Chapter Six
Tricks of the professionals

According to market purists there are two basic ways of assessing a company: fundamental and technical analysis. In practice the former is best for showing *which* shares are worth buying and the latter for *when* to buy them.

Fundamental analysis involves evaluating everything about a company. Unfortunately there is too much to know. Ideally you would want to know not only the quality of the product/service, the state of the company's customers and whether a few accounted for a large portion of sales, the competition, the competence of the board and senior management, the condition of finances and the vulnerabilities, the extent to which the business was reliant on a few markets, the economic cycle, exchange rates and labour relations, and so on.

A few of the basic measures and approaches were covered in Chapter 5, but market professionals have a wide range of tools for digging deeper into the circumstances and background of companies. They provide the principal basis for deciding what the underlying value of the company should be, and then seeing how far the market diverges from that.

There is no one simple and obvious way of deciding what a company is worth now, much less how its value is likely to move in the future. All the calculations are helpful sometimes, some most of the time, but none is consistently and reliably able to paint a definitive picture of the business. As different industries have varying payment customs, stock turnover times, capital needs, amounts retained for research and so on, the best way is to check what the norm is for the industry and see how far the company diverges from it. That in turn may take a fair amount of research from people like stockbrokers, trade associations and government.

Another problem is the shifting opinion about which ratio is the most reliable indicator. Obviously, when one factor becomes generally applied

as the true measure of a company it distorts the picture. In other words, if dividend cover is taken as the true indication of a company's worth, businesses are ranked by that criterion and a sensible investor would do best to look harder at other factors to see if the market has got its evaluation right.

Many ratios are quite difficult to work out and need a bit of digging to get at the figures. Most of these figures are extracted from the company's annual report and accounts, which should be read in conjunction with the guidance in Chapter 7 on what to look for in those accounts.

The ratios mentioned here are the most common and are generally agreed to be helpful. Experts have a range of other calculations, indicators and ratios they find useful. Those can be handy but only long experience will show what indicators are personally useful, so it will be the more experienced investors who should investigate the serious textbooks on how to calculate and use more sophisticated models of stock market behaviour.

Fundamental analysis

Chapter 5 discussed the reasons for researching a business, its background and circumstances, and how this can benefit an investor. In addition to the general overall feel and cursory trawl through the available figures, there are techniques and calculations used by market professionals that can help pinpoint precisely why a company is better or worse than general sentiment suggests. They are discussed below, in alphabetical order.

Acid test

Sometimes called the 'quick ratio', this can be worked out from the balance sheet. It checks to see just how solvent a company is by having a look at its liquid or readily realizable assets that could be used to meet short-term liabilities, and then comparing that with its current creditor position.

This means dividing the current assets minus stocks (ie net monetary assets) by the current liabilities. If the result is less than 1 the business could not settle all immediate debts if they were called in and suggests a precarious balance, while 2 is safer. It is also worth checking back in previous accounts to see if there is much movement.

It is a slightly better version of the net current asset (page 60) and current ratio (page 57) because it assumes that not all current assets are equally available to be turned into cash if suddenly needed. For instance, stock and work in progress need time to realize or they will fetch very low prices, and in any case few companies would plan to liquidate all their stock just to pay an overdue bill. So the acid test is reckoned to be a more realistic measure of how easily a company could meet its obligations.

Altman Z-Score

This was developed in 1968 by New York University finance professor Edward Altman to predict the likelihood of a company becoming insolvent within the next two years. The score is a bankruptcy prediction calculation that measures the probability of insolvency through inability to pay debts as they become due. He studied 66 manufacturers with assets then of over $1 million, half of which had gone bust. In one test it predicted 72 per cent of corporate bankruptcies two years before they happened. Z-scores for failing businesses show a consistent downward trend as they approach insolvency.

Altman used five ratios with varying weightings:

1. working capital (current assets – current liabilities)/total assets × 1.2
2. retained earnings/total assets × 1.4
3. earnings before interest and taxes/total assets × 3.3
4. market capitalization/total liabilities × 0.6
5. net sales/total assets × 0.999

The results will be between –4 and +8. Added they produce the Z-score.

It can also be thought of as an equation:

$$\text{Z-score} = \frac{1.2\,a + 1.4\,b + 3.3\,c + d}{e} + \frac{0.6\,f}{g}$$

where:

a = working capital
b = retained earnings
c = operating income
d = sales
e = total assets
f = net worth
g = total debt

1.8 or less	a very high probability of insolvency within two years;
1.8 to 2.7	a high probability of insolvency;
2.7 to 3.0	possible insolvency;
3.0 or higher	insolvency is not likely in the next two years.

Consistently low scores each year are more of a concern than a one-off low score.

Asset backing

See Net asset value.

Beta

This is one of the few calculations in this chapter not derived from a company's accounts. It is a measure of the share price volatility relative to the rest of the stock market – which is a measure of risk, or at least of getting one's money out when needed. Beta measures how far an individual share moves compared with the market as a whole.

The market is taken to have a beta of 1, so a share with a beta of 1 moves exactly in line with the market as a whole. A beta of 1.6 would move 16 per cent when the market as a whole moves 10 per cent. A high positive beta indicates that a share can be expected to rise faster than average in good times but plunge more steeply in bad. That is characteristic of smaller companies.

Conversely, a share with a beta of less than 1, such as 0.8, rises and falls less than the market as a whole. A share with a negative beta (pretty rare) should move in the opposite direction to the other shares.

Behind this approach there is a sophisticated mathematical philosophy about investor behaviour, stemming from what is called the 'capital asset pricing model'. This suggests that investors can decide on the risk of an individual share, or decide to reduce that risk by diversifying a portfolio. None of that will get rid of the market risk – the shares moving as the whole of the market rises or falls. The measure of that risk is measured by the beta, and an investor would (or should) seek a higher return to compensate for a high-beta share or portfolio.

This approach has the benefit of allowing investors to choose their degree of risk and check that the return is appropriately higher to compensate, and conversely to spot market inefficiencies in shares that have a higher return than would be indicated by their beta risk rating.

Cover

See Dividend cover.

Current ratio

A way of assessing a company's ability to pay bills in the short term is to look at the cash it has and the things that can readily be turned into cash. It is arrived at by the division of current assets by current liabilities. If the result is 1 the two are identical and the company has no spare money. A reassuring figure is more like 1.5 or 2 at least.

On the other hand, a high figure suggests the company may have an unusually large amount of stocks, or it is keeping its assets in cash, which means it earns a larger return on lending than on the business itself or that it cannot find a suitable way of growing its real activity. All are potentially worrying and might suggest the company could make an attractive takeover target for someone in search of cheap cash. It is worth checking if the figure is representative of the industry, however.

Debt collection

Allowing customers credit is expensive because it ties up a company's own capital until the bill has been paid. So it is a mark of good management that debts are collected promptly. One method is to check the average collection time in days. It is calculated by dividing the trade debtors by total sales and multiplying the result by 365.

Debtor turnover measures the number of times debtors are turned over in the year, which is pretty good measure of how efficient the company is in shaking the money out of customers. The calculation is very simple: just divide the figure for sales by the end-year figure for amount of debt.

Debt/equity ratio

See Gearing (page 59).

Dividend cover

This shows what proportion of the company's earnings are being paid to shareholders or, to put it another way, a measure of the number of times a company's net of tax dividend is covered by its net profit. If the ratio is 3 or more the company is being extremely conservative; with 2 or more (it could have paid at least double the dividend if it had wanted to) it is reckoned pretty safe; but anything below 1.5 is looking dodgy. At 1 all the earnings are distributed to shareholders, and if the ratio drops below 1 the company is paying out retained surpluses from previous years.

So, if Windowledge plc paid a dividend of 4p a share and its earnings per share were 12p, its dividend would be covered by a very cautious three times. Low level of cover combined with high yield shows the market is nervous about the company's ability to go on paying at this rate. Different industries have different needs for cash, so comparisons should be within the sector.

Dividend yield

This is the amount of dividend per share (usually quoted net of tax) as a percentage of the share price. It gives the return on the investment at the current share price and current rate of payments by the company. As with price/earnings ratios, the calculation can be done on 'historic' figures, which would be based on the most recent dividend figure; or prospective, which would use the forecasts of what the next dividend is likely to be. So if Windowledge paid a dividend of 4p, and its share price is 390p, the yield is a meagre 1 per cent.

That is pretty low in absolute terms, but one needs also to compare it with the yields on other shares in the sector to get the full flavour. As with price/earnings ratios (see below), comparison with competitors gives a good indication of the way a company is regarded by the market. Yield is determined by share price, so if a company is at the bottom end of the generally available yields around, it seems investors expect quite a lot of improvement in the years ahead to bump up that figure.

Conversely, if a yield seems temptingly high the share price is low, perhaps because there is a feeling that the company is heading into trouble and may well cut its dividend, at the very least. Once again, it will take further detective work to see how reasonable those expectations are.

Employee efficiency

This is wages divided by sales times 100, to get a proportion of sales paid out in employee costs. This figure needs very much to be related to the sector since it is obviously nonsense to compare capital-intensive with labour-intensive businesses.

Gearing

A large amount of short-term borrowing leaves a company vulnerable, especially during lean periods. If interest rates rise the business can face a sudden and disastrous drain on its resources. Interest has to be paid on borrowed money whether the company can spare it or not, and if it cannot, creditors failing to get their cash could cause the company to be broken up. Banks can call in overdrafts at will and at times of economic downturn get twitchy enough to do so even at the cost of killing the business. Loans must at some stage be repaid; shares do not have these problems. If times are tough the company can 'pass' (not pay) a dividend payment with impunity. Its share price may suffer but at least the business does not fold.

Some borrowing is pretty well inevitable and borrowing can be a more tax-efficient way of raising capital than issuing shares. The question is not how much it has borrowed but how great those loans are in relation to the value of the business.

The ratio between a company's borrowed money and the money that has been put in by shareholders (which is also called 'equity') is called 'gearing' ('leverage' in the United States). So a high level of gearing – lots of borrowing in relation to the equity – exposes a company in a downturn and is therefore a high-risk strategy. Correspondingly, shareholders of highly geared companies do rather well during upturns.

There are various ways of working out the figures. The simplest is just to take the total borrowings and compare that figure with the total amount of shareholders' funds. That is also the crudest way of evaluating the business. You can refine the calculation of just how great the risk is (gearing is a way of measuring risk) by leaving out the less significant components. For instance, you can exclude short-term debts since these are just the day-to-day business procedures as opposed to the underlying indebtedness. Some people prefer to leave out intangible assets (such as trademarks) as being difficult to dispose of, and sometimes preference shares are excluded from the total of shareholders' funds.

Net asset value

One way of judging a company is by the fail-safe system of seeing what it would be worth if the worst came to the worst and it went bust. The only real way is to check what the value is of all the assets it owns. In practice if the company did go under and had to sell everything it had, the assets would probably not realize the book value because fire sales seldom get best prices.

The net asset value figure, often abbreviated to NAV, can be calculated from the balance sheet by adding up the book value of all a company's assets (including buildings, machinery, cash at the bank, investments, etc). Deduct from that all the liabilities (such as unpaid bills, borrowings, etc) as well as all capital charges such as debentures, loan stocks and preference shares. The remainder is the shareholders' equity in the company, or the net worth of the business. Divide this figure by the number of ordinary shares on issue to get the net asset value per share.

The resulting net asset value per share provides a direct measure of investment trusts because it can be compared precisely with the share price to see whether the trust stands at a discount or premium. In an industrial business, allowing for the fact that the book value of assets is not always what they would fetch in the open market, the result is an indication of just how much solid worth lies behind each share. It is not so much what you have as what you do with it, so the figure is generally only another factor to remember rather than a guide for investment. A company with net assets 20 per cent higher than the share price would make a tempting takeover target. If an offer does come, shareholders can then use this measure as one test of how fair the offer price is.

Net current assets

The calculations so far have been based on total net assets. Some people use a narrower measure – net current assets – which concentrates on cash, things that can readily be turned into cash, and money owed that is likely to be paid in under a year. Net current assets per share that are well above the share price intensify the attractiveness of the business to a takeover predator. There is profit with a minimum concern or doubt because the portions of the business can be sold off in bits without worrying whether long-term assets are worth their book value. So the shares are worth buying because either somebody is

going to make the assets work harder – new management or an outside buyer – or the company will go bust, in which case there will be more than enough to pay off creditors and still have money left over to pay shareholders.

Subtracting a company's current liabilities (its debts and unpaid bills) from the current assets, both of which figures are available from the accounts, gives an idea of solvency in the short run. If there is a big surplus the company has lots of spare cash or near-cash to pay debts in the coming year and could therefore get quite a lot of additional credit if needed. A figure close to nothing or, worse still, a deficit, is cause for alarm. See also Current ratio (page 57).

Price/earnings ratio

Profit is a good place to start when valuing a company. The professionals usually start with comparing profits to the share price. This is the price/earnings ratio, often abbreviated to P/E, which is so widely accepted it is even printed in newspaper share price columns. It measures how many years it would take the company at its current level of earnings to equal the market value (total price of all shares). In effect, this is a measure of how quickly the market thinks the company will grow over the next year or two.

To get the figure, divide the share price by the company's earnings per share. For example, if Windowledge Holdings International has issued 70 million shares and made a profit of £8.4 million, its earnings per share would be £8,400,000/70,000,000, which is 12p (in practice, calculations may be a little more complex since earnings can be defined in different ways). If the share price is 390p then the price/earnings ratio is 390/12, which makes it 32.5. In effect that means it would take 32.5 years of earnings at the current level to pay for the current share price. That is the historic P/E, as it is calculated from the last profit figure; using a forecast of profit for the current year produces the so-called 'forward multiple'.

That 32.5 years is such a long period indicates that there is obviously something else going on. What is creating such an apparently unrealistic figure is the expectation by investors that the company will not continue making the current level of earnings but is likely to grow fairly rapidly. As a result, the time taken to cover the current share price will probably, in practice, be a lot less than those 32.5 years.

A relatively high P/E therefore indicates the presumption of fast growth. The point to note is the word 'relatively'. At one level it is a comparison with the market as a whole, and at another level it is with other companies in its sector. To get the full flavour of what the P/E indicates one has to take a look at the FTSE All Share Index P/E, as well as the same ratio for the sector in which the company operates (such as utilities, distribution or leisure). That indicates how the company compares, since the ratio is most useful as a *relative* risk indicator.

The P/E therefore indicates what the stock market as whole thinks of the prospects for the company. The obvious next step is to discover the causes of that sentiment. If the P/E is high relative to its sector, is that because the company is fashionable (journalists all keep saying how wonderful the managers are), or is it because it really is about to grow at twice the rate of the other comparable companies? The figure may be prompted by something simple like the rumour of an impending bid for the company.

A low P/E indicates pessimism or lack of interest by other investors. Whether that gloomy view is justified and whether subsequent events will reverse it requires quite a lot of further thought. The P/E being higher or lower than the sector average merely tells you what others think, not whether they are right in their forecasts. Sometimes it may be necessary to disaggregate a disparate group and value operations separately to see if the market has rated them fairly. Life assurers and property companies are particularly tricky to evaluate.

Another point to watch is whether the P/E is historic (uses the last set of published results), which is what the newspaper prices reproduce, or prospective (uses the generally expected level for the current financial year), which is what some brokers' and tipsters' circulars use.

Profit margin

To find the underlying profitability of a company's trading, take trading or operating profit as a percentage of turnover. This is called the 'profit margin'. The figures will vary enormously between trades and sectors.

Quick ratio

See Acid test (page 54).

Return on capital employed

The point of a company is to make a surplus, its profit. The reason it borrows or sells shares is to increase that profit. So an important gauge of its success is to see just how well it does it. The point of return on capital employed is that it measures the efficiency with which the company is using its long-term cash.

To get this measure, one divides the trading profit (before exceptional items, interest and tax) by the average capital employed over the period (shareholders' funds plus borrowings) and multiplies the result by 100. A return of 10 per cent is the bare minimum required; 20 per cent is pretty good. A low return on capital shows inefficiency in the way it is using the cash, even if the profit margins are high. The first check is to see whether the percentage is higher than the cost of borrowing. It is instructive to compare the return on cash in the business with other things the company (or indeed its investors) might have done with it.

A common criterion is to see what it would have yielded if put into something really safe, like gilts. If the return from that sort of investment is at least as great as the company's, there is something wrong – there should be a 'risk premium' for putting the money into something more hazardous such as a business venture. If the yield from gilts is at least 5 per cent lower than the return from the company's use of the money, the investment is beginning to seem reasonable. Investors prefer something better than 7 or 8 per cent above the gilt yield.

Return on sales

This is a revealing figure because it gives an indication of profit margins. Start with the pre-tax profit before interest and extraordinary items, then divide that figure by total sales, and multiply the result by 100.

Return per employee

This is another measure of how efficiently a business uses its workers. It is calculated by dividing the operating profit by number of employees.

Return to shareholders

This is another measure that is not derived from the published accounts. It indicates the total performance of an equity over a period such as a

year. The figure comes from adding the change in share price (ie the price at the end of the period minus the price at the start), plus the dividends, plus the interest receivable on the dividends, and then taken as a percentage of the price at the start of the period being examined.

For example, a share started the year at 520p and finished the year at 670p. During the year the company paid a 40p dividend as the interim dividend and 50p as the final. The interest rate was about 6 per cent. That would mean the share price benefit was £1.50 and the total dividend was 90p. Interest earned by putting the interim dividend money to work is 1.2p and the assumption is there has not been time to earn interest on the final. So the gain equals £1.50 + 90p + 1.2p = 241.2p, which divided by the 520p opening price is 0.46, so the return is slightly over 46 per cent. Not bad, but it is only a notional profit since it would entail selling the shares to realize it, and there would be a fee paid for doing that, which would reduce the benefit.

Stock turnover

Divide the cost of sales by the stock level at the end of the year.

Value added

This notion was developed in the 1990s to measure how a business has increased the value of the shareholders' investment.

Yield

See Dividend yield (page 58).

Technical analysis

The normal contrast to fundamental analysis is 'chartism', which is also called 'technical analysis'. This is concerned exclusively with the movements of share prices in the recent past to forecast how they will move in future. The really dedicated chartist does not even inquire whether the price chart is for houses, airline tickets, gold bars, indices like the FTSE100, or the shares of banks, since all relevant information is assumed to be in the pattern of movements.

This is in complete contrast with fundamental analysis in that it totally ignores the underlying worth of the business. Technical analysis is concerned not with whether the company is efficiently managed but with when the market price is likely to change. It can, however, indicate which share prices are due for a turn – in either direction – and so provide a stimulus for active traders. That means it does not so much indicate which share to buy as when to do so – and this is examined in detail in Chapter 10.