

# Technical Factsheet 167

## Valuing trading companies

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### 1. INTRODUCTION

- 1.1 This Factsheet aims to provide a summary of the issues that need to be considered when engaged in the valuation of companies of all sorts by using an earnings based approach. The calculations will give an indication of the valuation which the buyer/seller may consider rather than an exact figure.
- 1.2 Whenever an ACCA member undertakes valuation work care should be taken to ensure an appropriate engagement letter is agreed with the client.
- 1.3 This Factsheet will look at the application of Price Earnings ("P/E") ratios, EBITDA multiples and turnover multiples, discounted cash flow ("DCF") approaches, including discount rates, terminal values and appropriate cash flows, the normalisation of earnings, how to deal with minority interests, and briefly looks at those situations where an earnings based approach is not appropriate.
- 1.4 This is one of a series of technical factsheets numbered 167 to 171 looking at various valuation issues.
- 1.5 For matters to consider when reporting on valuations refer to technical factsheet 170 section 7.

### 2. EARNINGS BASED APPROACHES

- 2.1 In this section we will look at the selection and adjustment of appropriate P/E ratios and EBITDA multiples. We will conclude with a brief look at turnover multiples (although this is dealt with in greater detail in Factsheet 171 "Valuing Goodwill").

#### P/E Ratios

- 2.2 A price earnings ratio is simply the relationship between the post-tax earnings of a business and its capitalised value. For example, in a sale situation if a business is earnings £100,000 post-tax and is sold for £1m, then the business is said to be sold on a P/E ratio of 10. Alternatively, for a quoted company with earnings per share of £1.00 and a share price of £10.00 per share the company is said to be trading on a P/E ratio of 10.
- 2.3 P/E ratios are always calculated by reference to post-tax earnings, although these may well be normalised to remove one off or exceptional items, abnormal directors' remuneration and the like.

- 2.4 P/E ratios can be historic, current or prospective. It is important not to mix these. For example, an historic P/E ratio applied to prospective earnings or vice versa.
- 2.5 Historic P/E ratios usually refer to the last full year's reported earnings. A current P/E ratio will refer to estimated earnings likely to be achieved in the current full year of trading, and a prospective P/E ratio will refer to earnings forecast for next year or (occasionally) for years further into the future.
- 2.6 We set out below a short example showing the earnings of a business with an accounting date of 31 March for the last full year, the current year and for two projected years with the exit P/E ratio calculated on the basis of a sale of the company during the current year for £1million.

*Example*

	<b>2009 (Historic)</b>	<b>2010 (Current)</b>	<b>2010 (Forecast 1)</b>	<b>2011 (Forecast 2)</b>
Post Tax Profit (£'000)	70	120	150	170
<b>P/E Ratio</b>	<b>14.3</b>	<b>8.3</b>	<b>6.7</b>	<b>5.9</b>

- 2.7 There are various sources of information from which P/E ratios can be obtained. Both company specific and sector average P/E ratios can be obtained from publications such as the Financial Times ("FT"), the London Business School Risk Measurement Service ("LBS") and the like. In addition, P/E ratios can be calculated for individual companies by looking at the current share price and the company financial information obtainable from the company website, brokers' reports or commercial databases such as Bloomberg and Thomson Reuters.
- 2.8 When looking at company specific P/E ratios (rather than sector averages) one option is to look at the source financial data to calculate the P/E ratios individually, or at least to be able to check the calculations provided by organisations such as LBS or the FT.
- 2.9 In addition, when looking at individual company P/E ratios it is worth checking that there is a sufficient volume of trading in order to give a reliable result. Companies trading on AIM or other smaller markets may not have a large enough volume of trades for a P/E ratio to be reliably calculated. In the same vein, P/E ratios can be distorted if there are rumours within the market that a particular company may be either the target for an acquirer or in some form of difficulty (perhaps because key personnel are leaving).
- 2.10 Sector P/E ratios can be found daily in the Financial Times Actuaries Share Indices, which provides market capitalisation weighted averages for a number of broad sectors. It should be born in mind that, particularly in smaller sectors with fewer companies, the very largest companies within the sector will have a considerable impact on the weighted average, which may well distort this statistic. The LBS provides a calculation of the sector average P/E ratios on the basis of both a weighted and a non-weighted average, and this can be a useful extra resource.
- 2.11 In addition, the LBS also provides a more detailed breakdown of the principal sectors into smaller sub-sectors which can also be useful in allowing the valuer to focus in on a more detailed and appropriate sector.
- 2.12 Finally, P/E ratios may be derived from actual deals. These are called "exit" P/E ratios. They have within them a premium for control, and therefore no further adjustment is necessary in this regard (see below). However, it may well be that the deal price agreed contains a considerable degree of synergistic or other benefit that relates directly to the identity of the purchaser, or has taken place in a distress situation, and may not therefore be appropriate to be applied unadjusted in, for example, a tax valuation where the parties are anonymous (see Factsheet 170 for more detailed advice in this regard).

2.13 Exit P/E ratios can be obtained from proprietary databases such as Bloomberg and Thomson Reuters, publications such as Acquisitions Monthly and, in much broader terms sector analysis, for example the Private Company Price Index (“PCPI”) provided by BDO Stoy Hayward, which produces a quarterly average of exit P/E ratios, further details of which can be found at [www.bdo.uk.com](http://www.bdo.uk.com).

2.14 Exit P/E ratios in general and the PCPI index in particular, need particular care in their application for general valuation purposes. The valuer should note that the PCPI was designed only as a broad rule of thumb in estimating the discount necessary from a quoted sector P/E ratio so that ratio can be applied to any specific company in the sector. The information shown on each of the quarterly reports should therefore be read in full, and even then this ratio is perhaps best used only as a sanity check or other form of broad cross-check on an opinion derived by other means.

### **Adjusting P/E Ratios**

2.15 Quoted sector P/E ratios are derived from very small trades (typically of holdings of much less than 1%) in very large quoted entities. Some of the main issues relating to adjusting P/E ratios are discussed below.

2.16 We summarise below those issues which are most commonly found:

- **Quoted sector trades are for small, uninfluential minority interests** - it is not therefore appropriate to adjust the quoted sector P/E ratio downwards to reflect the size of the interest that the valuer may be asked to consider. This is perhaps the single most common mistake made in adjusting quoted sector P/E ratios. An adjustment in respect of a minority interest is only appropriate if the P/E ratio being used is an exit P/E ratio.
- **Holdings of more than 10%** - it may be appropriate to add a small premium to the quoted sector P/E ratio to reflect the greater size of interest under consideration. If a controlling interest is to be valued then a control premium will be appropriate – see below.
- **Quoted companies are usually larger and are more diverse** - a material discount is usually required to reflect the small size and lack of diversity of a private company compared with its quoted comparables. The actual size of the discount will depend on the facts of the case.
- **Quoted companies usually have material asset backing** - again, a substantial discount is usually required to reflect the fact that the balance sheet of a small, non-quoted company is usually far weaker than that found in a normal, quoted sector company.
- **Quoted companies have access to the capital market** - private, unquoted companies do not have access to capital via the stock market and a small discount is necessary in this regard.
- **Quoted companies do not usually rely on the input of a few key individuals** - such a scenario is, however, commonplace in private companies and the loss of key personnel is a material risk factor which needs to be adjusted for in the P/E ratio.
- **There are likely to be other issues which may well require adjustment** - these may include a limited number of customers, restrictive distribution or supply agreements, lack of ownership of intellectual property and lack of security of tenure in the trading premises.

2.17 Finally with regard to adjustments, it would be necessary to look at the dividend history of the target company. Large quoted entities usually have a defined dividend policy and the P/E ratio upon which they trade will have this factor automatically built in. If the non-quoted company has never paid dividends and does not intend to for the foreseeable future, then a further material discount will be required.

2.18 If the valuer is valuing a minority interest in a private company then the fact that the purchase of such an interest will be locked in and unable to transfer or otherwise dispose of their investment (probably because of restrictions

within the company Articles of Association) then this factor alone is likely to warrant a discount, perhaps of the order of 35%.

- 2.19 Whilst it is not possible to give detailed advice on the levels of discount appropriate in any particular circumstance, when valuing a small minority interest locked into a trading company with no history of dividends and none likely going forward, a discount of the order of 70% may be appropriate. The payment of dividends or a likely sale within the short to medium term would have the effect of materially reducing this level of discount.
- 2.20 Where a quoted sector P/E ratio is being used to value a whole company (as opposed to a minority interest) then the issue of marketability no longer arises, and a lower discount is therefore appropriate (perhaps of the order of 50%). However, it should be borne in mind that in valuing a 100% interest, a bid (or control) premium should firstly be applied to the quoted sector P/E ratio.
- 2.21 Bid and control premiums can be found from brokers' reports and, more usually, from specific M&A databases such as Bloomberg and Thomson Reuters. Broad overall control premiums are also published on a quarterly basis in *Acquisitions Monthly* and have averaged some 40% over the years. It should be borne in mind that these premiums very frequently contain a significant element of synergy or other benefit specific to the purchaser and a much smaller premium is usually appropriate, often in the region of 5% to 15%. *Acquisitions Monthly* is published by Thomsons whose website can be found at <http://www.aqm-e.com>
- 2.22 By way of example therefore, if the quoted sector P/E ratio is 10 and the valuer is valuing a 100% interest in a small private trading company then, assuming a control premium of 10%, the P/E ratio then becomes 11. Discounting this by, say, 50% gives a P/E ratio to value the whole of the small private company of the order of 5 to 6.
- 2.23 As an alternative to a P/E ratio, the valuer may use an EBITDA multiple. EBITDA multiples are traditionally used to give an enterprise value (rather than an equity value) and in order to arrive at a value for the equity, it is usually necessary to deduct the net debt. The multiples used are obtained from similar sources to P/E ratios - whilst publications such as the FT do not normally provide EBITDA multiples, they can be readily obtained via databases such as Thomson Reuters and Bloomberg, or can be computed by looking at the company financial information and the current enterprise value.
- 2.24 Normally the net debt is deducted (or surplus cash added). Net debt will consist of the company long term debt less any surplus cash above working capital.
- 2.25 EBITDA multiples can be adjusted in a similar way to P/E ratios, as outlined above.
- 2.26 A straightforward example of a valuation undertaken using both an EBITDA multiple and a P/E ratio is given below. See section 5 for further details.

#### *Example*

A small private trading company is to be valued. Only historic information is available, showing a normalised maintainable EBITDA of £300,000, net debt of £200,000 and post tax profits of £200,000. Research shows an appropriate adjusted EBITDA multiple is 6 and a P/E ratio is 8.

The enterprise value is therefore £300,000 x 6 (EBITDA multiple) = £1,800,000 and the equity value is £1,800,000 less £200,000 net debt = £1,600,000.

The equity value can also be calculated as £200,000 post tax profit x 8 (P/E ratio) = £1,600,000.

Normalised maintainable EBITDA is discussed in section 5 of this Factsheet.

- 2.27 As an alternative to multiples such as P/E ratios and EBITDA multiples, a turnover multiple can be used in certain circumstances. Turnover multiples are a principle methodology in considering the valuation of businesses such as professional practices (see Factsheet 171).

- 2.28 Usually a turnover based approach is only appropriate as a cross-check or sanity check, and is rarely appropriate as a principal methodology.

### **3. DISCOUNTED CASH FLOW VALUATION**

- 3.1 The subject of discounted cash flow company valuation is extremely large. In addition, most small businesses in the UK do not produce detailed cash flow forecasts going forward. This methodology (although very widely used in the US) is not in fact used that often in the UK to value small private businesses. This Factsheet briefly looks at common mistakes made in evaluating the cash flow forecasts themselves and in the selection of appropriate discount rates and terminal values.
- 3.2 In looking at the cash flows it should be borne in mind that we are looking at cash flows rather than earnings. As such, non-cash accounting entries, such as accruals and pre-payments, depreciation and amortization are not appropriate.
- 3.3 It is extremely important that the growth assumptions going forward are critically scrutinised and if they differ materially from the growth achieved historically, the reasons for this need to be clearly explained and the funding to enable the growth must be included in the equation.
- 3.4 The timing of the cash flows is also important. Normally, the cash flows can be assumed to be arising on a mid-year basis (if the cash flows are assumed to arrive on day one in the year, this would have the effect of over-inflating the value and, conversely, if they are assumed to arrive at the end of the year, this will have the effect of deflating the value).
- 3.5 Growth can rarely (if ever) continue at a rate above inflation for any appreciable time. At some time in the future, competition from other parties alone will have the effect of reducing the growth available and the forecasts should reflect this. In particular, it is important that the forecasts go as far as a reasonable steady state year (the time in the cycle where turnover and profitability growth has achieved a stable and maintainable rate that is likely to be close to long term inflation).
- 3.6 Another common mistake in preparing cash flow forecasts is to underestimate (or omit entirely) capital expenditure necessary during the forecast period. A reasonable estimate of the capital expenditure required throughout the period is required. Care must be taken to avoid a considerable hit in capital expenditure in the final year as this is likely to be the year used to calculate the terminal value, as appropriate.
- 3.7 Cash flows should usually be after a reasonable estimate of the tax charge exigible in the year.
- 3.8 In considering terminal value, this can be done in a number of ways. The two most common are to apply a multiple to the cash flows in the final year to reflect the value of the cash flows out into perpetuity beyond the forecast period, or to apply the Gordon Growth computation based on the discount rate used. The Gordon Growth computation is often preferred as this is less open to manipulation and the application of a current multiple to distant future cash flows is fraught with difficulty. The aim of the Gordon Growth model is to value a stock or company in today's terms, using discounted cash flows to take into account the present value of future dividends. Further details of this model can be found at the following site:  
<http://www.qfinance.com/asset-management-checklists/applying-the-gordon-growth-model>
- 3.9 The choice of discount rate is, of necessity, very subjective. Some guidance can be obtained by looking at the discount rates prevalent in the quoted sector, and in this regard brokers' reports can be extremely useful.
- 3.10 More general guidance can be found in publications such as "The Small Business Valuation Book" by Lawrence W Tuller, published by Adams. At section 2, Tuller provides an analysis of discount rates for various degrees of risk in private companies going back over some 90 years. Tuller advocates adding a premium to a risk free rate (which might be obtained from sources such as those provided by ICAP for interest rate swaps in sterling over various periods of time) with the premia ranging from 6% to 10% for established businesses with a good trade

position, good management, stable historic earnings and a predictable future, to 26% to 30% for small, personal services businesses with a single owner/manager.

- 3.11 By way of example, if we assumed a risk free rate of approximately 3% then for stable, established businesses Tuller would recommend a discount rate of between 9% and 13% and for a much more risky, small, personal services business, a discount rate of between 29% and 33%.
- 3.12 It is often useful to cross-check a discounted cash flow valuation via the application of an earnings multiple, if this is at all possible. In this regard, the most useful earnings multiple is likely to be a prospective P/E ratio - outlined in greater detail above.

#### **4. ASSETS BASED APPROACHES**

- 4.1 Further information on the use of assets based approaches as a principal methodology in the valuation of property and farming companies is contained in Factsheet 168, and this Factsheet therefore restricts itself to the application of an assets based approach for trading entities only.
- 4.2 Assets based approaches are principally used in the valuation of trading entities where either the business is loss making, is making a very poor return on assets or is in a break up situation. We address each of these scenarios below.
- 4.3 If a trading entity is loss making and is not forecasting profits for the foreseeable future, then the valuation is likely to proceed along the lines of an assets based approach. As such, the valuation will be based upon the balance sheet rather than the profit and loss account, although the premise will be that the business is still a going concern. A distressed valuation based on assets is discussed below.
- 4.4. If therefore the subject company is loss making but can still be considered to be a going concern, the valuer will look at the assets within the balance sheet and adjust any material assets to reflect current market value. These may well include the business premises, particularly in circumstances where these have not been revalued for many years. In addition, the valuer may need to consider the value of any intellectual property, such as a brand name, copyright or patent, as these are unlikely to be shown in the balance sheet. It may well be that a discount to the net asset value, is appropriate to reflect the likelihood of losses continuing in the future.
- 4.5 In cases where the business is making only small profits compared to the net asset value and the application of a P/E ratio or other multiple will produce a value less than the adjusted net asset value, then the valuer would normally proceed on the basis of the net assets. In this case, however, it is unlikely that a further discount would be required to reflect future losses.
- 4.6 For companies in a break up or other distress situation, the valuation will also usually proceed on an assets basis. In these circumstances, however, the valuer needs to look critically at the items within the balance sheet, including debtors. The valuer would normally assume that creditors need to be paid in full, that only a proportion of the debtors are likely to be collectable, that the tangible assets are worth their written down value (probably less a discount to reflect the fact that the company is in distress and any sale of these assets is likely to be on a forced sale basis), and that intangible assets such as goodwill have no value. The result is likely to be a very material discount to net assets, reflecting the distressed position in which the company finds itself.
- 4.7 Valuers do however need to take care in distress situations as there may well be some hidden intangible worth (such as a patent, computer software or a trade name), which can easily be overlooked or materially undervalued.

## 5. NORMALISATION OF EARNINGS

5.1 When looking at the valuation of a standalone business, the valuer needs to ascertain whether the historic and future earnings are affected by any one off, non-recurring or other abnormal entry. These can be many and varied but the most common are:

- **Directors' remuneration not at a commercial rate** - directors' remuneration needs to be at a commercial rate for the work actually undertaken. If the valuer is unsure whether this is the case or not, there are various sources on the web which give average levels of directors' remuneration in particular industries and in particular geographic areas. These can be substituted for the actual remuneration in the accounts, or an estimate of remuneration made on the basis of the turnover of the business or some other such parameter.
- **Bad debts** - a single one off bad debt can have a material impact on the earnings in that year. The valuer needs to take a view as to the level of bad debts going forward and adjust accordingly.
- **Amortisation** - frequently purchased goodwill is amortised in the accounts. It is normal for this amortisation to be added back.
- **Non-core earnings** - it may be that the company has income from other sources (such as rental income or the like) which are not a part of the core business activity which is to be valued. If the business is valued on an earnings basis then the income from other assets is removed from that computation and then the value of the assets driving out the non-business income is added to the final valuation of the business to give a total valuation of the entity.
- **One offs** - other singleton items may be a particularly good or bad deal or the like which materially affects profitability in a single year and needs to be accounted for.

5.3 A short example is shown below where the pattern of earnings is materially changed once the accounts are adjusted on to a more normal basis.

### *Example*

A trading company accounts over a three year period need to be adjusted for the following: excess directors' remuneration, goodwill amortisation, bad debts, rental income received and redundancy payments as follows:

	2008	2009	2010
	£'000	£'000	£'000
Pre Tax Profits	500	600	400
Excess Remuneration	50	100	300
Goodwill Amortisation	10	10	10
Bad Debts	-	20	-
Rent Received	(10)	(12)	(15)
Redundancy Payment	50	-	-
<b>Adjusted Profit</b>	<b>600</b>	<b>718</b>	<b>695</b>

5.4 If the company is part of a group then there are other additional factors which need to be considered, including the following more commonly seen issues:

- **Intra-group trading** - needs to be on a commercial and arm's length footing, otherwise the valuer will need to adjust the accounts accordingly.

- **Intra-group financing** - again, needs to be on an arm's length basis with interest appropriate to the risk charged. If not, then, again, the valuer must adjust.
- **Intra-group charges** - these may include services charges, directors' charges and the like, and need to be on an arm's length basis for the services actually undertaken.
- **Intellectual Property Rights (IPRs)** - if a group company uses IPRs owned by another group company (for example, a brand name, software or the like) then an appropriate licence fee should be paid.

## 6. MINORITY INTERESTS

- 6.1 Where the valuer is asked to value an interest in a private company that is less than a 100% interest, it may be appropriate for that interest to be discounted from the full pro rata value. The level of the discount will depend upon various factors, including the size of the interest, the spread of other interests, the degree to which the shareholding is locked in and the pattern of dividend payments, both historic and going forward. The following range of discounts might be considered to be a reasonable starting point in deciding on the level appropriate in any specific instance:
- **Majority holdings in excess of 50%** - a discount of 5% to 10%.
  - **50% interests** - a discount of 15% to 25%, depending on the split of the other interests.
  - **Interests of 26% to 49%** - a discount of 30% to 40%.
  - **Interests of 10% to 25%** - a discount of 45% to 55%.
  - **Interests of less than 10%** - a discount of 60% to 75%.
- 6.2 Discounts for size may be minimal for shareholdings in excess of 75% and be small (say 10%) for interests of 51% to 74%. This reflects the fact that at 51% and above the interest controls the company on a day to day basis and an interest of 75% and above can pass a special resolution.
- 6.3 50% interests can be difficult to value. Much will depend on the nature of the other interests in the company. If the 50% interest is faced with a single other 50% interest then a deadlock position ensues and a larger discount (perhaps of 25%) may be appropriate. Where, however, the 50% interest is the single largest interest and the other 50% is held by a number of small shareholdings, then the discount may reduce to, say, 15%. In a position where one of the 50% interests has a casting vote then this is, in effect, a majority interest and should be discounted accordingly.
- 6.4 For uninfluential minority interests of 26% to 49% then the discount might be between 30% and 40%, increasing to between 45% and 55% for interests of 10% to 25%.
- 6.5 For interests of less than 10% a discount of between 60% and 70% might be appropriate.
- 6.6 The valuer should bear in mind that all of the above discounts are broad guidelines only, and will vary according to the facts of each case. In addition, it might be that a 10% interest has strategic value (for example, where only two other interests of 45% each exist in the company). In such a circumstance the interest may have considerably more value than it would in normal circumstances.
- 6.7. Finally with regard to discounts, the discounts outlined above are likely to be appropriate for normal open market value valuations, such as tax valuation. Where the valuer is valuing for the purposes of a dispute or divorce, then if no guidance is provided via a shareholders' agreement or under the Articles, then the discounts of the order of those shown above are likely to be too high, and even for small, uninfluential minority interests a discount of no more than, say, 33% may be appropriate.
- 6.8 Where the company documentation or a shareholders' agreement specifies how the shares are to be valued, then the valuer must follow these guidelines. Frequently, these guidelines will include directions as to whether any form of discount is to be applied or not. It is usual for fair valuation cases and many dispute cases to be valued on the basis of a pro rata proportion of the whole rather than on a discounted minority basis.



Technical Factsheet 167  
Issued May 2011