price/earnings ratio method, for example.

Method 2: calculated intangible value

The CIV method calculates the value of the intangibles as the present value of the firm's earnings that are in excess of the earnings expected given the returns provided by a similar company. The industry average returns could be used if no data is available from a similar company.

A weakness of this approach is that any similar company will be making its return on both tangible and intangible assets, so in effect the CIV is a measure of the additional intangible assets the company has over those of a similar company

Method 3: intangible to tangible asset ratio

A ratio of intangible assets to tangible assets from a similar company or an industry average ratio can be applied to the tangible assets of a company to calculate an intangible asset value.

This method makes the rather simple assumption that similar firms will have the

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same relative level of intangible assets. This is clearly unlikely to be the case in reality, as no two companies are the same.

These three methods will generate a range of potential values for the intangible assets, from which the most appropriate figure can be chosen. This is a subjective decision that will need to take account of many factors. The reason for the valuation is an important consideration, which may have an impact on what is thought to be an appropriate value and indeed on how it should be calculated. For instance, if the valuation is being done with a view to selling the business, the appropriate value may be set towards the top of the range calculated. Alternatively, a value for inheritance tax purposes would have to be produced in the light of the relevant statutes and case law.

Consider the data provided on Lolly Co in the panel below and the following extra data:

- Lolly Co has 200 million shares, which are currently trading at £12.50 per share.

- The current replacement cost of the tangible non-current assets is thought to be £2,900m.
 - The industry average pre-tax return on the book value of net tangible assets is 13 per cent, while that of Lolly Co is 16 per cent.
 - The average cost of capital for Lolly Co's industry is 15 per cent.
 - The current tax rate is 30 per cent.
 - The tangible non-current assets of a similar company have a value of £3,700m and its intangibles have a value of £770m.
- Now let's work out the value of its intangible assets using the three methods that I have outlined.

Method 1

Lolly Co's market capitalisation can be calculated as £12.50 x 200m = £2,500m. The book value of its net assets equals its share capital and reserves (or total assets less external liabilities), which in this case is given as £1,709m. So the value of its intangible assets under method 1 is £2,500m – £1,709m = £791m.

The difference between the book value of Lolly Co's property, plant and equipment and the replacement cost of its tangible non-current assets is £2,900m – £2,450m = £450m. So, if we adjust for this replacement cost, the value of Lolly Co's intangible assets would be £791m – £450m = £341m.

Method 2

The value of Lolly Co's net tangible assets is £4,549m – £1,490m = £3,059m. Its pre-tax return on the book value of net tangibles in

excess of the industry average are, therefore (16% – 13%) x £3,059m = £92m.

Its excess post-tax earnings are, therefore £92m – (£92m x 30%) = £64m.

The total value of Lolly Co's intangible assets equates to the present value of its post-tax earnings at the cost of capital, which is £64m ÷ 15% = £427m.

Method 3

The ratio of intangible assets to tangible non-current assets for a similar company is £770m ÷ £3,700m = 21%.

Applying this ratio to Lolly Co's tangible non-current assets, we get £2,450m x 21% = £514m for the value of its intangibles.

It's clear, then, that we've calculated a wide range of values for Lolly Co's intangibles. This isn't surprising, given the difficulty of making an appropriate estimate. In the absence of any extra information, it may be appropriate to choose a mid-range value of about £450m.

The very nature of intangible assets means that their valuation will always be a problem. Valuation has been described as an art rather than a science and this is particularly true when it comes to intangibles. But, at its simplest, an intangible asset value can be calculated by looking at the difference between a company's total equity value and the value of its net tangible assets.

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P9 further reading

For case studies on the valuation of separately identifiable intangible assets, visit www.snipurl.com/5ey46.

Lolly Co's financial position on June 30, 2008	
	(£m)
Assets	
Non-current assets	
Property, plant and equipment (book values)	2,450
Current assets	
Inventories	80
Receivables	1,875
Cash	144
	<u>4,549</u>
Equity and liabilities	
Equity	
Share capital and reserves	1,709
Non-current liabilities	
Loan stock	1,350
Current liabilities	<u>1,490</u>
	<u>4,549</u>