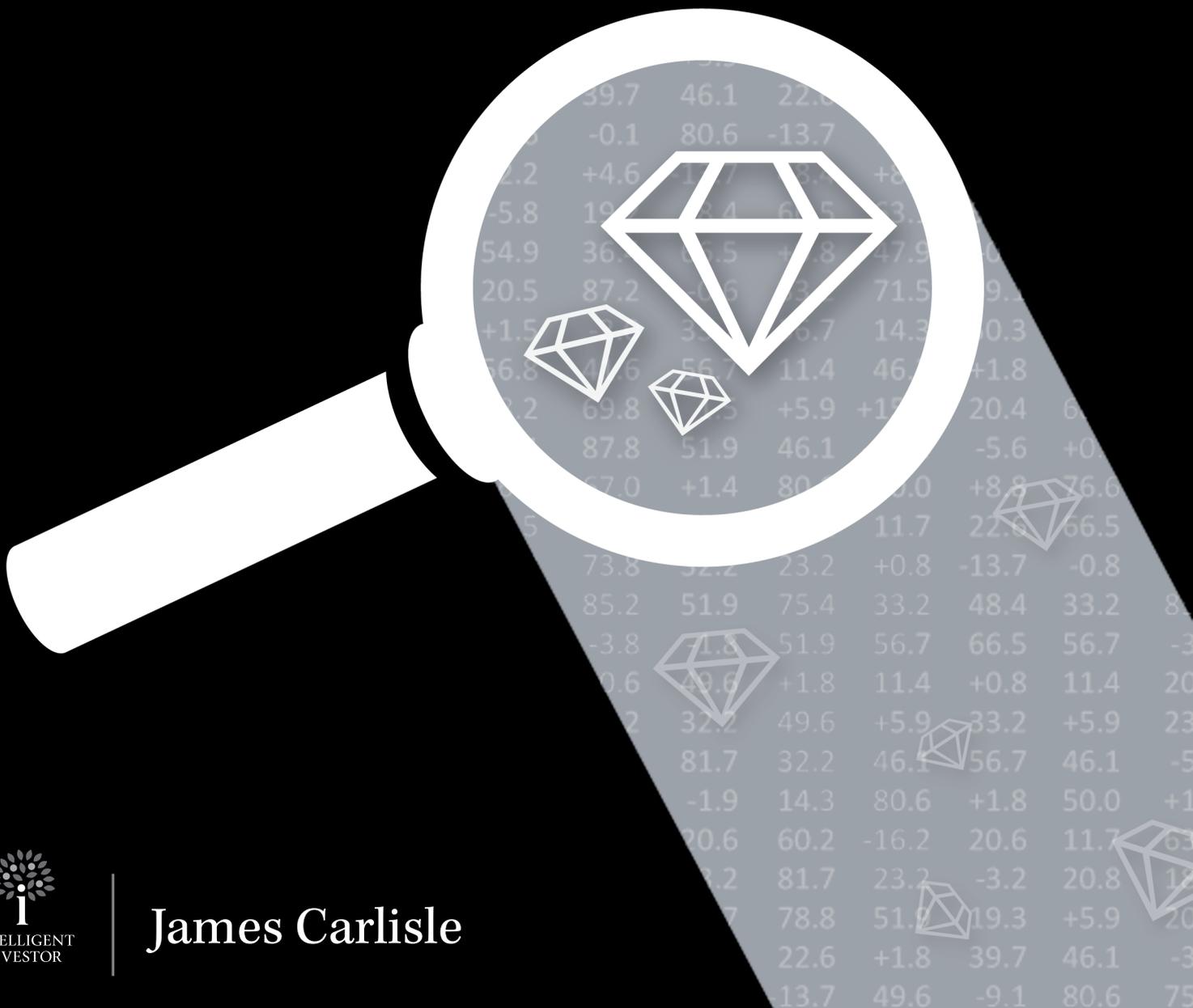


Value

*Intelligent Investor's Guide to
Finding Hidden Gems on The Sharemarket.*



VALUE

INTELLIGENT INVESTOR'S GUIDE TO FINDING HIDDEN GEMS ON THE SHAREMARKET

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First published 2008 by Wrightbooks

an imprint of John Wiley & Sons Australia, Ltd

42 McDougall Street, Milton Qld 4064

Office also in Melbourne

Typeset in ITC Giovanni LT 11/14.5pt

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National Library of Australia Cataloguing-in-Publication data:

Author:	Carlisle, James.
Title:	Value : Intelligent Investor's guide to finding hidden gems on the sharemarket / James Carlisle.
Publisher:	Richmond, Vic. : John Wiley & Sons, 2008.
ISBN:	9780731407644 (pbk.)
Notes:	Includes index.
Subjects:	Investment analysis — Australia Securities — Australia Investments — Australia Stocks — Australia
Dewey Number:	332.630994

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All inquiries should be made to the publisher at the address above.

Printed in Australia by McPherson's Printing Group

10 9 8 7 6 5 4 3 2 1

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About the author

After graduating in law from Cambridge University in the UK and qualifying as a solicitor, James Carlisle soon decided that his interest was in finance rather than law, and he moved to the London merchant bank Close Brothers. There he developed a taste for stocks and shares, but soon it wasn't enough for him and he became an investment analyst with the private client arm of Robert Fleming Group. From Flemings, he moved to work as a fund manager and head of research at another London-based private client fund manager, Douglas Deakin

Young.

In 1999 he found his way to the UK offshoot of The Motley Fool, a website preaching the merits of value-based, long-term investment. He wrote and edited articles on all areas of finance and investment and co-authored *The Motley Fool UK Investment Guide*. In 2002, James and his Australian wife decided to put the English weather behind them and move to Sydney. He soon found Intelligent Investor, where for over five years he indulged his passion for banging on about value investing before moving to his current role at The Australian Financial Review.

His other passions include walking, running and cycling in the bush, travelling, astronomy and music. But most of all he enjoys spending time with his family.



About Intelligent Investor

Established in April 1998, Intelligent Investor is an independent sharemarket research service available by subscription. Members enjoy frequent and detailed stock reviews posted on <www.intelligentinvestor.com.au>, and a printed fortnightly newsletter comprising the most notable reviews. There's also a range of other member benefits, such as podcasts featuring Intelligent Investor's analysts, company executives and notable investors, and forums where members can ask questions of the team of analysts.

The service takes its name from one of the world's classic investment books: *The Intelligent Investor*, the bestseller written by Benjamin Graham and first published in 1949. Graham is often referred to as the father of security analysis, and his value-investing philosophy has stood the test of time.

With a team of eight regular analysts and a number of occasional contributors, Intelligent Investor applies these value-investing principles to Australian stocks. You can find out more about Intelligent Investor's philosophy, the writers behind it and what you get with a subscription by visiting <www.intelligentinvestor.com.au>.



Introduction

‘Value investing’ means different things to different people. Most often it seems to refer to the purchase of stocks at low prices compared with a company’s assets, profits and dividends, and it tends to be used in contrast with ‘growth investing’, which usually refers to the purchase of stocks with (hopefully) growing profits — but also with typically higher price tags.

Buying ‘value stocks’, say the traditionalists, beats buying ‘growth stocks’ because the price paid for the latter often reflects growth that never actually eventuates. That may be true, but it’s not universally so. Sometimes the growth does appear; sometimes it can be predicted with reasonable certainty; and sometimes it makes ‘growth stocks’ better value than ‘value stocks’.

As you will see in chapter 1 of this book, seeking value is the very essence of investing, and growth, which can be positive or negative, is always a factor in it. Indeed the expression ‘value investing’ seems tautological, though it’s useful in so far as it makes the distinction between this and other approaches that label themselves ‘investing’ but should perhaps be more properly described as ‘speculation’.

I stumbled across value investing when I picked up a copy of Roger Lowenstein’s biography of Warren Buffett (*Buffett: The Making of an American Capitalist*) in 1996. The logic behind the approach and the incredible success of many of its devotees provided compelling evidence (to me at least) that I’d found an investing approach that works. From there it’s been an incredible intellectual journey, filled with mistakes, lessons and some fascinating characters.

It all started with Ben Graham, who is considered the father of modern-day value investing. He set the ball rolling in the middle part of the last century — several balls, in fact, because a (very) disproportionate number of the 20th century’s greatest investors learnt from his lectures or by working for him. In a famous essay titled ‘The Superinvestors of Graham-and-Doddsville’, Graham’s star pupil Warren Buffett used the records of some of these investing greats to demonstrate the benefits of the value-investing approach. As Buffett noted, the common intellectual theme behind these ‘superinvestors’ was that ‘they search for discrepancies between the

value of a business and the price of small pieces of that business in the market'.¹

Graham first outlined his value-investing approach in *Security Analysis*, co-authored with David Dodd and first published in 1934, but he made it more accessible in 1949 through our publication's namesake, *The Intelligent Investor*. This book has inspired many investors over the years, and it inspired us enough to name our business after it. It is undoubtedly the best book on investing ever written, and its timeless good sense is as applicable today as it was nearly 60 years ago. If you haven't read it yet, we suggest you put this book down, grab yourself a copy and get started. Hopefully we'll see you later.

Every stock has a value and successful investing is about buying stocks for less than that value, but there are many different ways of actually finding those undervalued stocks. Graham's own approach led him towards stocks on low prices compared with earnings and assets, and several of the superinvestors from Warren Buffett's essay have used a similar approach, though each with their own nuances. Buffett himself, however, aided by his partner Charlie Munger (another of the superinvestors), has developed an approach whereby he prefers 'to buy a wonderful company at a fair price than a fair company at a wonderful price'. These wonderful companies tend to provide plenty of growth, although it's the predictability of that growth that Buffett seems to find particularly appealing. Here in Australia, investors such as Robert Maple-Brown and Kerr Neilson (of whom we'll say more in chapter 8) have had considerable success with their own variations on the value-investing theme.

We can't claim the successes of these investing legends, but at Intelligent Investor's offices in Pitt Street we're working hard at building our own and our members' portfolios with successes of our own. In searching for these opportunities, each of us applies the value-investing principles slightly differently — some of us lean towards wonderful prices, while others lean towards wonderful companies — but we're all aiming to find a wonderful gap between price and value.

The differences in approach simply reflect our personalities and the different ways we look at the world. The idea behind this book, then, is to explain the fundamental underpinnings of value investing, so that you too can go out and develop your own approach. We hope you enjoy the book and wish you the best of success with your investing.

Greg Hoffman

Director

Intelligent Investor

¹ W Buffett, 'The Superinvestors of Graham-and-Doddsville', speech given at the Columbia University Business School, New York, 17 May 1984.



Chapter 1

The essence of investing

‘The propensity to truck, barter and exchange one thing for another is common to all men, and to be found in no other race of animals.’

Adam Smith

Investing is as old as the hills — or at least as old as the people cultivating their slopes. As soon as people started producing crops, they were trading them; and as soon as they began using tools, they were sharing them and exchanging them for other items.

Take the ancient Yir Yoront people of the Cape York Peninsula. They desperately needed stone axes for a range of daily activities: collecting firewood, making tools, constructing huts and climbing trees to gather honey (for an idea of how this might work, head along to the woodchop arena at Sydney’s Royal Easter Show). Yet, living as they did on a flat alluvial coastline, they didn’t have the materials to make these vital tools.

The best axes were made from a dense basaltic rock found close to what is now Mount Isa, where the rock was skilfully crafted into axe heads by the Kalkadoon people. But the Kalkadoon lacked the stingray barbs they needed for their preferred style of spear — which was excellent news for the Yir Yoront, who lived and breathed stingray barbs. It was also great news for the people who lived between the Kalkadoon and the Yir Yoront, since they could make a nice turn transporting the goods.

So the spears flowed down the trade route from the north, in exchange for the axe heads that flowed in the other direction. As the items got further from their source, their value increased, reflecting the effort put in to get them there.

A Yir Yoront would perhaps have given a dozen spears to secure one axe head, while a Kalkadoon might have offered several axe heads for one spear. Somewhere in between, you might have found someone exchanging five axe heads for eight spears, in the knowledge that one spear could be kept, and the other seven could be swapped for six axe heads on the other side of the territory (one to keep and five to exchange for another eight spears).

Capitalism—then and now

They may not have seen it this way, but the people who once moved the axes and spears around Australia were running businesses. They invested capital in the form of whatever they needed to trade to get their starting batch of merchandise and the labour capital to move it along the trade route, and their profit was the difference between what they were able to get for their goods at their destination and what it cost to get them there.

The more they could make for a given amount of capital, the better they'd be doing. So if traders found they could move more goods further along the trade route by travelling in a canoe, they'd make a better return on capital — so long as the effort put into making the canoe, spread over its useful life, was less than the effort of going the extra distance by foot.

The additional returns wouldn't last, however, because other traders would soon spot the new efficiency, get busy with their own canoes and compete away the advantage. The streamlined trade route would involve less work and, ultimately, the Kalkadoon and the Yir Yoront would find that spears and axe heads had become a little cheaper. Our enterprising canoeists might think this rather unfair, since it was their idea in the first place, but that's capitalism. They'd have to console themselves with the knowledge that it was good while it lasted, and they were the first not to be left behind by the march towards greater efficiency.

Capitalism is based on the idea that value, like water, will ultimately find its own level. Sooner or later, the true value of something — in terms of what it can do for people — will be recognised. And that's the essence of investing: you aim to buy something for less than it's worth, so that you can keep a portion of that value for yourself when it comes to be realised.

The modern world isn't much different. Nowadays we have roads and air freight instead of tracks and canoes, corporations instead of individuals, and contracts and lawyers instead of friendships and trust. But the basic economic arrangements whereby businesses use capital to provide others with the things they need, and make a bit extra on the side, haven't changed a bit.

Two forms of capital

The capital that finances business comes in two basic forms: debt and equity. The simplest form of debt is a bank loan, which confers the right to the repayment of a fixed number of dollars in the future and defined payments of interest in the meantime. Equity, on the other hand, gives its owners the right to everything a company makes over and above what it has to pay back on any debt. It can come in the form of direct business ownership or a share in a partnership, but for most of us it comes in the form of shares on the stock market.

There are various reasons why equity tends to provide higher returns than debt over the long term, although they're more variable in the short term. The first is that if a company goes bust, its lenders are the first to pick

over its bones (at least, after the government and a few others). Shareholders, by contrast, are at the bottom of the pile, and if the company's gone bust they'll typically get nothing. So when shareholders are deciding how to finance their business, they'll generally organise things so that they stand to get more than the lenders, to make this extra risk worth their while. Of course, they don't always get it right, but it's at least an aim, and this makes it a tendency across the whole economy over the long term.

Another reason is that banks ultimately borrow most of the money to make their loans from depositors (that's you, me and our savings), who also expect a fixed number of dollars back and interest in the meantime. So when a bank lends money to a company, it wants to know that the loan can be supported out of the company's current level of cash flow (or at least based on a very conservative view of the future), and the returns we can earn from our deposits are therefore similarly limited. That's the penalty you pay for knowing you can get your money back whenever you want it.

You can, of course, cut out the middleman and lend money to companies or governments directly, by investing in bonds (which are like IOUs). In this case you'd be taking it upon yourself to make sure the borrower can pay what it promises. The riskier the borrower and the longer before it pays you back in full, the more interest you'll require to cover the risks. But if you're sensible you'll make sure a company can at least cover the interest out of its current cash flow, because it certainly won't share any upside with you.

In contrast with this, the right to whatever's left over after the debts are paid is an unknown quantity, so buying a right to it entails risk. Shareholders can't just go along to a company and get their money back. They have to be patient while it makes its profits and passes them on, and they have to live with the fact that the profits might go backwards, thereby reducing their share of the pie.

Most of the world's capital doesn't have this kind of patience, because it's needed for buying things in the short term. And even the capital that can be this patient often isn't inclined to be; it's said that the sharemarket climbs a wall of worry, and it's undoubtedly true. There are always reasons why things are about to take a turn for the worse, but it can be hard to put your finger on where the next efficiency might come from — because it probably won't have been thought of yet. So when a company's owners (that is, the shareholders) are deciding how to finance their company, they tend to take a conservative view of what their equity might be worth and surprises tend to be on the upside.

Progress comes in fits and starts; some companies will miss out entirely and go bust, and even whole economies will grind to a halt for short, or sometimes depressingly long, periods of time. But overall, and taken over the long term, the march of progress has been unstoppable, and the owners of equity have been handsomely paid for putting their faith in it.

Triumph of the optimists

In their book *Triumph of the Optimists*, Elroy Dimson, Paul Marsh and Mike Staunton reviewed the data between 1900 and 2000 for 16 countries making up 88 per cent of the world's sharemarkets by value in 2000 (and, they estimate, at least that amount in 1900). Table 1.1 shows the real returns from the different assets, as well as the real 2000 value of 1 currency unit invested in 1900 in each asset group.¹

Table 1.1: asset returns 1900–2000

	Real returns from different assets			Real value in 2000 of 1 currency unit		
	1900–2000 (% per annum)			invested in 1900		
	Shares	Bonds	Cash	Shares	Bonds	Cash
Australia	7.5	1.1	0.4	1487	3.02	1.50
Belgium	2.5	−0.4	−0.3	12	0.67	0.74
Canada	6.4	1.8	1.7	526	6.06	5.49
Denmark	4.6	2.5	2.8	94	12.11	16.27
France	3.8	−1.0	−3.3	43	0.36	0.03
Germany*	3.6	−2.2	−0.6	36	0.11	0.54
Ireland	4.8	1.5	1.3	114	4.50	3.69
Italy	2.7	−2.2	−4.1	15	0.11	0.01
Japan	4.5	−1.6	−2.0	85	0.20	0.13
The						
Netherlands	5.8	1.1	0.7	297	3.02	2.02
South Africa	6.8	1.4	0.8	769	4.07	2.24
Spain	3.6	1.2	0.4	36	3.34	1.50
Sweden	7.6	2.4	2.0	1633	10.97	7.39
Switzerland**	5.0	2.8	1.1	138	16.27	3.02
UK	5.8	1.3	1.0	297	3.69	2.73
US	6.7	1.6	0.9	699	4.97	2.47
Average	5.1	0.7	0.2	153	2.04	1.19

* German bond and cash figures exclude 1922–23

** Swiss equities from 1911

As you can see, over the 101-year period shares comfortably beat bonds and cash in every country in the study. Indeed, in most cases, bonds and cash barely paid enough interest to keep up with inflation, and in a few cases they went backwards in real terms; we've even had to put the cents in to separate the countries out.

Shares, meanwhile, pay an initial dividend that typically starts off as less than the interest you can get from bonds and cash, but that tends to grow along with economic growth over the long term. Economic growth is generally measured as the growth in a country's economic output, or gross domestic product (GDP), and in most developed countries it seems to trot along at 2 to 3 per cent per cent above inflation. Australia is no different, with average real GDP growth of around 2 per cent a year during the 20th century. So with the Reserve Bank of Australia targeting inflation of between 2 and 3 per cent, you might reckon on economic growth of 5 per cent over the long term. Some companies will increase their dividends faster than this, some more slowly, and some will go bust — but overall and taken as an average, shares will benefit from this growth and it should (eventually at least) give them the edge over bonds and cash.

Sydney rents on the rise

Property is another 'real asset' whose returns (that is, rent) grow over the long term in line with the economy. When the *Beagle* sailed into Sydney Harbour in January 1836, Charles Darwin wrote: 'The number of large houses and other buildings just finished was truly surprising; nevertheless, every one complained of the high rents and the difficulty in procuring a house'.² Some things never change. Rents always feel high if you're paying them, but they're obviously limited to what people are earning — as is the amount a bank will lend you to buy a property. Over time, though, the earning power of property (the rent it can generate — or save you if you live there), taken as a whole, will rise roughly in line with the growth in average wages, which approximates to the growth in economic output.

Most of what's written in this book could also be applied to property. But there's a crucial difference between direct property investment and sharemarket investment: with a property you have management control over the asset, whereas with shares you don't. Control lets you do things to maximise your property's potential, but it can be expensive and time-consuming, and you could also stuff it up. On any basis, though, property investment is a specialist area and it's not what this book is about; we'll stick to shares.

Avoiding the peaks

After all this enthusiasm for the sharemarket, we should make clear that it's not all plain sailing. The fact you can't go along and get your money back may indirectly give shares their advantage, but of course it is also the thorn in their side. Breaking the 20th century up into decades, Dimson, Marsh and Staunton found that, across all 16 countries in their study, shares lost out to cash in 33 out of the total of 159 decades (note that the period 1900–1910 was excluded for Switzerland), or about 21 per cent of them. For periods of two decades, shares lost to cash on 10 per cent of occasions. For periods of three decades it was 6 per cent. And on just one occasion — Ireland between 1900 and 1939 — shares lost to cash over a period of four decades.

These longer periods of underperformance by shares need to be seen in context, because the most they lost out by was an average of 0.6 per cent a year over four decades and 1.0 per cent a year over three decades (Sweden between 1910 and 1939). Over two decades and one decade, though, the situation is more disconcerting. The worst two-decade performance (Italy between 1960 and 1979) and the worst one-decade performance (Spain in the 1970s) showed underperformance of 4.1 per cent and 11.6 per cent per year respectively — which would have chopped 57 per cent and 71 per cent respectively off your capital in relative terms. A total of six out of the 159 decades in the study would have seen shares more than halve in relative terms. Needless to say, you'll do a lot better over your investing lifetime if you manage to avoid such lengthy periods of underperformance.

The good news is that to do this you don't actually have to stay out of shares for that amount of time. You just have to avoid investing heavily at a peak to which the market may take a long time to return. There are two main ways to accomplish this. The first — and the simplest, since most people are saving throughout their working lives — is to space out your purchases. The second is to leave yourself a generous margin of safety between what you pay for a stock and what you perceive its value to be. If you can't find anything that fits the bill, you hold onto your cash until you can; shares will go up and down and good opportunities will eventually appear. Which of these mechanisms you favour will depend on your investing skills and the time and effort you're prepared to put into it. We'll look at this in chapter 2.

¹ E Dimson, P Marsh & M Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns*, Princeton University Press, New Jersey, 2002.

² C Darwin, *The Voyage of the Beagle*, 1839.



Chapter 2

Know what you know

'To achieve satisfactory investment results is easier than most people realize; to achieve superior results is harder than it looks.'

Ben Graham

In chapter 1 we established that, with a little care, the stock market is generally a good place for patient money to hide itself away. The question then becomes 'which stocks?', and the aim of this book is to help you work that out. Before you get into it, though, you need to make an honest appraisal of the skills you're able to bring to investing and the time and effort you're prepared to put in. More than anything else, how you do in the stock market will depend on not trying to do too much.

In this chapter we'll look at three different categories of investor. The first two — the 'know-nothing' and the 'know-something' investors — were so labelled by Warren Buffett in the 1993 Berkshire Hathaway annual report. They deal with the extremes of the knowledge scale, so we've added a third category to bridge the gap: the 'know-a-little' investor.

The know-nothing investor

Whether it be sending down an ace at Wimbledon, taking the chequered flag at Albert Park or soaking up the applause at the Sydney Opera House, we all have our dreams. And for almost all of us, dreams are where such experiences will remain. But it's one of the most astonishing paradoxes that investors with no knowledge at all, putting in no great effort, can beat most professional money managers at their own game.

It's hard to imagine that all those degrees and diplomas, the hours in the office, the meetings with management and the expensive research tools all come to nothing. Yet it's true. To come out ahead of the pros at investing is comfortably within everyone's reach — you just need to understand three basic points and be ready to embrace your limitations.

You see, most of the activity in the stock market involves one highly paid fund manager buying shares from another. Each of them will be investing a large slab of the nation's retirement savings and they'll each have

good reasons why they should do better than the other. They'll also have excellent marketing departments which will make these reasons sound very persuasive, and they'll pay generous commissions to financial planners to encourage them to spread the word. But (and here's our first basic point) for every trade there is a buyer and a seller and they can't both be right.

This would be fine if it cost nothing for the fund managers to have their fun, but (and this is our second basic point) it does cost; it costs a *lot*. With a typical Australian managed fund, you might start off by giving 5 per cent of your money to the financial planner who sold it to you (sorry — advised you to invest in it). Then the fund might take 1.5 per cent a year in fees, to cover the high pay packets and the substantial marketing budgets, and to provide some profits for the funds management company's shareholders. On top of this, a fund might spend one or two per cent of your money each year in brokerage commission on all the trading it does to try to justify itself. And if it does manage to come out ahead of the crowd after all this, the fund manager may take an extra cut of the winnings as a performance bonus.

All up, investing in a managed fund could easily cost you 2 to 3 per cent of your money each year, which might not sound like much — until you remember that, as we saw in chapter 1, the average advantage of shares over cash, for 16 sharemarkets around the world in the 20th century, was just under 5 per cent. So by giving your money to the pros, you might be giving away about half your advantage over cash, and this is likely to put a big hole in your investment performance over the long term.

Of course it would be okay if you could pick the funds that will do well, but how would you go about it? If you relied on your financial planner or were swayed by the marketing of a particular fund, you might be more likely to pick a poorly performing fund — because that would be the fund that leaked the most money in commissions and marketing expenses (which will likely be paid for by higher fees).

Funds management groups make a point of differentiating themselves according to their past performance, because there's not much else to go on and because, out of a stable of five or 10 funds, they'll normally have one or two that have done pretty well over the past few years. So they'll push them hard, until they slip back and others take up the mantle. Every now and again, a fund with a consistently poor track record will be closed down and a new one started up to replace it. But it's all just a sham to try to deceive us: the evidence is that past performance has little bearing on future performance, except in so far as it relates to costs. In other words, the only really persistent factor in fund returns is how much they leak in costs: over the long term, the funds with the lowest charges almost invariably end up beating the funds that charge most.

Of course, there are some really good fund managers out there, but it typically takes a couple of decades and a large dose of hindsight to tell who they are. It is possible to spot them in advance, on account of the approach

they take and the skill with which they implement it — but if you can spot these things, you're likely to be in the know-something investor category that we're going to discuss in a moment. If your adviser doesn't take commissions and can therefore be relied upon to give impartial advice, and you trust them, then you might follow their recommendation. But always remember that over the long term it will take a very good fund manager to overcome an extra percentage point or two a year in fees — so always check the fees carefully.

After bashing the pros, it's only fair to acknowledge that private investors typically do even worse. People tend to be hugely overconfident in their ability to predict short-term share price movements (as we'll see in chapter 3), and this leads them to trade far too much and to leak even more than the professionals in brokerage. Research by Terrance Odean and Brad Barber into a large US broker's customer accounts between 1991 and 1996 showed that the average account managed a gross annual return of 18.7 per cent — just ahead of the index return of 17.9 per cent. This outperformance was put down to a private investor bias towards smaller stocks that happened to outperform over the period. But wherever it came from, the advantage didn't last long, because after costs the performance of the average account fell to 16.4 per cent. Even more graphically, the net return of the 20 per cent of portfolios that traded the most (which turned over their portfolios at least 2.7 times a year) was just 11.4 per cent, while the 20 per cent of portfolios that traded the least (averaging portfolio turnover of just 2 per cent a year) almost matched the average gross annual return, with a return of 18.5 per cent. As Odean and Barber put it (note that managed funds are known as mutual funds in the US):

The investment experience of individual investors is remarkably similar to the investment experience of mutual funds. As do individual investors, the average mutual fund underperforms a simple market index (Jensen, 1969; and Malkiel, 1995). Mutual funds trade often and their trading hurts performance (Carhart, 1997). But trading by individual investors is even more deleterious to performance because individuals execute small trades and face higher proportional commission costs than mutual funds.¹

The third basic point is that the net sum of all the buying and selling on the stock market is zero. The market doesn't notice who owns the shares, it just goes up and down according to a combination of perceived value and prevailing mood. So, all you have to do to get the average performance, before costs, is to build a portfolio that mimics the composition of the overall market and, er, leave it alone. Simple as that.

Doing this costs you next to nothing — just some brokerage to buy the stocks initially and to reinvest money that gets returned to you over the years through takeovers and such. So you get the average performance before costs and have lower costs than most, meaning that you'll come out ahead of average. And you'll get further ahead of the average as time marches on and charges weigh increasingly heavily on other people's performances.

If you wanted to be precise about it, you could invest via what's known as an index fund. These track a particular index of stocks and, if you want to match the overall market, you'll want an index that represents the broad market — such as the All Ordinaries index or the S&P/ASX 200 index (which, in fact, accounts for over 90 per cent of the All Ordinaries). As the stocks in the market wax and wane, so too will the holdings in the index fund, so portfolio weightings remain in line with the index and very little trading is required. Using a fund will involve an annual management fee, but this should be much less for an index fund than for an actively managed fund.

You can save yourself even the small costs of an index fund, though, if you're prepared to put in a little effort yourself. At the simplest level, this could be finding out the exact weightings of the stocks in a particular index and building your own index fund. As you can see from table 2.1, almost 40 per cent of the market was made up of just 10 stocks at the time of writing, so it shouldn't be hard to get quite close.

Table 2.1: top 10 stocks in the ASX All Ordinaries index on 29 February 2008

Stock	Share price (\$)	Market capitalisation	Proportion of index
		(\$ billion)	(%)
BHP Billiton	39.58	132.8*	10.0
Rio Tinto	137.00	62.5*	4.7
Commonwealth Bank	42.13	55.4	4.2
National Australia Bank	28.85	47.0	3.5
Westpac	23.32	43.7	3.3
ANZ	22.00	42.2	3.2
Woodside Petroleum	57.00	39.2	2.9
Woolworths	28.99	35.1	2.6
Westfield	17.50	34.0	2.6
Telstra	4.87	30.2**	2.3
Total			39.3

* The market capitalisations of BHP Billiton and Rio Tinto are, in fact, about \$208 billion and \$159 billion respectively when their London-listed stock is taken into account.

** Telstra's market capitalisation is about \$52 billion when the Telstra Instalment Receipts issued in the 'T3 offer' are included, together with their final \$1.60 instalment payable by 29 May 2008.

As the percentage weightings of the stocks get smaller, they will matter less to the performance of your overall portfolio. It won't affect your relative performance too much, for example, to leave out a stock with a weighting of just 2 per cent. And you don't have to buy every stock in every sector. You might reckon, for example, that a couple of big banks and a regional bank would give you enough exposure to that sector. And you don't have to be a slave to the index in any case. If you get within 30 per cent of it over a couple of decades, you'll be beating most people.

The index is also, in part, merely a coincidence of the large global companies that happen to be listed in Australia, so there's no real reason to match it anyway (except to keep up with the Joneses — or a little ahead of them, of course). And your exposure probably shouldn't be limited to Australia anyway. Fundamental financial theory says that you should aim to match your assets with your liabilities and your income with your expenditure, and you probably spend half your money on cars made in Japan, soft drinks formulated in America, dishwashers made in Germany and a whole host of other stuff made in China. To some extent this is balanced by the Australian companies making profits abroad, but you might decide that some overseas exposure was appropriate — so you might put some money into a bunch of large Australian blue chips, some into a fund tracking an index of smaller stocks, and some into a cheap fund investing internationally.

You could also make use of some of the larger listed investment companies, such as Australian Foundation Investment Company and Argo Investments, which are internally managed and have very low annual management charges. You need to be slightly careful with these, though, because they're priced like companies rather than funds, and their shares don't necessarily reflect the value of their underlying investments. You really need to value them as you would other companies, and that takes you into the realms of the know-something, or at least the know-a-little, investor (see chapter 6 for more about asset-based share valuation).

One way or another, then, if you embrace your limitations and don't try too hard, it's pretty easy to do better than most in the stock market. You just have to spread your bets over a large number of stocks in a broad range of sectors, with half an eye to the composition of the index, and make sure you keep your costs low.

There's not much more we can say for the know-nothing investor — at least not without tempting you to try to do too much. Take a quick look at the section below on the know-a-little investor, to see if that's for you, but be careful. Otherwise, we hope you've found this book worthwhile — make good money, but most importantly, enjoy all the time you have left over for other things. Oh, and try not to be too smug about it.

The know-something investor

As a know-nothing investor, then, you can beat the pros at their own game without even breaking a sweat. All you have to do is settle for an average performance (before costs), thereby relinquishing any hopes of making a motza. And there's the rub. Human nature being what it is, many of us want to have a go at doing a bit better, even if we know that most of us will fail — and end up doing worse as a result of trying.

Trying to find the stocks to do a bit better is what the rest of this book is about so we won't dwell on it too much here. But, in terms of general approach, it's worth saying that there are ways of limiting the damage if you don't quite come up to scratch, and value investing, by its nature, encompasses most of them. For one thing, it's a patient approach that should tend not to do much trading, so you shouldn't leak much in costs. And, for another thing, the focus is on stocks where there appears to be a wide margin of safety (the gap between price and value, as we saw in chapter 1), so the damage should be limited if you get things wrong.

The main difference between the know-nothing and the know-something investor — at least in terms of outward appearance — is the degree to which their portfolios will be diversified over a number of stocks and sectors. Know-nothing investors are concerned that their performance might come in below par, so they work hard at spreading the net far and wide, thereby making an average performance more likely; know-something investors, on the other hand, are confident of coming in above par, at least with their most favoured stocks, so they focus their portfolio on those few stocks, thereby making an average performance less likely.

Of course, a certain degree of diversification is always required to cope with the uncertainty of the future. We'll look at this more closely in chapter 9. When Buffett introduced the know-something investor, he talked about having five to 10 stocks, and that's probably about right — although five should very much be seen as a minimum, for very capable investors making selections with large margins of safety.

As well as your investing skills, your personal circumstances will make a big difference to the risks you're prepared to take. If you have no dependants and you're at an early stage in your investing career, investing a relatively small amount compared with your likely future earning power, then less diversification might make sense. But it's worth remembering that even at a healthy rate of 15 per cent a year, it will take five years to double your money, so it will seriously impede your wealth-building if you keep going back to the beginning.

The know-a-little investor

The know-nothing and know-something investment approaches both have much to recommend them, but they really apply to the extremes on the scale of investment capability. Most of us, or at least those of us with some interest in the stock market, will find ourselves somewhere in between, as know-a-little investors.

This category runs all the way from someone putting 95 per cent of their money into index funds, with the remaining 5 per cent going into a small company about which they have specialist knowledge, to someone putting 85 per cent of their money into a small selection of stocks they consider undervalued, with 15 per cent spread between the four big banks, to give exposure to that sector (about which they know nothing).

If know-a-little investors can define the limits of their knowledge accurately, they can get the best of both worlds — above-market performance in the areas they understand, and a cheap, average performance in the areas they don't. As Buffett put it:

What an investor needs is the ability to correctly evaluate selected businesses. Note that word 'selected': You don't have to be an expert on every company, or even many. You only have to be able to evaluate companies within your circle of competence. The size of that circle is not very important; knowing its boundaries, however, is vital.²

So what exactly do you need to know to bring a stock within your circle of competence? Well, you need to know enough to be able to value the company more effectively than most others in the market. That doesn't mean you need to know everything about a company's operations or the tiniest detail about a competing product expected later in the year. You can evaluate Cochlear, for example, without knowing exactly how a titanium implant can be fused with living bone in your ear, and you can evaluate MYOB without knowing how to write computer software. In fact, too much detailed knowledge about an industry can sometimes make it hard to see the wood from the trees.

What you really need is to understand why people are (or are not) prepared to pay up for a company's products or services, and why they might (or might not) continue to do so in preference to the competition. To answer these questions, you inevitably need some knowledge about a company and its competitors, customers and suppliers, but it's more to do with the factors that go into the products and how they're received by customers than the precise details of how they work. We'll look more closely at all this in chapter 7. There will be areas where you can't even take it this far without very specialised knowledge and, unless you have that knowledge, you'll need to leave these situations in the too-hard basket.

As well as having a feel for a company's competitive position, you'll also need to know how it makes money, and this requires a basic understanding of company accounts, something we'll look at in chapter 5. Finally, you need to know how to pull the various elements together into a valuation, and that's what we'll look at in chapter 6.

Every bit as important as actually having this knowledge and skill, however, is the ability to implement it in a rational fashion — and, as we'll discover in the next chapter, this is harder than it sounds.

¹ B Barber & T Odean, 'Trading is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors', *The Journal of Finance*, vol. 18, no. 2, 2000.

² W Buffett, *Berkshire Hathaway annual report*, 1996.



Chapter 3

Why value investing works — and why it's hard

'I can calculate the motion of heavenly bodies, but not the madness of people.'

Isaac Newton

As we saw in chapter 1, markets are capitalism's price-setting mechanism, and the hunt for value is how they work. If something is priced below its value, then people will tend to buy it, thereby putting upwards pressure on its price, and vice versa. In this way, wandering stock prices tend to be pulled back towards their underlying value (or at least the market's perception of it, as we'll see in a moment) and the further prices get from value, the greater will be the impetus to take them back there.

Depending on the number of participants in a market, the availability of information and the frequency with which prices are set, this should happen more or less efficiently. With half a dozen traders meeting at a watering hole every third full moon, it might all happen very slowly, enabling some people to make oversized profits. But modern stock markets bring together thousands of people, with mountains of information and real-time prices. So what chance have we got to nip in before a pricing anomaly disappears?

Inefficient markets

Well, as is so often the case in investing, less appears to be more. You see, a funny thing happens when prices are quoted minute-by-minute throughout the working day: people start to care less about the underlying value of the shares themselves and instead become fixated on where they think their prices are headed.

Running against value

Some people get so focused on prices that they ignore value altogether. Typically they'll attempt to predict future price movements according to past movements, with the assumption generally being that stock prices have some kind of momentum that will tend to keep them going in one direction before they head off in the other. This can be very beguiling, since every share price chart looks like this with hindsight, and we're used to seeing things exhibiting trendlike behaviour in the physical world — like a ball rolling along the ground or a block of ice melting. But share prices don't have mass, so they can't have any momentum and they can't absorb

energy. Instead, a share price is just the level at which two people are prepared to trade a share at any particular time, and prices can jump from one level to another in an instant without there being any physical connection between the two.

Occasionally trend-following might become a self-fulfilling prophecy: if people are tending to buy because prices are rising, this might cause them to rise further in the short term. But the more this happens, the more it will store up trouble; the further a stock price gets from its underlying value, the sharper the pull-back is likely to be. When the trend-followers eventually change tack on an overvalued stock and start selling, they'll find there's no-one to do the buying.

This kind of speculation, where you might willingly pay more for a stock than it's actually worth, in the hope of passing it on to a 'greater fool' at an even higher price, would have struck the Yir Yoront and the Kalkadoon as a very dangerous game to play. It also strikes us as a dangerous game to play. It's rather like chain letters and Ponzi schemes: some people will make money along the way, but sooner or later most will find that there isn't in fact a greater fool after all. And because a stock's underlying value will ultimately be realised, the net effect for all investors of buying a stock above its value will be a loss, while the net effect for all investors of buying a stock below its value will be a gain.

Few people actually take this pure price-dependent approach, and they don't count for much of the money in the market. But they trade a lot, and they often magnify their exposures by borrowing money and using derivatives, so they can have a disproportionate effect on prices. And the effect is all good as far as value investors are concerned, since it tends to drive prices away from value, exaggerating movements and making for better opportunities.

Running ahead of value

The greater part of the market is interested in value, but many people cause trouble for themselves by focusing on trying to guess where the value will be realised soonest. Investing profits can come either as a result of buying an undervalued stock and holding onto it, taking the extra returns it generates, or because the market reappraises its valuation and offers you a better price, thereby enabling you to bag a quick profit and move on to other opportunities.

As we saw in chapter 1, the sharemarket has rewarded patient investors with an annual return of about 10 per cent over the years, after inflation, and by buying undervalued stocks you can maybe get this up into the high teens. Yet individual stocks tantalise us by moving that much in days or even seconds. You don't need much in the way of greed and overconfidence to be off trying to catch these big short-term movements, and most people

have generous servings of both.

So people start thinking less about value, and more about the market's perception of value, and most particularly which stocks the market seems likely to value higher in the near future. Much of the trading that goes on is made up of the market chasing its own tail like this. The media and the stockbrokers love it, because it gives them lots to talk about, and the allure of short-term profits is tough to resist.

It can be hard to notice when people — or even you — are taking this approach, because much of the talk will be superficially about value, but it will really be about how others see the value and how this is likely to affect the price in the short term. So you'll hear things like 'Glasshalfull.com looks set for a re-rating as its growth trajectory becomes more apparent' or 'earnings at Last Gasp Limited should recover in fiscal '09 as synergies start to flow from the takeover of Mirage'. And there's actually nothing much wrong with doing this; it's just that it's of dubious benefit, it will probably make you trade too much and, most of all, it will tend to distract you from the hunt for real value.

In his painting *The Treachery of Images* (shown in figure 3.1), Belgian surrealist René Magritte presented a stylised image of a pipe, with the caption 'Ceci n'est pas une pipe' ('This is not a pipe'). Most people have got so used to thinking of an image of an object as being the object itself that it takes us a few moments to work out what he's going on about. But he's right of course (as he put it himself: 'Just try to stuff it with tobacco!'), and it just goes to show how perceptions can get mixed up with reality.

If you spend too much time thinking about the market's perception of value, rather than the reality of value itself, then you'll start to reflect — and reinforce — its own biases. As with any situation where people are trying to copy one another, such as popular fashion or music, the sharemarket's tendency is towards the crude and the obvious, with subtle distinctions being lost. So the biggest misvaluations — and therefore the best opportunities — will be where the greatest subtleties are most overlooked. But you'll obviously overlook them yourself if you worry too much about the market's view of things.

<fig 3.1 from p.27>

Figure 3.1: *The Treachery of Images*



Museum Number 78.7, *La Trahison des images (Ceci n'est pas une pipe)*, 1929, Magritte, René. Los Angeles County Museum of Art, purchased with funds provided by the Mr and Mrs William Preston Harrison Collection. Photograph © 2007 Museum Associates/LACMA.

The crudest and most obvious factor in a stock's pricing is its forecast earnings for the next couple of years, and the market's focus on this is what leads to its famed short-termism. As we'll see in the next chapter, though, a company's real value has more to do with how much cash it can generate over the long term. So the market frequently throws up opportunities where a company's short-term earnings prospects run behind its long-term potential to generate cash — but to take advantage you need to give up shooting for short-term profits yourself, and focus on the reality of value rather than the market's perception of it.

Much of what we'll look at in this book, therefore, will be less about the short-term factors and more about understanding a company's cash flow and the business fundamentals that might support it in the long term.

Running alongside value

The final group we'll look at comprises the value investors. These worthy souls also account for a large share of the money invested in the market, but rather less of the trading since they tend to shift their money around less than the other two categories.

Value investors are those that have given up trying to guess how the market will value a stock, and are simply focused on doing that job as accurately as possible themselves — the idea being that if you correctly identify an undervalued stock, it doesn't matter what the market does with it, because you can just hold it forever and collect its superior returns.

We can illustrate this with Aristocrat Leisure. In June 2003 it was probably the most hated stock on the Australian Stock Exchange. The share price had fallen 85 per cent or so; the senior management team had been given the sack; and a fiasco in South America had cost shareholders a bundle. At its low point the stock hit 76¢, but it spent a couple of weeks at around a dollar. Yet in the four years since, it has made total earnings per share of 190¢ and paid ordinary dividends of 114¢. In 2007 Aristocrat made earnings per share of 53¢ and paid ordinary dividends of 40¢.

It would have been quite a trick to have moved past all the negative sentiment back in 2003, to see the value and buy the stock, and even more of a trick to have held on ever since. But just suppose you had bought back then at \$1; would you really care if the share price hadn't budged? Why should you? You'd be making 40 per cent a year in dividends on the money you invested — if anything you'd be delighted with the opportunity to reinvest those chunky dividends in such a cheap stock.

The value can come through irrespective of what the market does, and that puts time on the value investor's side. More often than not, though, other investors will come to recognise the value of your stock and offer to buy it from you at a higher price, giving you the chance to bag a profit and move on. And this, in fact, is what has happened with Aristocrat. At the time of writing, the stock is trading at \$10.40, so anyone who did buy at a dollar in 2003 could now take a profit of more than 10 times their money — or about 72 per cent a year (more if you include dividends) — before recycling the money into a new opportunity.

So in fact even value investors are hoping to bring their returns forward a bit, by having the market agree with them and increase the price of their stock. The difference between value investors and the previous category is that value investors aren't trying to second-guess the market; they simply reckon that the best chance of having a stock price move to a higher level is to find one that's currently priced a long way below its underlying value.

We've already come across this gap between price and value in the first two chapters, and it will keep popping up throughout this book. Ben Graham dubbed it the 'margin of safety', and dedicated the concluding chapter of his renowned book *The Intelligent Investor* to it; Warren Buffett has called it the 'cornerstone of investing success'; and against this our own endorsement seems a little feeble, but it really is the nub of it. The greater the margin of safety, the more money you stand to make, and the more likely you are to make it sooner rather than later. It also provides compensation in the form of higher interim returns if you do have to wait a while before the value is reflected in the price.

To give yourself the benefit of this wonderful margin of safety, all you need to do is ignore the market's chatter, keep a clear focus on the true underlying value of a stock, and wait until its price gets a long way below it. It sounds simple, but in practice it's far more difficult than it sounds.

Irrational behaviour

There's an old Japanese tale about a young archer who shows off to an aged master by scoring a distant bullseye and then splitting his first arrow with a second. The master is unimpressed and leads the young man up a mountain. Near the top there's a deep chasm crossed by a derelict bridge. The old man steps onto the shaky bridge, picks out a nearby tree and hits it squarely with his arrow, but the young pretender can't muster the courage to step onto the bridge, let alone shoot an arrow. 'You have great skill with your bow,' said the old master, 'but little control of your mind.'

And so it is with investing. You can know everything about valuing companies, but it'll come to nothing if you can't apply it rationally when the heat is on. Human behaviour is directed by a combination of evolutionary hardwiring and developmental programming, and you can see both in everything we do. The trouble is that

stock market investing hasn't really been a survival factor throughout human evolution, so we haven't developed behaviours appropriate to it. Instead, we tend to co-opt a range of other behavioural responses that we picked up in the more important pursuits of hunting, gathering and reproducing, and they're often completely inappropriate.

Greed, fear and overconfidence

The twin forces of greed and fear were no doubt a great help to cavemen balancing up the dangers of mammoth-hunting with the sustenance provided by a juicy mammoth steak, but they won't help you to make a cool assessment of the value of one of your holdings when it doubles and halves and then halves again.

Overconfidence is another problem. As two of the pioneers in the field of behavioural finance, Werner De Bondt and Richard Thaler, put it, 'Perhaps the most robust finding in the psychology of judgment is that people are overconfident'.¹ Instances are easy to find. In 1981, for example, 82 per cent of drivers were found to rate themselves in the top 30 per cent.² And of 2994 entrepreneurs surveyed in 1988, 81 per cent believed their chance of success was at least 70 per cent, and 33 per cent believed their chance was 100 per cent, while in reality about 75 per cent of new businesses no longer exist after five years.³

Presumably human propagation has been better served by action over inaction: mammoth-hunting was no doubt very dangerous, but it would have pulled the ladies and fed their offspring better than sitting in the corner of a cave going hungry. In the stock market, however, overconfidence leads to rash decisions and too much trading.

Not too far removed from overconfidence is commitment tendency, which tends to make us more optimistic about things we've already committed to. The behaviour was graphically illustrated by Canadian psychologists Robert Knox and James Inkster, who found that gamblers at a racetrack consistently felt more confident about their horse's chances of success if asked just after they'd placed their bet than if asked just before.⁴ Asked to rate their chances on a scale up to seven, those asked after betting gave an average rating of 4.81 — a full 38 per cent higher than the 3.48 average of those asked before betting. This tendency may have encouraged continuity of action among cave-dwellers and helped them to build important relationships, but falling in love with a stock won't help you assess its value objectively.

We all like to be proved right, to ourselves as well as to others, and when the story on a stock you've bought changes for the worse and the price starts lurching downwards, it can be all too easy to start twisting the story to justify your stance. This is especially problematic for value investors, because the name of the game is taking a contrary position, effectively saying 'I'm right and the market's wrong'. So, as the price falls, it's easy to say 'I'm still right and the market's even wronger'. And this is often the correct stance to take — which is exactly

why's it's so hard to spot when it isn't. One way to deal with this is to write down your reasoning when you buy a stock, along with a timeline of roughly what you expect to see from it — at the very least, this should show you when you're veering away from the straight and narrow.

Don't fall in with the sharemarket crowd

The ability to think independently is particularly important — and particularly hard. In 1954 the Polish-born American psychologist Solomon Asch ran a series of experiments in which subjects were put in a classroom with a number of others (who were all stooges) and asked to pass judgement on the relative lengths of lines displayed before them. The stooges were directed to give incorrect answers on 12 out of a total of 18 tests and, overall, subjects assented to the incorrect consensus 37 per cent of the time compared with the 1 per cent that was recorded with no peer pressure.⁵

In 2005 a version of the Asch experiments was conducted on subjects in an MRI scanner. When the subjects made a correct observation, the visual perception part of their brain was seen to fire. But when they followed the crowd with an incorrect observation, the social/emotional part of the brain fired rather than the decision-making part (the latter being what you'd expect for a barefaced lie), suggesting that the root of the crowd-following behaviour may lie in the subconscious.⁶

In the context of human evolution, going along with the consensus has generally been a smart move. For one thing, the majority opinion — in terms of such things as where the food was and when the tigers were likely to return — had a good chance of being right. And, for another, wandering around the cave-dwellers' world alone probably wouldn't have left you much time to feel smug even if you were right.

But crowdlike behaviour in the stock market causes people to trade shares for reasons other than their underlying value, and that leads to mispricings; the mispricings will lead to someone losing out; and, because they're the ones paying over the odds or selling for too little, it'll ultimately be the crowd followers that do the losing.

Typically it'll start very innocently. A company, Flatters-2-Deceive Ltd, produces a series of good results and its share price rises — for the very good reason that its underlying value has increased. But, after a while, the price rise itself becomes the news and a feedback loop sets in. It becomes accepted wisdom that Flatters-2-Deceive is 'a quality company'. And when there's a choice between saying something positive or negative about the stock, brokers and journalists tend towards the former because, after all, it's a quality stock and they don't want to look stupid.

If you can see all this happening, you'll have gone a long way to avoiding it, but there are other things you can

do, such as taking a step back from the hurly-burly of the market. Some very successful investors have been conspicuous in doing this. Warren Buffett is happy in Omaha, for example, and Platinum Asset Management's Kerr Neilson has given it as a reason for basing an international funds management business in Sydney. We won't suggest that everyone should head off to the back of Bourke, but you certainly needn't try to be in the thick of things. You should also be selective about the media you watch and read and, if you talk to a broker, try to find one who shows a healthy scepticism of the latest fads (like four-leaf clovers, they do exist, but they can be hard to find).

The gambler's ruin

Perhaps the most pernicious of all psychological influences on investing, though, is a phenomenon known as 'intermittent reinforcement', made famous by the behavioural psychologist B F Skinner.

Building on the work of Ivan Pavlov (who, you might remember, got his dogs to drool at the ringing of a bell), Skinner found that rats and pigeons placed in one of his experimental boxes would learn to press a particular lever if they were given a food pellet each time they did so. After the food supply was stopped, they'd continue to press the lever for a short time, before giving up. What was particularly surprising, though, was that if the food pellets were released only some of the time, before being discontinued, the animals were much slower to give up the lever-pressing behaviour.⁷

You can see the effects of this in many aspects of human behaviour. If your team won the grand final once every decade or so, you'd probably follow them more avidly through the lean times than if you were used to them winning every year — after all, another win might be just around the corner. And if you fancied someone, you might make a start by complimenting them and smiling at them a lot, but you'd probably have more success if you ignored them every now and again as well. Las Vegas was built on intermittent reinforcement (just substitute a poker machine for one of Skinner's experimental boxes and you'll get the picture), and the phenomenon also rears its head in the stock market.

There's nothing like buying a stock that quickly doubles or more, for example, particularly as it happens only rarely. And that's what keeps us trying to recreate the conditions that provided the success, even after many such attempts have failed. This is how all sorts of dubious 'investing strategies' take root, not to mention stock market bubbles.

Recognise your emotions

These problems are all tied up with human nature, so it's impossible to eradicate them. And for that we should be grateful. Not only does it help make the world an interesting place, it also means we'll always have an irrational stock market in which to invest. But that's the fundamental irony of investing: irrational human behaviour creates the opportunities, but to take advantage of them you have to be rational and inhuman.

And whenever you try to put a curb on a natural process, there's a danger you'll overshoot. If you worry too much about your crowd-following tendencies, for example, you could end up going against the consensus opinion just for the sake of it — which might itself be a mistake.

Probably the best way to deal with your emotions is to learn to recognise them, so you can get a feeling for when they might be getting the better of you. If you feel yourself getting a bit overexcited, then put it all to one side and go and do something else. However it might have been for cave-dwellers, in the stock market it's best to favour inaction over action.

¹ W F M De Bondt & R H Thaler, 'Financial decision-making in markets and firms; a behavioural perspective',

² O Svenson, 'Are we all less risky and more skilful than our fellow drivers?', *Acta Psychologica*, vol. 47, 1981, pp. 143–148.

³ A C Cooper, C Y Woo & W C Dunkelburg, 'Entrepreneurs' perceived chances for success', *Journal of Business Venturing*, vol. 3, no. 1, 1988, pp. 97–108.

⁴ R E Knox & J A Inkster, 'Postdecision dissonance at post time', *Journal of Personality and Social Psychology*, vol. 8, no. 4, 1968, pp. 319–323.

⁵ S Asch, 'Opinions and social pressure', *Scientific American*, vol. 193, no. 5, 1955, pp. 31–35.

⁶ G Berns et. al., 'Neurobiological correlates of social conformity and independence during mental rotation', *Biological Psychiatry*, vol. 58, 2005, pp. 245–253.

⁷ B F Skinner, *Science and human behavior*, The Macmillan Company, 1953.



Chapter 4

What is value?

'Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted.'

Albert Einstein

As we've seen in the previous chapters, value investing is about buying stocks for less than they're worth. The approach works because human beings just aren't very good at it, but that is also what makes it hard. To be successful you need to do two things: first, you need to control your emotions so you can make objective decisions; and second, you need to be able to pick out a few undervalued stocks.

There's not a lot we can do to help with the first part, except to point out the worst potential pitfalls, as we did in the previous chapter, and suggest that you keep a close eye out for them sneaking up on you. Hopefully we can, however, help with the second part — how to pick out a few undervalued stocks. We'll set the tone right away, though, by saying that it's an inexact science at the best of times, and utterly impossible at others.

The utterly impossible situations are easy: as we saw in chapter 2, if you don't feel you can have a reasonable stab at valuing a stock, you can just toss it into the too-hard basket and revert to being a know-nothing investor. If it's in an obscure area, then that'll just mean ignoring it. But if the sector is a significant part of the economy and you feel you need some exposure for the purposes of diversification — as you might with banks, for example — then you can just hedge your bets across a few stocks, spread out your purchases, and be done with it.

The inexact situations include everything else, because there's no such thing as an exact valuation for a stock. Getting to grips with this inexactness is absolutely critical to investing success. Most importantly, it means that when you do invest in a stock, you'll want a large margin of safety so you can be wrong about a few things and unlucky about some others and still come out okay.

Large margins of safety don't grow on trees, however, so you need to be very fussy about your selections. You might find just one or two really good opportunities a year, but you'll need to work hard to find even them, scanning the business pages, reading publications such as *Intelligent Investor* and doing your own research. When you find them, however, they should scream value to you almost any way you look at them.

So you need some quick and easy valuation tools by which to filter opportunities, to see if they're worthy of more research. By focusing on fewer really interesting opportunities, you'll then be able to spend more time thinking about their long-term business advantages and disadvantages, which are what will really make the difference to a stock's value. We'll look at these valuation tools in chapter 6, but to make any sense of them we first need to ask ourselves a more basic question: what exactly is value, anyway?

The fundamental basis of value

For the people of the Yir Yoront and the Kalkadoon, whom we met in chapter 1, value was a sharp stone axe or a reliable barbed spear. These tools helped them to survive in the bush, and their value was determined by what they could do and what had to be given up to procure them. So a complex system of barter developed, incorporating these and a host of other items, whose value varied as they moved around the continent.

In those days everything was relative, but now we have hard (or at least hard-ish) currency against which to measure everything. With the help of money, anything that can be traded can be given a value in monetary terms. And although some things can't be bought (as the Beatles famously explained about love), rights and obligations feature large on the list of tradeable items — which is where shares and other financial securities come in.

Stocks and shares are little bundles of legal rights and obligations. Most importantly, they confer the right to receive money in the future, and it's this ability to put money in your pocket that gives them their value. Specifically, the value of a stock is the value of each of those future bits of money all added together. This, though, is where things start to get a bit tricky, because the value of money you're going to receive in the future depends not only on how much it is, but on when you actually receive it and on the return you plan to make in the meantime. We'll look at these three elements separately.

When you receive the money

The reason money is worth more the sooner you get your hands on it is that it can be used to make more money in the meantime. You could buy an ox and plough your field more quickly, or a boat or truck to deliver goods, or a shop from which to sell things. In short, money has a value because it can be put to work doing things and, until you get it, it's working for someone else, not you.

This principle is known as the 'time value of money', and we can flesh it out with an example. We'll assume that all money generates a return of 10 per cent a year (and costs that amount to borrow since the lender has to give up that return). On that basis, if I have \$100 now, what will it be worth in five years' time? The answer is set out in table 4.1.

Table 4.1: value of \$100 invested at 10 per cent for five years

Year	Annual return (10% of		
	Opening balance (\$)	opening balance; \$)	Worth at end of year (\$)
1	100.00	10.00	110.00
2	110.00	11.00	121.00
3	121.00	12.10	133.10
4	133.10	13.31	146.41
5	146.41	14.64	161.05

The sum can be written out as:

$$100 \times 1.10 \times 1.10 \times 1.10 \times 1.10 \times 1.10 = \$161.05$$

We multiply by 1.10 each time because this has the effect of keeping what we had before (the 1) and adding 10 per cent (the 0.10). If you multiply \$100 by 1.10 five times, you'd normally write it in shorthand as $\$100 \times 1.10^5$, and the answer comes out as \$161.05.

But here's the clever bit. If someone offered you \$161.05 in five years' time, how much would you pay them for it now? The answer goes like this. The money you pay now is either money that won't be earning returns for you at 10 per cent a year, or it's money you'll have to borrow and on which you'll have to pay interest at 10 per cent. Either way, paying out money now costs you 10 per cent a year until you get it back. So, to buy a cash flow of \$161.05 in five years' time, you'd pay up to \$100, because if you'd kept the \$100 (or had not borrowed it), you'd have turned it into \$161.05 over five years (or saved yourself that amount).

The 10 per cent you plan for your money to make each year, incidentally, is called the 'internal rate of return' or the 'discount rate', depending on which end of the sums you're coming from, and we'll have more to say about it shortly. For now, the key point is that a payment of \$161.05 in five years' time would have a value today of \$100 if you wanted it to deliver a return of 10 per cent a year. If you paid more than that then you'd make less than 10 per cent; if you paid less, you'd make more than 10 per cent; and if you paid a lot less, you'd make a lot more than 10 per cent. That's value investing.

Multiple payments

Of course, most securities have more than one payment to consider, which means that to get the total value you have to work out the value of each individual payment and then tot them all up. Imagine, for example, that I offered you a bond paying \$8 a year for the next four years, and then \$108 at the end of the fifth (comprising the final \$8 interest, and the \$100 face value). How much would you pay for this bond if you wanted to make 10 per cent a year? We've set out the working in table 4.2.

Table 4.2: the value of a five-year \$100 bond paying \$8 a year

Expected			
Year	payment (\$)	Discount factor	Value now (\$)
1	8	$1 / (1.10)^1 = 0.9091$	7.273
2	8	$1 / (1.10)^2 = 0.8264$	6.612
3	8	$1 / (1.10)^3 = 0.7513$	6.011
4	8	$1 / (1.10)^4 = 0.6830$	5.464
5	108	$1 / (1.10)^5 = 0.62094$	67.0607
Total			92.42

As you can see, the value comes to somewhat less than the \$100 face value, because the \$8 payment each year is less than our targeted return (which would be \$10 a year on a \$100 outlay).

Repeating payments

When you get a payment that repeats every year, forever, something really handy happens: the sum of all the individual payments simplifies down to just one payment divided by your discount rate. So if you have a security paying 10¢ a year, forever, and you decide you want a return of 10 per cent a year, then the security's value is 10¢ divided by 10 per cent (that is, 10 divided by 0.1), which is 100¢. And the sums even have the decency to remain pretty simple if you assume growing payments — at least if you assume they'll grow at the same rate each year. In this case, you just divide the first payment by the difference between the discount rate and the growth rate (the growth effectively offsets part of the discount rate); see table 4.3.

Table 4.3: growth in payments offsetting the discount rate

First year's payment (€)	Annual growth in payment (%)	Discount rate (%)	Net discount rate	
			(discount rate minus annual growth in payment; %)	Value (first year's payment divided by net discount rate; €)
10	0.0	10.0	10.0	100
10	2.5	10.0	7.5	133
10	5.0	10.0	5.0	200
10	7.5	10.0	2.5	400
10	10.0	10.0	0.0	Infinity

So, if you're aiming to make 10 per cent a year, then an annual payment of 10€ growing at 5 per cent a year is worth exactly double the value of a flat 10€ a year, while a payment growing forever at 7.5 per cent would be worth four times as much, and a payment growing at 10 per cent or more would be worth an infinite amount. You get this curious result because you've assumed an opportunity cost at or below the growth you expect from your investment, even though that investment is itself an opportunity. To put it another way, capital that grew faster than everything else forever would eventually end up owning everything, at which point it would be the only game in town and its return would have to be your opportunity cost (it'd still be worth an infinite amount, though, since by owning everything it'd be the only capital capable of making any money).

How much money you're actually going to get

As you may have spotted, though, there's a major problem with all this elegant theory, which is that we can never actually be sure how much money we're actually going to make in the future. We might get a particular payment, but then again we might not — and this obviously makes it less valuable.

There are two main ways people estimate things that are uncertain. You can either think of the middle point of the range of possible outcomes (known as the 'median' or 'central case'), or you can think of the average outcome (also known as the 'mean', the 'expectation' or the 'expected value'). For many situations, the central case is very close to the average, because the range of possible outcomes is evenly spread about the central case. If you line up a group of people by height, for example, the person in the middle is likely to be very close to the average. But thinking like this can get you into trouble in some situations.

Don't underestimate the Don

Take Don Bradman's test batting record, for example. His central-case score (between dismissals, so that not outs are accounted for) was 64.5 (this is actually halfway between his two central-case scores of 63 and 66, because he had an even number). But Douglas Jardine would have been wrong to bank on him making only this many before being out — because when the Don scored big, he very often scored *big*, and that put his average up to the famous 99.9. (Jardine's development of the infamous 'Bodyline' tactic would suggest that he didn't, in fact, make this mistake.)

So the expected value of a Bradman knock was 99.9, even though that's some way above the most likely outcome. In other situations, your expectation might be below the central-case outcome. Take our earlier example, of the \$161.05 promised to you in five years' time, but this time imagine that it's been offered by a property investment scheme, Dodgy Developments Corp, which you reckon has a 30 per cent chance of not being around to make the payment in five years' time.

In this case, the most likely outcome is that you get paid the \$161.05 in full, giving a value today of \$100 (using a discount rate of 10 per cent). But you'd be very wrong to bank on that, because there's only a 70 per cent chance of that scenario occurring, with the other 30 per cent leaving you with nothing. So the payment's expected value today would be \$70. You can see the working in table 4.4.

Table 4.4: different scenarios for supposed payment of \$161.05 by Dodgy Developments in five years' time

	Probability of occurring (%)	Payment (\$)	Payment's value today (\$)	Contribution to value (value today × probability; \$)
Scenario A	30	0.00	0	0
Scenario B	70	161.05	100	70
Total expected value				70

And what about our other example, of the five-year bond paying \$8 a year for four years and \$108 at the end of the fifth? Let's say this was issued by Dodgy Developments, and you reckoned there was about a 5 per cent chance of it going bust in any one year. There are two ways of looking at this, though they amount to the same thing. Either you can work out the expected value of each payment, discount them all and then add them up; or you can work out the results from the different potential scenarios, awarding different probabilities to each, and adding those up (see tables 4.5 and 4.6).

Table 4.5: value of Dodgy Developments five-year bond (first approach)

Year	Payment (\$)	Probability of Dodgy being around to make payment (%)	Expected value of payment (\$)	Discount factor	Value now (\$)
1	8.00	95.00	7.600	0.909	6.91
2	8.00	$95 \times 95 = 90.25$	7.220	0.826	5.97
3	8.00	$95 \times 95 \times 95 = 85.74$	6.859	0.751	5.15
4	8.00	$95 \times 95 \times 95 \times 95 = 81.45$	6.516	0.683	4.45
5	108.00	$95 \times 95 \times 95 \times 95 \times 95 = 77.38$	83.568	0.621	51.89
Total					74.37

Table 4.6: value of Dodgy Developments five-year bond (second approach)

Scenario	What happens	Probability calculation (%)	Value of payments received (\$)	Scenario value (\$)
A	Dodgy goes bust in year 1	5.000	0.00	0.00
B	Dodgy goes bust in year 2	$95 \times 5 = 4.750$	$8 \times 1 / 1.1^1 = 7.273$	0.35
C	Dodgy goes bust in year 3	$95 \times 95 \times 5 = 4.513$	$8 \times 1 / 1.1^1 + 8 \times 1 / 1.1^2 = 13.884$	0.63
D	Dodgy goes bust in year 4	$95 \times 95 \times 95 \times 5 = 4.287$	$8 \times 1 / 1.1^1 + 8 \times 1 / 1.1^2 + 8 \times 1 / 1.1^3 = 19.895$	0.85
E	Dodgy goes bust in year 5	$95 \times 95 \times 95 \times 95 \times 5 = 4.073$	$8 \times 1 / 1.1^1 + 8 \times 1 / 1.1^2 + 8 \times 1 / 1.1^3 + 8 \times 1 / 1.1^4$ $= 25.359$	1.03
	Dodgy stays solvent	$95 \times 95 \times 95 \times 95 \times 95 =$ 77.378	$8 \times 1 / 1.1^1 + 8 \times 1 / 1.1^2 + 8 \times 1 / 1.1^3 + 8 \times 1 / 1.1^4$ $+ 108 \times 1 / 1.1^5 = 92.418$	71.51

The first of these two approaches (table 4.5) is easiest, since there are relatively few payments to consider and quite a lot of scenarios. We've showed the second approach (table 4.6), though, because it's most useful for valuing companies, where there are a large number of cash flows but you'll try to come to an approximate value with relatively few scenarios. We'll see some more examples later in the chapter, where we look at how value fits into your overall portfolio.

The return you plan to make

So now we know how much money we're expecting to get and when we're going to get it, but what about the return we're planning to make? We've used 10 per cent in all our examples so far, but where, you might reasonably ask, did it come from? Did we pluck it out of thin air? Well, almost. There's a lot of argument about it in academic circles, but we suggest you steer clear of most of it. It's basically the rate you plan to make from an investment, so the logical figure to use is the return you could get from investing elsewhere, which is known as your 'opportunity cost of capital'.

The trouble is that not all money is created equal: some you might need next week to pay your phone bill; some you might need next year to pay for a new kitchen; and some you might plan to leave as an inheritance, drawing only a small income in the meantime.

In each of these scenarios, you have different options for your money, and these options have different potential returns. In the case of your phone bill, the best you could do would be a savings account, since that guarantees a set number of dollars. (If you have an 'offset' mortgage, this might have a higher effective interest rate, especially before tax, because instead of saving money, you're in fact temporarily paying off your mortgage.)

For next year's kitchen, you might also decide you need to hold the money in cash or a term deposit, although you might wonder, in that case, why you don't just do the kitchen now. Alternatively, you might decide that you could chance the money in the sharemarket, in the hope of better returns. If you weren't ready to sell the shares in a year's time (feeling they were still undervalued), you might decide to delay the kitchen.

In making that decision, you'd be balancing the return you expect to make from your shares against the value of having a nice new kitchen. If you find some shares that you think are particularly undervalued and your kitchen will do for another few years, you might figure you can risk the money in the shares. But if you can't find any real bargains in the sharemarket, and your kitchen is falling apart, you'd probably decide to get on with it. So your opportunity cost is not only dictated by what you expect from available investment opportunities, but also from the cost of not having a new kitchen.

Finally, for the ultimate patient money, from which you never require the capital and only need an income of a

few per cent, the real risk, as we saw in chapter 1, is in not being in the sharemarket. While a diversified portfolio of shares is much more risky than cash in the short term — that is, its value fluctuates much more (even the real value of cash fluctuates a little on account of inflation) — over longer periods of time, those fluctuations tend to be swallowed up by the sharemarket's higher returns. Over periods of several decades sharemarket returns are still highly variable, but they vary between falling behind cash by a sliver and absolutely thumping it out of the ground.

So for money you plan to commit to the sharemarket, we'd recommend using the long-term return from shares as your discount rate. The Australian sharemarket returned 7.5 per cent over inflation between 1900 and 2000 and, with the Reserve Bank of Australia targeting an inflation rate of between 2 and 3 per cent, we think 10 per cent is a nice round number to aim for.

It's not a big deal, though, because whatever number you use will have a similar effect on all the stocks you're looking at; it's just that a lower discount rate will tend to make shares more attractive as an overall class, and vice versa. The other slight difference is that a lower discount rate will tend to give you a predilection for stocks with relatively distant cash flows (typically those with lower current yields but higher anticipated growth), while a higher discount rate will lead you to favour stocks with nearer cash flows (typically those with higher current yields and lower anticipated growth). At the time of writing, for example, this might lead you to favour Santos, which has a lot of oil and gas producing assets, over Woodside, which has a greater proportion of assets in development. As long as you choose something in the ballpark of 8 to 12 per cent, though, most of any difference should get lost in the rounding.

Don't confuse value and risk

Conventional theory says you should finetune your discount rate for different shares, using a higher discount rate for riskier stocks and vice versa, but we think that just confuses the issue. If something is riskier than something else, it doesn't necessarily mean it has a lower value, it just means that the value is more variable.

As we'll see in a moment, how you deal with risk for any particular stock depends on your margin of safety, your diversification and how much risk you're prepared to take. To understand how these factors all stack up, though, you need to put all stocks on a level playing field in the first place by valuing them on the same basis — which means using the same discount rate.

Value in the context of your overall portfolio

A stock's value, then, is the sum of its future cash flows, each discounted to today's value at the base return you're aiming to make. But that doesn't mean you'd rush straight out and buy stocks at that value — if you did,

you'd only expect to make whatever return you'd factored in, and you wouldn't be leaving yourself any margin for error.

Margin of safety

Remember that our appraised value of a Bradman knock was 99.9, but that was just our break-even result. To get us interested in a bet, we'd have wanted to see a discount to that fair value, and it's very much a case of the more the merrier. You'd have felt pretty good about backing Bradman to make 64.5 over the long run, for example, but you'd have felt better about backing him to make 20. Based on the former, you'd have won your bet by an average of 35.4 each time, but you'd have been on the losing side half the time; based on the latter, you'd have won by an average of 79.9, and you'd have only lost on 16 occasions out of 70. In other words, the larger the discount to your estimate of expected value, the greater the likely returns *and* the less chance you have of losing money — which is nice.

So how might the margin of safety work with a stock? Let's say your expectation is for Tortoise Toll Roads to pay dividends in the current year of \$1.20, and that you expect this to increase forever at 6 per cent a year. To get a targeted return of 10 per cent, you'd therefore need to pay a price that provided a dividend yield of 4 per cent (so that the yield of 4 per cent plus its growth of 6 per cent would equal your targeted return of 10 per cent), which comes out at \$30 (\$1.20 divided by 4 per cent, or 0.04).

But that's just your estimate of a fair value for the stock. To get you interested in buying it, you'd need to see a discount to this — and the riskier the situation and the better the opportunities elsewhere, the more of a discount you'd need. Balancing it all up, you decide you only really find Tortoise Toll Roads compelling at \$20. That would give you a 33 per cent margin of safety, but it would also increase your dividend yield to 6 per cent and your total expected return to 12 per cent (the 6 per cent yield plus the 6 per cent growth).

The intrinsic value of \$30 is also the level you might reasonably expect the stock price to return to (or 6 per cent higher than that for each year into the future to allow for the growth) — so it also defines the capital gain you're secretly hoping to make if the price returns to the underlying value. The trouble is that you don't know when — or even if — the price will return to that underlying value. But the bigger the margin of safety and the more confident you are about it, the better your chances of capital appreciation. And if you're left holding the stock, a large margin of safety should at least make it a decent ride.

It's a little bit like the price being tied to the value by a piece of elastic — a tired old piece of very unpredictable elastic, at any rate. The price wobbles around, either side of the underlying value, and your aim is to buy when it's a good way below it. The further the price gets from the value, in either direction, the more likely a snap-

back becomes. Riskier stocks — those that have a wide range of potential outcomes — will tend to have looser elastic. So they'll probably bounce around more wildly, making the prospects of a snap-back less reliable, and you'll want to buy at a wider discount to provide some comfort.

We can see this with the help of a much riskier stock: the oil explorer Hart Oday Gondamorra. Given the wide range of possible outcomes, you might decide to estimate the company's value by breaking down the outcomes into broad categories.

You might reckon, for example, that there is a 40 per cent chance of it finding no oil and being worth nothing, a 30 per cent chance of it finding a reasonable amount of oil and being worth \$100 million, a 20 per cent chance of it finding a lot and being worth \$200 million and a 10 per cent chance of it hitting the jackpot and being worth \$300 million. Table 4.7 shows the workings.

Table 4.7: valuation of Hart Oday Gondamorra

Scenario	Probability (%)	Value of company (\$ million)	Value per share (\$)*	Contribution to
				overall value per share (\$)
A	40	0	0	0
B	30	100	30	9
C	20	200	60	12
D	10	300	90	9
Total value	100			30

* Hart Oday Gondamorra has 3.33 million shares on issue

Your overall expected value for the stock would come out at \$30 a share, but there is a lot of risk, with the value varying between \$0 and \$90 depending on how things turn out. In fact, only 30 per cent of the outcomes have it being worth more than its \$30 expected value, and in 40 per cent of outcomes you expect to lose all your money. So you might decide, keeping in mind your overall portfolio, your exposure to the resources sector, the risks you're taking and your desire for a new kitchen, that you're only prepared to pay \$10 for Hart Oday Gondamorra. At that price you'd have a 66 per cent margin of safety and, even though you'd still be losing the lot in 40 per cent of the outcomes, you'd be making a good profit in the rest and your average result would be much greater than before.

Hedging your bets

Even with a fat margin of safety, though, you wouldn't put much into Hart Oday Gondamorra because of that 40 per cent chance of a complete wipe-out. And the same applies, to lesser extent, to safer bets. Even Don Bradman made seven test match ducks and the apparently reliable Tortoise Toll Roads could come a cropper. So you need to hedge your bets a bit; you wouldn't put a large amount of money on Bradman to make 20 in any one innings, but you might if you could spread it over a series. (Bradman only once averaged less than 20 over three dismissals, during the first two tests of the 1936–37 Ashes, and he responded with scores of 270, 212 and 169 in the third, fourth and fifth tests.)

With stocks, diversification comes from spreading your portfolio over a range of different companies and sectors, and from the amount of time you are invested. The more time you allow, the greater the chances of the value being reflected — which, of course, is why the sharemarket beats cash more consistently the longer you give it, as we saw in chapter 1.

There's an interaction, of course, between diversification and margin of safety, because the more you've got of one, the less you might need of the other. There is, however, a crucial difference: as you increase the number of stocks in your portfolio, your selections gradually get worse. An increased margin of safety, on the other hand, will mean better selections.

The flip side is that margin of safety relies on you making correct assessments of value, while diversification will tend to take you towards an average return, whether you're getting the value right or wrong. So if you're very confident in your ability to assess value, you might focus on finding stocks where you see a huge margin of safety and not worry so much if you end up holding only a few of them. But if you're less sure about assessing value correctly, you'll want to focus more on achieving a decent diversification, with the inevitable reduction in apparent margin of safety from your additional selections — which is basically the difference between the know-nothing, know-something and know-a-little investors we looked at in chapter 2.



Chapter 5

Understanding company accounts

'A person should not go to sleep at night until his debits match his credits.'

Luca Pacioli

As we saw in chapter 4, the value of a company depends on the cash it's able to produce, when it produces it, and how much of a return you want to make in the meantime. The return part of the equation is relatively straightforward, but the size and timing of the cash flows is another matter. In practice, therefore, a variety of simple valuation tools have sprung up to make life easier, and we're going to look at them in close detail in chapter 6. But first we need to run through some basic company accounting, so that we understand where all the numbers come from.

The basic accounting framework

The first we really know of the modern system of accounts was in medieval Italy, when a monk by the name of Luca Pacioli set it all out in his grandly titled 1494 blockbuster *Summa de Arithmetica, Geometria, Proportioni et Proportionalita* (Everything about Arithmetic, Geometry, Proportion and Proportionality).

The crucial innovation since ancient systems had been the notion of a profit. That's not to say the likes of the ancient Egyptians didn't know how to make a buck, because they surely did (even if some of their better-known public works make Sydney's tranquil Cross City Tunnel look like a veritable money-spinner), but just that they counted the bucks they made a bit differently. You might reckon, for example, that ancient mummy makers might have added up all their cash coming in, taken off the cash going out (for fabrics, embalming fluids, workbenches and the like), and considered the difference to be the money they'd made.

Which is fair enough, but it's not what Brother Luca would have called a profit. The word comes from the Latin *proficio*, meaning 'I make progress' (no doubt the Romans were fond of the word), and, rather than describing the progress made in a business's cash position, it describes the progress made in its overall position, taking into account all assets and liabilities.

A profit is only achieved when you *increase* the overall value of your assets, usually by selling something for

more than you paid for it. So when Memhotep's Mummy Manufacturing ('Look good in the afterlife') invested in a workbench, its cash would go down. But, in terms of double-entry bookkeeping, it would simply have swapped one asset (cash) for another (a workbench), so there would have been no immediate effect on profit. Instead, each year after that, Memhotep's Mummy Manufacturing would take a notional charge for the wear and tear on its workbench as a cost against profit.

If Memhotep's Mummy Manufacturing judged the useful life of its new workbench to be 10 years, it would have recorded it up-front as an asset, and each year would have reduced its value by a 10th, taking that 10th as a business expense. This process is called depreciation, and its effect is to spread the economic cost of an asset over its useful lifetime. (There are, in fact, a number of more complicated ways of doing it, but we'll leave them to the accountants.)

The double-entry system keeps tabs on all of this by tracking 'capital' or 'value', or whatever you want to call it, as it makes its way around a business. Every movement (known as a transaction) needs to be recorded both as leaving one part of the business, and as arriving in another (hence 'double entry'). The different parts of the business are represented by accounts; a movement into an account is known as a debit, and a movement out of an account is known as a credit. To most people this sounds like it's the wrong way around, but the idea is that when value moves from one account to another, the new account is treated as owing that value to the old account. The debits and the credits net off against each other and, taken across the whole business, they must balance each other out. If they don't, someone has fat fingers on their calculator (or abacus).

When value comes into a business — either as money put up by the owners, or because a profit is made — it appears as a debit in, say, the cash account. But it also appears as a credit in the owners' account, because it's money taken to be owed to the owners. In the same way, when value leaves a business — either because money is taken out by the owners or because a loss is made — it's recorded as a credit in the account where the value disappears from (for example, the bank account in the case of a dividend payment, or the relevant asset account in the case of an asset write-down) and as a debit in the owners' account, thereby reducing the amount that's owing to the owners. In fact, the owners' account tends to be split into two — the capital account (capital put in less capital taken out) and retained earnings (actual earnings recorded less dividends paid) — so that the owners can tell how they're travelling.

There are two key points to note about all this theory. First of all, retained earnings and owners' capital, perhaps a little counterintuitively, are treated as liabilities. If you look at a company's balance sheet, you'll see the capital (often called 'contributed equity' or 'paid-up capital') and 'retained earnings' at the bottom, offsetting the figure for net assets (which is itself the sum of all the business's assets, less its normal business liabilities).

The second point is that the accounts record capital as it flows around a business and, when you're trying to value a company, the name of the game is to figure out how well it's flowing, and if it's getting held up anywhere. What we'd really like to see is profits piling up as credits in the profit and loss account, matched by a rising pile of debits in the cash account — meaning that, any time we want, we can reduce both piles by paying ourselves a big fat dividend.

The profit and loss account

We can flesh the theory out with an example. Imagine it's the year 1495 and Carlo the candle maker, having just read Brother Luca's great work, is inspired to have a go at this double-entry bookkeeping caper. Starting from scratch, he has a decent first month, selling 60 boxes of candles, each made with 2 florins' (fl) worth of wicks and tallow, for 3 fl apiece. During the month he records the transactions shown in table 5.1.

Table 5.1: Carlo's Candles accounting transactions for the month of July 1495

Date	Transaction	Debit (fl)	Credit (fl)
1 July	Put in capital of 500 fl	Cash: 500	Carlo's capital: 500
1 July	Borrowed 200 fl from Medici Bank, repayable 1 July 1497; interest payable at end of each month at 1% per month	Cash: 200	Loan: 200
1 July	Bought wicks and tallow for 84 fl in cash	Inventories: 84	Cash: 84
1 July	Bought 17 fl of coal on one month's credit	Profit and loss: 17	Accounts payable: 17
1 July	Bought shed for 480 fl in cash	Fixed assets (shed): 480	Cash: 480
1 July	Bought oven and tools for 120 fl in cash	Fixed assets (oven and tools): 120	Cash: 120
10 July	Sold 20 boxes of candles (which cost 40 fl to make) for 60 fl on credit	Accounts receivable: 60	Inventories: 40 Profit and loss: 20

17 July	Received payment for first batch of candles	Cash: 60	Accounts receivable: 60
20 July	Sold 19 boxes of candles (which cost 38 fl to make) for 57 fl on credit	Accounts receivable: 57	Inventories: 38 Profit and loss: 19
27 July	Received payment for second batch of candles	Cash: 57	Accounts receivable: 57
28 July	Bought wicks and tallow for 80 fl in cash	Inventories: 80	Cash: 80
31 July	Sold 21 boxes of candles (which cost 42 fl to make) for 63 fl on credit	Accounts receivable: 63	Inventories: 42 Profit and loss: 21
31 July	Depreciation of shed (useful life of 20 years — 24 fl per year; 2 fl per month)	Profit and loss: 2	Fixed assets (shed): 2
31 July	Depreciation of oven and tools (useful life 10 years — 12 fl per year; 1 fl per month)	Profit and loss: 1	Fixed assets (oven and tools): 1
31 July	Wages: 18 fl per month (12 for Carlo; 6 for apprentice)	Profit and loss: 18	Cash: 18
31 July	Interest: 2 fl to Medici Bank	Profit and loss: 2	Cash: 2

At the close of business on 31 July 1495, Carlo sits down with a nice glass of 1489 Chianti to tally up his books. First of all, he notes his balance on the profit and loss account of 20 fl. With corporate taxes running at 30 per cent, he therefore makes a provision for tax of 6 fl (although the tax won't be due for some time). You can see his completed profit and loss account in table 5.2.

Table 5.2: Carlo's Candles profit and loss account for the month of July 1495

Date	Transaction	Debit (fl)	Credit (fl)
Opening balance			0
1 July	Bought 17 fl of coal on one month's credit	17	
10 July	Sold first batch of candles for 60 fl		20
20 July	Sold second batch of candles for 57 fl		19
31 July	Sold third batch of candles for 63 fl		21
31 July	Depreciation of shed*	2	
31 July	Depreciation of oven and tools**	1	
31 July	Wages	18	
31 July	Interest	2	
31 July	Provision for tax***	6	
Closing balance			14

* Useful life of 20 years — 24 fl per year; 2 fl per month

** Useful life of 10 years — 12 fl per year; 1 fl per month

*** 30% of pre-tax profit of 20 fl; credit accounts payable

Carlo then decides to give the account a bit of a makeover so that it's easier to see what's going on. First of all, rather than just showing the profit made on each candle sale, he decides to break this down into the revenue received for the candles, and the cost of the raw materials that went into them. He then groups like transactions together: revenue from goods sold, cost of goods sold, administrative and operating expenses, interest and tax. By putting the revenue at the top, he can then produce sub-totals after each group of costs. He calls it an 'income statement', and we've reproduced it in table 5.3.

Table 5.3: Carlo’s Candles income statement for the month of July 1495

	Amount (fl)
Revenue from goods sold	180
Cost of goods sold	(120)
Gross profit	60
Administrative and operating expenses	(38)
Operating profit	22
Interest payable	(2)
Profit before tax	20
Tax	(6)
Net profit	14

The gross margin

Carlo can see that for each 180 fl of candles sold, he’s made 60 fl of gross profit — a ‘gross margin’ of 33 per cent (60 divided by 180). The gross margin shows the value a business is able to add to the materials it uses to make its product. In this case, Carlo was able to add half again to the value of the materials he used, which was a fair effort.

It would pale in comparison with something like a modern-day branded clothing company, though, because the actual fabrics cost very little, with the main expenses (such as marketing) being taken further down the profit and loss account. Billabong, the maker of trendy ‘surfwear’, for instance, had a gross margin of 54 per cent for the 2007 financial year. Grocery retailers, by contrast, do less to the goods that pass through their hands, aiming instead to encourage high volumes with low prices. In the 2007 financial year, Woolworths had a gross margin of 25 per cent.

The operating margin

After taking off administrative and operating expenses, Carlo made an operating profit of 22 fl on sales of 180 fl, to give him an ‘operating margin’ of 12 per cent (22 divided by 180). This measures the value he added to his raw materials, after taking into account the cost of adding that value. This is the margin you most frequently hear people talking about, since it doesn’t discriminate between the actual costs of the goods sold and the costs of selling them. It still ignores interest and tax, however, which means it can be used to compare companies that have different amounts of debt and different tax rates. It just tells you how much of each dollar of sales you’re

left with, after taking account of all ‘operating costs’. You’ll often see operating profit referred to as ‘earnings before interest and tax’ (EBIT); the operating margin is often called the EBIT margin.

Billabong’s operating expenses include a large slab of advertising and marketing costs (you need to spend heavily on these things if you’re to convince people to pay double what it costs to make a piece of clothing), so the margin drops quite sharply, from 54 per cent at the gross level to 20 per cent. Woolworths has to spend a lot on moving all that produce around and on renting all those big stores (the ones it doesn’t own, anyway), and its gross margin of 25 per cent falls to an operating margin of 5 per cent. As we’ll see shortly, though, that’s more than enough for it to make attractive returns.

Other margins

After the operating profit, we take out interest to give the profit before tax, and then deduct tax to leave the net profit. You can turn these into margins as well if you like, and many people do, but they won’t tell you much. Carlo’s ‘profit before tax margin’ comes in at 11 per cent, but if he’d borrowed 400 fl instead of 200 fl (and put in only 300 fl of his own capital instead of 500 fl), his ‘profit before tax margin’ would fall to 10 per cent, because the extra 2 fl of interest would reduce profit before tax to 18 fl. In other words, this figure tells you less about a business and more about how it is financed. And the ‘net margin’ would tell you more about how a business is financed and taxed.

Margins are interesting to look at and they make useful benchmarks for comparing companies in a similar line of business, but they don’t give the whole picture, because we’re ultimately concerned with the returns we make on the capital we tie up in a business, rather than on the sales that business makes. So if a company is able to make a high value of sales for each dollar (or florin) of capital it uses, a relatively low margin will still leave it making healthy returns for its owners.

Operational gearing

Carlo’s thoughts naturally turn to how his operating margin might fare if he sells more or fewer candles. The key, he reasons, is to break costs down between ‘variable costs’, which rise and fall according to how many candles he sells, and ‘fixed costs’, which he has to pay come what may. If his costs were all variable, his margin would stay constant, since any rise in revenues would be matched by a rise in costs. The more his costs are fixed, however, the more his profits will rise if he sells more candles — because he’ll be making better use of that fixed cost base — and the more they’ll fall if he sells fewer.

Carlo figures that his 120 fl of ‘costs of goods sold’ (made up of the tallow and wicks) are variable costs. His administrative and operating expenses, however, break down into 17 fl of variable expense (coal), 18 fl of fixed

expense (wages) and 3 fl that he figures is partly fixed and partly variable (the depreciation — the oven and tools will wear out anyway, but more quickly the more they are used). Roughly speaking, though, he calls this a 50/50 split.

So Carlo figures that a 20 per cent increase in revenue (to 216 fl) would lead to a 20 per cent increase in cost of goods sold (to 144 fl), and a 20 per cent increase in gross profit (to 72 fl), keeping the gross margin at 33 per cent. But administrative and operating expenses would increase by only about 10 per cent (half rising by 20 per cent and half remaining fixed) to 42 fl, so the operating profit would see a 36 per cent jump to 30 fl.

Looking at it another way, Carlo sees that a full 8 fl (22 per cent) of his 36 fl increase in revenue would have flowed through to operating profit — almost double his former operating margin of 12 per cent. This enhancement would lift his overall operating margin to nearly 14 per cent.

Of course it would work the other way as well: a 20 per cent fall in gross profit (to 48 fl) would only be met with a 10 per cent fall in administrative and operating expenses (to 34 fl), giving a 36 per cent fall in operating profit (to 14 fl).

Financial gearing and interest cover

Rather less subtle than operational gearing is the ‘financial gearing’ caused by the fixed cost of the interest bill. Carlo’s financial gearing is relatively low, because his interest bill of 2 fl is ‘covered’ 11 times by operating profit. So the 20 per cent increase in revenue in the previous section, which became a 36 per cent increase in operating profit (to 30 fl), would result in a 40 per cent increase in profit before tax (to 28 fl); while the 20 per cent fall in revenue would see profit before tax shrink 40 per cent to 12 fl.

As well as showing the degree of financial gearing, the interest cover also reveals the comfort zone between operating profit and the interest bill. Carlo’s interest cover of 11 times means that he could see operating profit fall by more than 90 per cent and he’d still be able to pay his interest bill — so long as he had the cash, of course, and we’ll get to that in a moment. You’d probably start to get worried if interest cover dropped below the high single digits, though it would depend a lot on the stability of a company’s operating profits, which would in turn depend on the stability of its revenues and the extent of its operational gearing. A steady earner such as Woolworths, for example, could manage much more debt and much lower interest cover than a jeweller, for example, whose profits will tend to bounce around with the economic cycle.

Other charges and tax

Sometimes you might find, tucked in near the bottom of a profit and loss statement, some ‘one-off items, alternatively known as ‘extraordinary’ or ‘significant’ items. Significant they may be, but sadly they’ve never

been very extraordinary or one-off. Companies use them to put through any write-downs or other costs (or occasionally profits) which they don't think will be recurring and which they therefore think distort the picture on profits. Due to widespread abuse, current accounting standards ban the use of these one-off items in a company's formal accounts, although you might still see them in informal accounts and presentations, and they may well return to formal accounts in the future (accounting standards don't tend to stay still for very long).

Banning the use of one-off items in formal accounts forces investors to work out the level of a company's underlying profit for themselves. We'd say that's a good thing — or rather that it makes little difference, since investors should be working out this sort of thing for themselves in any case. The question is more about the sort of information investors are given to help them do this, and that still largely depends on the openness of a company's management. We'll talk more about underlying profits in the next chapter. For now, just be aware that you might come across one-off items occasionally, and it's generally best to approach them suspiciously. Thankfully Carlo, having only operated for a month, doesn't have any one-off items.

The final item in the profit and loss account is tax, which can bounce up and down according to all sorts of complexities. Again, your job is to reach an underlying figure, which will hopefully be close to the corporate tax rate. Where companies seem to have a consistently low tax rate, you have to wonder whether they're really that good at side-stepping the Australian Taxation Office (ATO) or whether the ATO just thinks they make less profit than they like to think they do. Very often the ATO turns out to be right.

The balance sheet

Carlo decides to look at what's happened to the capital he's committed to his business. So he writes down the balances of each account on one sheet of paper to see how they balance up. For obvious reasons, he decides to call it his 'balance sheet'; it's shown in table 5.4.

Table 5.4: Carlo's Candles balance sheet as at 30 July 1495

	Account	Amount (fl)
<i>Current assets</i>	Cash	33
	Accounts receivable	63
	Inventories	44
<i>Fixed assets</i>	Shed	478
	Oven and tools	119
Total assets		737
<i>Current liabilities</i>	Accounts payable	23
<i>Long-term liabilities</i>	Loan	200
Total liabilities*		223
Net assets		514
<i>Represented by:</i>	Carlo's capital	500
	Retained profit	14
Carlo's equity		514

* This is typically referred to as 'total liabilities', even though it excludes capital and retained profit

Return on equity

Carlo notes that he now has 514 fl of net assets, which makes sense since he put in 500 fl and has made a profit of 14 fl. In the accounts, of course, this is balanced by 514 fl of equity 'owing' to him.

Carlo figures that if he keeps going the way he is, he'll make a total profit of 168 fl for the full year. That would amount to a 'return on equity' of 25 per cent (168 divided by 668) based on his projected net assets at the end of the year of 668 fl (that is, 500 fl of capital plus 168 fl of retained profit). This probably understates the true return, however, because he's assuming the 168 fl of retained profits will sit there doing nothing. If, instead, he decided to withdraw his profits after the first month (when his cash flow situation has settled down a little — as we'll see in a moment), his return on equity would be 33 per cent (168 divided by 514).

Of course it's a huge leap of faith to assume that the year will continue as it has begun, but he's halfway through his bottle of Chianti now and is beginning to get a bit overexcited. Carlo reckons, though, that if anything he'll sell more candles during the dark winter months, so he figures he's being reasonably conservative.

One way or another, though, for every 100 fl he's put into the business, Carlo hopes to make 33 fl per year — a very attractive return and far more than he's paying the Medicis in interest. This makes him wonder: what sort

of return would he be making if he'd borrowed 500 and put in 200, instead of doing it the other way around? Well his monthly interest bill would rise to 5 fl, taking his monthly profit before tax down to 17 fl and his monthly net profit down to 11.9 — making about 143 per year. In this case, though, he'd only have 211.9 of net assets, so his projected annual return on equity would rise to a whopping 67 per cent.

Like the 'profit before tax margin' we looked at earlier, though, the return on equity often tells you more about how a company is taxed and financed than it does about the returns its underlying business is capable of making. And although a return of 67 per cent looks very attractive, 33 per cent is also very good and, with less debt, it's much safer and more likely to be sustained.

Return on capital employed

To get a measure of the underlying business, rather than the way it's financed, we need to separate the operating business from the company that owns it — it's the former that makes the operating returns, and it's the latter through which those returns are split, as appropriate, between the owners, the banks and the tax man. The operating assets are integral to the functioning of the business, whereas the finance can be changed instantly, for example by issuing new shares and using the cash raised to reduce debt. So the way you can tell operating assets from the financing used to pay for them is that the former don't earn (or incur) interest, whereas the latter do.

The operating assets can be further broken down into long-term operating assets, which are not expected to be turned into cash within one year (such as buildings, plant and machinery or long-term accounts receivable) and short-term operating assets (typically inventory plus accounts receivable less accounts payable). Short-term operating assets are often known as 'working capital'.

To get back to the 'capital employed' by the operating business, we need to add the equity put in by owners (represented by net assets) to the money borrowed from the bank. The latter is commonly known as 'net debt', and you get it by netting off any interest-bearing loans against any surplus (and interest-bearing) cash. Amounts owed by the business that don't incur interest, such as Carlo's coal bill, shouldn't be considered a part of net debt, since they're part of the operating assets of the business, albeit a deduction from them. Similarly, cash that's needed as a float in a company's tills is an operating asset and shouldn't be set off against net debt. Again, the way to tell operating assets from finance is that they don't incur or earn interest. This is why stores are so keen to offer 'cash-out' facilities. It's not so much that they want to save you a trip to the ATM, it's more that by giving you cash and receiving payment in their bank accounts, where they earn interest, stores reduce their operating assets and cut their debt (or add to their interest-earning cash). In practice, among listed companies (even supermarkets), the cash in the till tends to be a very small amount and in most cases you can assume that

all cash could easily be removed from the business, and should therefore be treated as a deduction against net debt.

Carlo needs 17 fl of his 33 fl cash balance to pay the following day's coal bill, but the remaining 16 fl could happily be removed from the business. You might therefore estimate the capital employed by Carlo's Candles as being made up of 514 fl (the net assets) plus 200 fl (the bank loan), less 16 fl (surplus cash), giving a total of 698 fl (again we're assuming that Carlo withdraws his profits after the first month). To get the 'return on capital employed' for Carlo's Candles, we need to divide the profits made by the operating business (the operating profit) by the capital employed in it. In other words, we're keeping the effect of financing out of our capital employed (by adding back the debt) and our profit measure (by not deducting the interest expense), and we're therefore comparing apples with apples.

As an aside, the failure to compare like with like is one of the most common mistakes with accounting ratios. The most obvious example is the price-to-sales ratio, which compares a company's market capitalisation (the total price of all its shares on the market — a 'company measure') with revenue (a 'business measure'). If you took a company with a market capitalisation of \$100 million and revenue of \$100 million, it would have a price-to-sales ratio of 1. But if the company suddenly borrowed \$90 million and paid out the cash as a dividend, thereby (we'll assume) reducing its market capitalisation to \$10 million, it would have an apparently very cheap price-to-sales ratio of 0.1 — even though what's left of the company is still being valued on the same basis as before. If you need a measure for the price of an entire business, to compare with business measures such as sales (or anything else that comes before interest in the income statement), then you need to add the company's net debt to its market capitalisation, to give a figure known as 'enterprise value'. In our example above, the enterprise value would remain at \$100 million (\$10 million plus \$90 million) and the enterprise value-to-sales ratio would remain the same.

Going back to our example, we'll extrapolate from the month of July to give an annual operating profit of 264 fl (12 times 22). So this gives us a very healthy return on capital employed of 38 per cent — although bear in mind that this is before tax.

Return on capital employed is one of the most important indicators of business quality, because it shows how much money a business can churn out for each dollar (or florin) invested in it — and that, after all, is what we're after.

Billabong, which we looked at earlier, made a return on capital employed of 24 per cent in its 2007 year (\$241 million of operating profit on capital employed of \$1.014 billion, comprising net assets of \$760 million and net debt of \$254 million), which is very healthy, but is perhaps not as high as its margins might have led us to

believe. Over half of Billabong's capital employed is represented by intangible assets of \$660 million. Of this, \$106 million is 'goodwill', which represents the premium paid by Billabong for assets that it has acquired over the years. If, for example, it pays \$100 million for assets that are individually worth only \$20 million, then it will credit its cash account by \$100 million and debit other asset accounts with the \$20 million. The balancing \$80 million is debited to a 'goodwill' account. The remainder of Billabong's intangible assets is almost entirely made up of brand names it has acquired, which are included at cost (acquired intangible assets can be revalued in certain circumstances, but we won't get into that). Money spent developing intangible assets internally generally has to be charged directly to the profit and loss account as an expense and they're there to be seen as well as to earn money. Depending on the company, other possibilities for intangible assets include patents, trademarks, copyrights and licences.

Although intangible assets don't require maintenance in the same way as a workbench, they do require spending in the form of things such as advertising and marketing, and they do represent actual money paid out in the first place. Intangible assets are also a very common source of future asset writedowns, when brands acquired, for example, turn out to be worth less than expected (although we're not suggesting that this will happen in Billabong's case). All in all, though, we think it's right that the goodwill is included in Billabong's return on capital employed calculation.

Woolworths, meanwhile, which came a distant second to Billabong on its margins, was able to boast a return on capital employed of 27 per cent in its 2007 financial year (\$2.111 billion of operating profit on capital employed of \$7.787 billion, comprising net assets of \$5.515 billion and net debt of \$2.272 billion). The reason it's higher than Billabong's figure, despite its lower margins, is that Woolworths generated more than \$5 of revenue for each \$1 of capital it employed in the 2007 year, while Billabong was able to generate only slightly more than \$1.

When you buy shares in a company, you're unlikely to be able to buy them at a price that will give you returns as high as 37 per cent on your investment, or 25 per cent, or 21 per cent. This is because the market, being aware that Carlo's Candles (or whoever) is such a high-quality business, will price the shares such that the earnings are more like 10 per cent of what you pay (we'll talk more about this in the next chapter). So you have to pay a premium price, over and above the net asset value, to buy into good businesses. In effect, you're paying this premium for the privilege of being able to reinvest future profits from the business at its high rates of return. And of course the key to whether or not this is a good decision is whether the company is able to continue investing at high rates of return.

By contrast, you'll sometimes be able to buy into companies at prices below their net asset value, because the

market is pricing them in the belief that they will make poor returns on their capital. And of course if such companies go on to make better than expected returns, you can do very well out of them. In chapter 7 we'll look more closely at the factors that can enable a business to sustain high (or low) rates of return.

But despite all our enthusiasm for return on capital employed, we have to admit that it doesn't provide all the answers, either. While the margins we looked at earlier could be measured quite accurately, they were measuring the wrong thing; and while the return on capital employed is measuring the right thing, it's very hard to get an accurate fix on it.

The first problem is that it compares a flow of something (profit) with a snapshot in time (the capital employed at an arbitrary date, typically the year end). So theoretically you should use the average capital employed for the period over which the profit is earned, but few companies release the numbers necessary to calculate this.

The second problem is that balance sheet figures generally relate back to the cost of assets rather than their real value, so they're notoriously inaccurate. This is especially true of intangible assets such as goodwill. Here we have the ironic situation that conservative companies, by giving low valuations to assets, may actually be overstating the key benchmark of their quality.

As a conservative investor trying to gauge a business's quality, you should actually aim to give high values for the capital being used by a company. Assets often cost a lot more to replace than their value on a balance sheet, partly because of inflation, but perhaps also because of productivity improvements in the new assets. So the capital expenditure needed to maintain assets often runs well ahead of the depreciation recorded in the profit and loss account, meaning that the actual cash coming out of a company can run some way behind its apparent profit.

Gearing ratios

The other main thing to gauge from a company's balance sheet is its level of financial gearing. We've already looked at this in the previous section with interest cover, which compared profits with the interest bill, and you can get another angle on it by comparing a company's actual debt with its assets.

The two main ways of doing this are to look at net debt (which we calculated in the previous section) as a proportion of net assets (or equity — it's the same thing), or to look at net debt as a proportion of total capital employed. They're both normally expressed as percentages, and it doesn't much matter which you choose, so long as you know what you're looking at.

In the first case, which is normally called the net-debt-to-equity ratio, you'll get a number that is a multiple of debt compared with net assets; a figure of 50 per cent would mean you had half as much net debt as net assets,

and a figure of 200 per cent would mean you had twice as much.

In the second case, you'll get a number ranging between 0 per cent for no debt, and 100 per cent for all debt and no equity. A net debt to equity ratio of 50 per cent would be equivalent to a ratio of 33 per cent under the second measure, and a net debt to equity ratio of 200 per cent would be the same as 67 per cent under the second measure.

The problem with gearing ratios is the same as for all balance sheet calculations — the asset figures just aren't very indicative of the profits and cash a company can generate. So high gearing levels don't necessarily mean a company is financially stretched and vice versa. If you want to know how well a company is coping with its debt, you're generally better off looking at how well the interest bill is covered by profits and cash flow.

The cash flow statement

Carlo is beginning to get comfortable with the returns being made by his business, but before he can relax completely he needs to check the most important thing of all: how much cash is actually flowing out the other end. To judge this, he turns to the cash account, which records the inputs and payments from his cash balance over the month (shown in table 5.5).

Table 5.5: Carlo's Candles cash account for the month of July 1495

Date	Transaction	Debit (fl)	Credit (fl)
Opening balance			0
1 July	Put in capital of 500 fl	500	
1 July	Borrowed 200 fl from Medici Bank, repayable 1 July 1497; interest payable at end of each month at 1% per month.	200	
1 July	Bought wicks and tallow for 84 fl in cash		84
1 July	Bought shed for 480 fl in cash		480
1 July	Bought oven and tools for 120 fl in cash		120
17 July	Received payment for first batch of candles	60	
27 July	Received payment for second batch of candles	57	
28 July	Bought wicks and tallow for 80 fl in cash		80
31 July	Wages: 18 fl per month (12 for Carlo; 6 for apprentice)		18
31 July	Interest: 2 fl to Medici Bank		2
Closing balance			33

As with the profit and loss account, for the sake of clarity, the cash account tends to get a facelift, with like transactions grouped together and subtalled. The result is called the ‘statement of cash flows’, or similar; Carlo’s is shown in table 5.6.

Table 5.6: Carlo’s Candles statement of cash flows for the month of July 1495

	Amount (fl)
<i>Cash flows from operating activities</i>	
Receipts from customers	117
Payments to suppliers and employees	(182)
Interest paid	(2)
Net cash provided by/(used in) operating activities*	(67)
<i>Cash flows from investing activities</i>	
Payments for property, plant and equipment	(600)
Net cash provided by/(used in) investing activities	(600)
<i>Cash flows from financing activities</i>	
Issue of shares to Carlo	500
Loan from Medici Bank	200
Net cash provided by financing activities	700
Net increase in cash held	33
Cash held at the beginning of period	0
Cash held at the end of the period	33

* Also known as operating cash flow

There is a saying that ‘sales are vanity, profits are sanity and cash is reality’, and Carlo has finally arrived at reality. He might have had a good month, but tonight’s celebration could be his last for a while, because the reality is that after paying tomorrow’s coal bill he will be left with just 16 fl in cash — and that’s after putting in 500 fl himself and borrowing 200 fl. Of course he’s also the proud owner of a new shed, a new oven and some tools, at a combined cost of 600 fl, but the success of his new venture will depend on how these expensive assets are able to perform over the years. The omens are good, but the business has absorbed a lot of cash, and it will be some time before Carlo can really know if it’s been a success or a failure.

The reconciliation of profit to cash flow

Even excluding the expenditure on new fixed assets, Carlo's Candles' operations have sucked in 67 fl in cash, so where did it all go? To get a fix on things, Carlo decides to tally up a 'reconciliation' of his net profit against his operating cash flow. So he takes his profit and then reverses out all the 'non-cash items' that went into it — such as depreciation and changes in current asset and liability balances — to leave him with his operating cash flow. This reconciliation of profit to cash flow is shown in table 5.7.

Table 5.7: Carlo's Candles reconciliation of net profit to operating cash flow for the month of July 1495

	Amount (fl)
Net profit	14
<i>Add back expenses not paid out in cash</i>	
Depreciation	3
Increase in accounts payable	23
<i>Subtract changes in current assets</i>	
Increase in inventories	(44)
Increase in accounts receivable	(63)
Operating cash flow	(67)

Modern company accounts often go through a very convoluted process for doing this (it'll probably be in the notes to the financial statements, cross-referenced from the cash flow statement), but the basic idea is to add back the non-cash items that contributed to, or detracted from, the profit.

Looking at his reconciliation, Carlo is reassured that the main differences between cash flow and profit in July were increases in inventories and accounts receivable, which were a result of starting up the business. He now has enough wicks and tallow stored away to make 22 boxes of candles, giving some protection against supply disruptions, and assuming he just replaces what he uses in August, there should be no further cash absorption here. And he can reasonably expect to be paid in August for July's third batch of candles and August's first two batches, leaving accounts receivable at roughly the same level at the end of the month.

All in all, he expects to see his cash inflow rise to about 180 fl (for three batches of candles of around 20 boxes each), from which he'll need to spend about 120 fl on wicks and tallow, 17 fl on coal, 18 fl on wages and 2 fl on interest, leaving an operating cash flow of 23 fl. With no capital expenditure anticipated and no tax to pay, he

can look forward to a healthy bank balance at the end of the month, so he decides that at this point he'll start paying all his profits out to himself as dividends (which, incidentally, would involve crediting the cash account and debiting retained earnings, keeping the balance of the latter at the 31 July level of 14 fl).

Corporate metabolism

The saying that 'what goes in one end comes out the other' might seem to be true of babies, but it's emphatically not true of companies. In fact, even babies retain part of what goes in at the top end — to grow so they can consume and expel more in future. Companies do the same thing, to a greater or lesser degree. Some metabolise their cash quickly, only needing to skim off a little to provide for future growth, while others seem to suffer from serious indigestion and what goes in may never come out at all.

Carlo's cash flow has been held up a little, but after a month it has started to flow, and he expects it to continue to flow at a slightly higher rate than profits — at least in months when there is no tax to pay and no need to invest money in new assets. Every now and again, he will need to cough up for a new shed and a new oven, but he's expecting these to last for 20 years and 10 years respectively, so that shouldn't be too much of a problem.

In fact, the shed and the oven are wearing out (depreciating) at a rate of 2 fl and 1 fl per month respectively. If we assume that, on average, they will need to be replaced at the same rate, we can come up with a cash flow figure of 20 fl per month, after a notional deduction for 'maintenance capital expenditure' (this is one measure of what's known as 'free cash flow', although many people prefer to deduct actual capital expenditure — we'll talk more about it in the next chapter).

The trouble with some industries is that technology is always moving ahead and assets need replacing more often and more expensively than expected. Carlo might reasonably believe that his oven will last for 10 years, in terms of current candle-making technology, but he could find that after just five years he is falling behind his competitors, who have been investing in new super-efficient ovens. And at this point, Carlo will find that his old oven is worth a lot less than half what he paid for it (which would be its value on the balance sheet after five years' worth of deductions for wear and tear). So he'll have to write off the difference in value (crediting the oven account and debiting the profit and loss), and make a cash investment in a new oven much earlier than expected.

In Carlo's case, this wouldn't be too serious. The asset base that supports his profits is relatively low, as indicated by his high return on capital employed, so even if he depreciates his oven over five years, it will only take another 1 fl from his monthly operating profit. But this cycle of improvement can be a major problem for

high technology industries with low returns on capital.

The classic example of this is the airline industry — and it's particularly relevant at the time of writing, with Qantas and other airlines around the world waiting for delivery of their new Airbus 'super-jumbos' and Boeing Dreamliners. These planes are set to make a major dent in coal costs — which is why airlines have little choice but to upgrade their fleets if competitors are doing so. But they also require a huge investment and returns on capital in the airline industry have been very low in the past. So it would be brave to bet that the airlines will make a decent return from these new planes before they need to upgrade them again.

In its 2007 financial year, for example, Qantas managed a return on capital employed of 14 per cent which, although some way behind the likes of Billabong and Woolworths, is not at all bad. But 2007 was a very good year, with the operating profit jumping 58 per cent. The returns on capital employed for 2006, 2005, 2004 and 2003 were 8 per cent, 10 per cent, 10 per cent and 5 per cent respectively, giving a five-year average of just 9 per cent.

So why do airlines accept such low profits? We'll say more about this in chapter 7, but one reason is that they have very long investment cycles. By the time they come to price the tickets, they can forget the investment they made all those years ago and fail to charge enough to recoup it. And some airlines don't seem to be in it for the money in any case — they're flag carriers for their nations (or perhaps for a brand, in the case of companies like Virgin, and European carrier easyJet) and they're there to be seen more than to earn money. It takes only one renegade company to spoil things for everyone, but they don't seem to be in short supply.

It's hard to say whether it's the chicken or the egg, but companies that absorb cash rather than pass it on to shareholders tend to have swollen balance sheets and relatively small streams of profit and cash flow. The historical picture doesn't always tell the whole story, though. A new telecoms company might spend vast sums laying fibre-optic cable in the ground, and it might therefore start with a low return on capital. But it might be that only a small level of ongoing investment is needed to make relatively high 'incremental' returns. Barring such exceptional situations, though, a large slab of assets producing a small slice of profits generally makes for a sickly company.

Investment for the future is not something to be scared of — so long as it's done by the right companies and is likely to make attractive returns. If Carlo decided after a year or two to invest in a second oven, to boost his sales and profits, then who's to say it wouldn't earn the same high returns — in terms of both cash and profits — as the first oven? In fact, if he could operate it with the addition of just one apprentice, his profits (and his 'incremental return on equity') would be higher, because he'd basically be able to spread his own salary between the two ovens (we'll talk more about such 'economies of scale' in chapter 7).

But such expansionary capital expenditure (which you can think of as the difference between overall capital expenditure and the depreciation charge) is as bad for companies that make low returns on capital as it is good for companies that make high returns.

The one great sadness is that lean and mean companies with really high returns on capital often just don't have anywhere to invest more of it. After all, if it was that easy, everyone would be doing it. The Australian Securities Exchange (ASX) has been making excellent returns in recent years (albeit in near-perfect conditions), but it can hardly go out and build a new stock exchange. So it pays almost all its profits out as dividends, which is just fine, although it will moderate how much you're prepared to pay for the privilege of reinvesting profits at these high rates of return.

Of course, although the ASX can't build a new stock exchange, it can buy one, which is what it did in 2007 with the merger with the Sydney Futures Exchange. The goodwill paid for this acquisition (the premium of price paid over asset value received) has reduced the ASX's return on capital to a comparatively pedestrian 15 per cent, but its shareholders will be hoping that this will rise as combined profits rise rapidly with no need for further investment.

The companies to be especially wary of are those which have tended to make low returns on capital in the past, but which are overflowing with ideas for investing your money at apparently high rates. Life just isn't that simple. Superior returns aren't available everywhere — and where they do exist they're generally there because a company is doing something right in its existing line of business.

So companies that are burdened with an unproductive base of assets generally don't produce much cash — or at least they slow down the arrival of that cash with shareholders, which comes to the same thing in terms of valuation because, as we saw in chapter 4, money is worth less the longer you have to wait for it.

Adding meat to the bones

Listed companies have to follow huge numbers of ever-changing and often very complex rules — imposed by government, the stock exchange and global accounting standards — when preparing their financial statements, but the result is generally pretty similar to what we've produced here for Carlo's Candles.

Some industries have their own peculiarities. Banks talk about 'net interest income' and 'other operating income' instead of gross profits and, as money-lending businesses, they tend to operate with very high levels of debt. Insurance companies get to invest premiums received while they wait for the claims to come in, giving them an extra source of earnings. And, of course, all listed companies have to produce pages and pages of notes to their financial statements. But while most of it's useful in terms of getting a handle on a company, it's really

only adding meat to the bones.

The key to understanding a company is to understand how the cash flows through it, and the three main statements that we've looked at in this chapter, plus the reconciliation of cash flow to profit, are all you really need for that. The income statement and balance sheet tell you about the assets mounting up inside a company, while the cash flow statement and the reconciliation provide the clues as to whether and when it's likely to start landing in shareholders' pockets.

Of course, you then need to decide if all this conforms with your view of a company's business dynamics, and see whether the stock is available at an attractive price — which is what we'll be looking at in the next couple of chapters.



Chapter 6

Short cuts for finding value

'In theory there's no difference between theory and practice. In practice there is.'

Yogi Berra

As we saw in chapter 4, companies and shares are worth the present value of the future cash they can generate for their owners. It's a simple enough proposition, but in practice there are a couple of problems.

First of all, you might wonder how to value companies that aren't in the habit of paying out cash to shareholders. Some of the biggest and best companies in the world, including Warren Buffett's Berkshire Hathaway, don't pay dividends (Berkshire Hathaway did once pay a dividend under Buffett's stewardship, soon after he took charge, but he has since suggested that he must have been in the bathroom at the time it was declared).

So how can Berkshire Hathaway be worth anything at all, if it doesn't ever pay any cash to shareholders? The answer is that it will, eventually, pay something out to its owners — unless it disappears in a puff of smoke — because there's nowhere else for the money to go. Perhaps, when Warren Buffett takes his place in the great boardroom in the sky, it'll pay dividends again, or maybe it'll even be broken apart or wound up. But if the cash keeps piling up, sooner or later it will have to pay some of it out, and people are betting that when it does, it'll be worth waiting for.

The way to get around this, in terms of valuation, is to value the cash flowing into the company, rather than to the shareholders. You can do this because the shareholders own the company, so the cash flows made by the company are in fact their cash flows, whether or not they (or their appointed board of directors) decide to pay them out as dividends. In fact, if you assume that a company and its shareholders make the same returns on their investments and that their cash flows should therefore be discounted at the same rate, it actually makes no difference which way you look at it.

The deficiencies of DCFs

In spite of a few shortcomings (which we'll come to), this theory does at least provide a framework for comparing different companies, irrespective of what they do with their cash. And if you give an analyst a theoretical framework, he or she will give you a 15-page spreadsheet. After all, if a company is worth the present value of its future cash flows, then why not put together a giant sum, calculating all those cash flows, discounting them back to their present value and totting them up? These sums are called 'discounted cash flow' calculations, and they're all the rage these days (though curiously they were not nearly so popular before the advent of the computer).

In practice, though, they're often not worth the space they take up on your hard disc. The problems start because you can get so wrapped up in the niceties of the calculation that you forget to give enough thought to the numbers you put in. And as you multiply wrong numbers together, they just get wronger and wronger until they're quite possibly worse than a wild guess. Worst of all, though, is that when an answer does pop out, there's a danger you'll give it more weight than it deserves, simply because it's been spat out by your elegant spreadsheet.

If you're sure you can trust yourself not to get carried away, then it can be worth running through this sort of exercise occasionally, to see how different factors might affect a valuation. On the whole though, you'll save yourself a lot of time, trouble, and most likely money, if you treat them with extreme caution.

As the famous economist John Maynard Keynes put it, it's better to be vaguely right than precisely wrong, and the better bet is to stick to a few simple valuation tools. They won't allow for decimal-place accuracy, but they will help you evaluate opportunities as they present themselves. The theory about discounted cash flows is important — to direct your thinking and help you interpret the results — but when the right opportunity comes along, it should scream value at you, making complex calculations redundant. Your time will be better spent thinking about your assumptions and why they're so different from the market's.

Asset-based valuation tools

The simplest tool of all is the 'price-to-book ratio'. You get it by taking a company's market capitalisation and dividing by its net assets (also commonly known as 'book value'). There are two main justifications for using the net assets as an estimate of value. The first is that it represents what's been paid by the company for all its stuff, so it might at least be an indication of its value — after all, the company could perhaps sell it all and give the money back to shareholders. The second is rather more esoteric, though it amounts to the same thing. The theory goes that a company's net assets form the base of capital on which it makes a return and if, as before, we

assume it makes the same returns as its shareholders, then the company's net asset value will be its value to shareholders.

The beauty of the price-to-book ratio is in its simplicity, but there are a couple of problems with it. The first is that the book value doesn't in fact represent the value of a company's assets. As we saw in the previous chapter, it represents what the company paid for those assets, less an arbitrary charge for wear and tear over the years, and plus or minus the odd bit of accounting confusion.

So you have to be careful about the assets you include in your estimate of book value and the values you give them. Plant and machinery dedicated to a declining industry might have a much lower value than that stated on the balance sheet. Other assets, such as cash, have a more definite value. In between, there are things such as inventory and receivables, whose value will depend on how confident you are that they can be converted successfully into cash.

Some assets, such as property, might be understated, and some valuable 'intangible' assets, such as brands, goodwill and intellectual property, might not even show up at all. Accounts for The Coca-Cola Company for the year ended 31 December 2007, for example, showed total assets of US\$43 billion and a net book value of US\$22 billion, yet Interbrand's 2007 global brand survey put the value of its main brand at US\$65 billion (actually, they made it precisely US\$65.324 billion, using a form of discounted cash flow calculation).

So you need to make adjustments to some asset values, and perhaps even ignore others, to come up with your own estimate of a company's net asset value. The trouble is that it's all a bit circular. We say a company is worth the value of its assets because of what they can earn for us, but then we value those assets according to what they can earn for us. All roads eventually lead back to the fundamental truism that a piece of capital is worth what it can earn.

Which gets us to our second problem: companies and investors most definitely don't all make the same returns. Some companies consistently make returns far above what others can achieve, because of competitive advantages or good management, or both. Economic theory says these factors should be ironed out over time, and eventually they must be — but in practice they can hang around for ages.

All things being equal, then, a good business making high returns on capital will justify a price that's higher than its net asset value — particularly if it has ample scope to invest further capital at those high rates of return. And a poor business making low returns will deserve to be priced at a discount to its net asset value — particularly if it's determined to keep investing capital at those low rates of return rather than return it to shareholders.

Woolworths had a book value of \$6.2 billion at 31 December 2007, so its market capitalisation of \$35.2 billion puts it on an extravagant price-to-book ratio of 5.7. But, as we saw in chapter 5, it makes a thumping return on capital of 27 per cent and, given its market positioning (something we'll look at more closely in chapter 7), it will most likely sustain these returns long into the future, steadily investing more capital. (Woolworths paid dividends of 74¢ per share in respect of its 2007 earnings per share of 108¢, thereby retaining 34¢ to reinvest for the future.)

At the other extreme you'll find companies like PaperlinX, the paper manufacturer and distributor, which had a book value of \$2.0 billion at 31 December 2007 and a market capitalisation of \$955 million at the time of writing, giving it a price-to-book ratio of 0.5. At first glance that might look cheap, until you see that it has managed returns of only 6 or 7 per cent on its capital for the past few years. The market is betting on continued poor returns and, in a cutthroat industry where products compete almost entirely on price, we wouldn't argue. Table 6.1 (overleaf) shows the price-to-book ratios for a range of companies. As you can see, there's a broad correlation between price-to-book ratio and return on capital, though it's far from perfect, reflecting the problems inherent in these measures and the market's own inefficiencies.

Table 6.1: selected price-to-book ratios

	Share price as at 29 February 2008 (\$)	Market capitalisation as at 29 February 2008 (\$ million)	Net assets at 31 December 2007 (\$ million)	Price-to-book ratio	Return on capital employed for 2007 financial year (%)
Seek	6.58	1894	123	15.5	109
Aristocrat Leisure	10.40	4811	321	15.0	79
Cochlear	53.91	2999	288	10.4	41
JB Hi-Fi	10.63	1125	151	7.4	31
Woolworths	28.99	35211	6196	5.7	27
Corporate Express					
Australia	5.40	905	163	5.5	36
Billabong International	12.60	2614	783	3.3	24
ASX	42.04	7195	2768	2.6	15
BlueScope Steel	10.90	8096	3655	2.2	20
Downer EDI	6.23	2016	1241	1.6	9
Qantas	4.22	8020	5638	1.4	14

Most stocks trade at least a bit above their book value since they have some sort of a market position, even if they're no Woolworths. So if you find a company making decent returns on capital, but priced around book value or lower, it might pay to wonder why. Generally there's a reason — such as that those returns are flattered because the balance sheet undervalues the company's capital or the returns are likely to take a tumble — but occasionally it might suggest a bargain.

Graham's net current asset approach

Where the price-to-book ratio really comes into its own is in trawling through the darkest depths of the stock market, where you can very occasionally find stocks trading well below any reasonable assessment of their asset value.

Ben Graham himself was the master of these situations. In particular, he directed his attention to stocks trading at substantial discounts to their net current assets. Current assets comprise cash and any assets that the company expects to turn into cash within one year, such as inventory and receivables. Fixed assets — that is, those that will not be turned into cash within one year, such as plant and machinery and intangible assets — are of far less certain value, and Graham therefore chose to ignore them. From the current asset figure, you deduct all a company's liabilities, both short-term and long-term and both 'trading' and 'financial', to arrive at a figure for the net current assets.

As Graham surmised in *Security Analysis*, published in 1934 and co-authored by David Dodd, the value of these net current assets should be a reasonable proxy for the minimum value a company might be expected to deliver if it were liquidated. At the time there were a large number of common stocks selling for less than their net current asset value, and Graham described it as fundamentally illogical. 'It means that a serious error is being committed', he wrote, 'either: (a) in the judgment of the stock market; (b) in the policies of the company's management; or (c) in the attitude of the stockholders towards their property'.¹

After a couple of pages of intellectual t-crossing and i-dotting, he concluded:

When a common stock sells persistently below its liquidating value, then either the price is too low or the company should be liquidated ... The truth of the principle above should be self-evident. There can be no sound reason for a stock's selling continuously below its liquidation value. If the company is not worth more as a going concern than in liquidation, it should be liquidated. If it is worth more as a going concern, then the stock should sell for more than its liquidating value. Hence, on either premise, a price below liquidating value is unjustifiable.²

The greatest risk to buying stocks at a discount to their net current assets, Graham observed, was that management may refuse to liquidate the business while continuing to dissipate the assets that make the

investment attractive. So Graham added a large former earning power to his wish list for the ultimate bargain. As he explained:

Common stocks which: (a) are selling below liquid asset values; (b) are apparently in no danger of dissipating these assets; and (c) have formerly shown a large earning power on the market price, may be said truthfully to constitute a class of investment bargains. They are indubitably worth considerably more than they are selling for, and there is a reasonably good chance that this greater worth will sooner or later reflect itself in the market price.³

Happily for Graham, throughout most of his investing career there were plenty of these opportunities, and he wrote about several in *Security Analysis*. A famous early coup for his investment partnership involved Northern Pipe Line, an oil transporter conspicuous to the rest of the market only by its dullness. Graham, however, noticed that, in addition to its pipeline assets, the company owned a portfolio of ‘Liberty Bonds’ and other gilt-edged securities worth about US\$80 per share — well above the company’s stock price, which sank to US\$64 in 1926. He built a large stake at prices below US\$70 and set about pressuring the board to liquidate the bond portfolio because he felt it was ‘inconsistent for most of the capital of a pipeline enterprise actually to be employed in the ownership of bonds’. The company duly sold the bonds and paid special dividends of US\$70 per share, leaving Graham with his money back and a fair slice of the — albeit lacklustre — pipeline business. And in June 1929, when the rest of the market was off buying radio shares, Graham was able to buy shares in the Otis Company for US\$35, even though it had US\$101 per share in net current assets, including US\$23.50 in cash. Over the next couple of years the company paid special dividends amounting to \$24 per share, and in April 1931 the shares were selling for US\$45, giving a combined total of US\$69 including the distributions — almost double the 1929 price (which isn’t bad, given that the worst stock market crash in history had taken place in the meantime).

Sadly, these types of opportunities have become scarce, no doubt in part because of Graham’s success with them. But they do arise from time to time, although perhaps not exhibiting all the facets of Graham’s ultimate bargains. One recent example was SecureNet, a producer of IT security products, which in the aftermath of the dotcom bubble in 2002 saw its price slump from almost \$20 to just 65¢. At these levels, however, the stock was trading well below its net current asset value and even the net cash on the company’s balance sheet, which amounted to \$90 million in June 2001, or about \$1.18 per share.

Of course SecureNet had never had a ‘large earning power’, and its cash balance was falling by about \$1m a month as it lost money, but there was considerable agitation to put the cash pile to better use. Having previously recommended the stock as a Speculative Buy at prices between \$1.17 and \$1.67, *Intelligent Investor* upgraded SecureNet to an outright ‘Buy’ in April 2002 at \$0.85. We were rewarded with a cash takeover at \$1.57 per

share a little more than a year later. Table 6.2 provides a summary of these net current asset situations.

Table 6.2: the net current asset approach — then and now

		Share		
	Year	price low	Net current assets	Value realisation
Northern Pipe Line	1926	US\$64	Net current assets of US\$82 per share, including US\$79 per share in gilt-edged securities.	Special dividends of US\$70 per share, plus remaining pipeline business.
Otis Company	1929	US\$35	Net current assets of US\$101 per share, including cash of US\$23.50 per share.	Special dividends of US\$24 per share, plus remaining business priced at US\$45 per share in 1931.
SecureNet	2002	65¢	Net current assets of \$1.26 per share, including cash of \$1.18 per share.	Cash takeover at \$1.57 per share.

Earnings-based valuation tools

While asset-based valuations focus on what you hope a bunch of assets might be able to earn, earnings-based valuations (you won't be surprised to hear) focus on what they're actually earning. As we saw in chapter 5, a business's earnings are essentially made up of its increase in cash, plus its increase (or less any decrease) in other assets. The increase in other assets comprises the investment that's made in the business in order to make more cash in future. It's capital that could have been taken out as cash, but that has been reinvested in the business instead.

So when you come to value a business, in terms of its discounted cash flows, you can either think of this reinvested element as cash that's available to you today (and it just so happens that you've decided to reinvest it in the business), or you can think of it in terms of the extra cash you'll make in future on account of having invested it — but to think of it as both would be to attempt to have your cake and eat it too.

As before, if you start by assuming that the company and its shareholders make the same returns, it actually makes no difference which approach you take. This leads to a handy valuation shortcut. Instead of discounting a series of varying cash flows and adding them together, you can think just in terms of this year's earnings repeating year after year. And, as we saw in chapter 4, the value of the same amount repeating year after year conveniently simplifies down to that amount divided by the return you're aiming to make.

Let's say, for example, that you aim to make a return of 10 per cent per year and you have a company,

Plodalong Plastic Plant Pots, that makes a return on capital also of 10 per cent, and has a policy of paying out half its earnings and retaining the other half to invest in its business (a 50 per cent ‘payout ratio’).

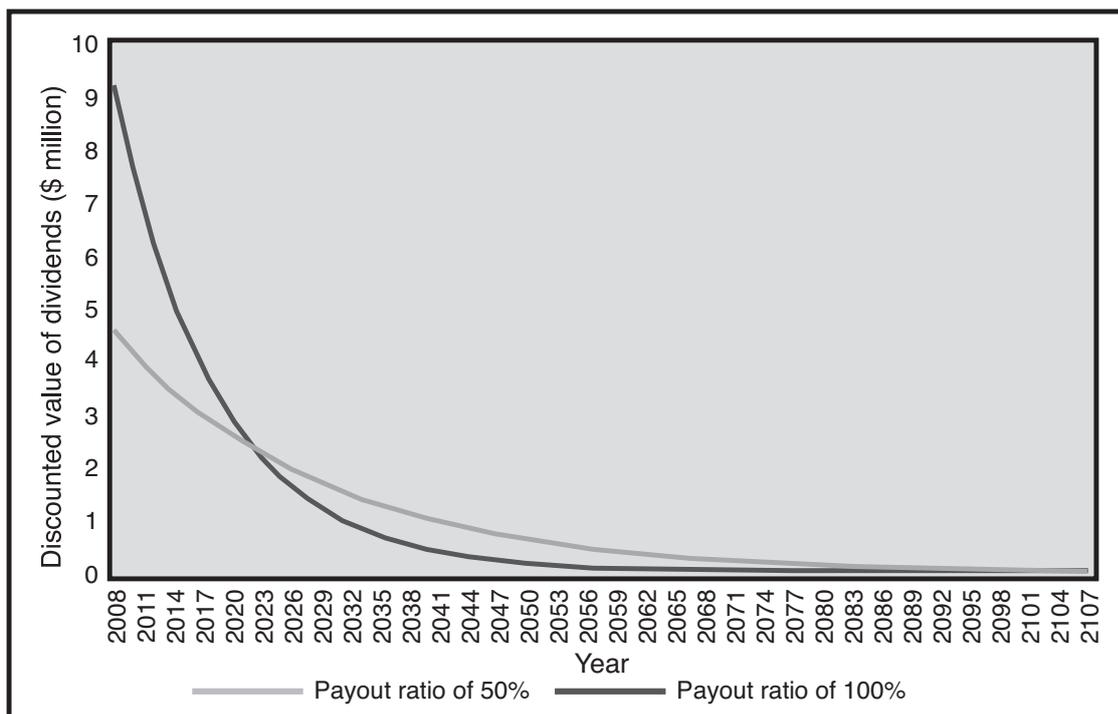
This year it makes earnings of \$10 million, pays out \$5 million and reinvests \$5 million. Next year, it’ll make \$10.5 million (the same \$10 million plus 10 per cent on the \$5 million reinvested) and pay out \$5.25 million. In year three, it’ll make \$11.025 million and pay out \$5.5125 million. Cutting a long story short, you’ll have a series of dividends starting at \$5 million and growing forever at 5 per cent a year.

Going the long way around, you could discount each of these dividends at 10 per cent per year and add them up. You can take it from us that they’d come to a grand total of \$100 million. But taking the short cut, you could simply divide this year’s earnings by your target return of 10 per cent — getting the same \$100 million and having time left over for a round of golf. (What you can’t do is value the whole \$10 million of earnings growing at 5 per cent per year, because that would be having your cake and eating it too.)

By assuming a flat \$10 million of earnings a year, you’re essentially assuming that Plodalong pays out all its earnings as a dividend (a 100 per cent payout ratio), so the earnings don’t grow. As you’ll see from figure 6.1, today’s value of the \$10 million dividend stream (under the 100 per cent payout ratio) would start out higher than the \$5 million dividend growing at 5 per cent (under the 50 per cent payout ratio), but the lines cross in 2023, and the growing dividend is always worth more after that. Even so, the total value of each dividend stream — represented by the area under each graph — is the same.

<fig 6.1 from p.96>

Figure 6.1: Plodalong Plastic Plant Pots discounted value of dividends



In fact, however much of its earnings a company pays out, and no matter what return you target, so long as you assume it will make the same return on its capital as your target return, then its value will simplify down to this year's earnings divided by your target return — simply because you're not adding any fresh capital to the overall pot (represented by you and Plodalong) and you're assuming all the capital in there makes the same return.

The price-to-earnings ratio

Of course it's a huge assumption to say that Plodalong makes the same returns on its capital as its shareholders do, but it does provide a neat short cut, because it would mean that any company is simply worth this year's earnings divided by your target rate of return. You can turn this around to say that a stock is worth a multiple of this year's earnings, where that multiple is one divided by your target rate of return. This multiple is known as the price-to-earnings ratio (or the PE ratio, PER or earnings multiple).

So, if you were targeting a return of 8 per cent a year, then you could, in theory, pay a PER of 12.5 (1 divided by 8 per cent) for a stock (assuming it could reinvest its capital also at 8 per cent). And if you were targeting 12 per cent a year, then you'd pay a PER of up to 8.33. And if a stock were priced in the market on a PER of 16, then theoretically it would be set to provide a return of 6.25 per cent (1 divided by 16; this is also known as its 'earnings yield').

But in practice, of course, things aren't so simple. As we saw earlier with the price-to-book ratio, some companies persistently make better-than-average returns on their capital, while others make poor returns.

At the top end of the spectrum, there are companies with lots of potential to reinvest large portions of their earnings at high rates of return. For the privilege of being able to reinvest large lumps of capital at these high returns, it might make sense to pay a significant premium to your 'target PER'. And by paying that premium, you effectively bring your expected return down from the company's internal reinvestment rate towards your target rate of return — or even below if you get things wrong. You're essentially making a bet on the durability of a company's competitive advantage — that is, how long it will be able to keep investing capital at premium rates. If the advantage is eroded later than what's implied by the PER you pay for a stock, you'll do well. If, however, the advantage is eroded sooner than implied by the price, you'll do worse.

This is obviously a grey area, because we're forced to look long into the future and we're no longer looking at a linear valuation scale. Double the return on capital for twice as long doesn't mean twice the value. And it's not as if returns will suddenly fall off a cliff after a set number of years anyway; more likely they'll gradually revert to the market average over a period of time, so you have to consider the rate of decline.

We'll go into some of the factors that influence business quality in the next chapter, but for now we'll just note

that, without being able to get an accurate fix on all these things, we'll be left needing a wide margin of safety. In practice, this means only paying premium PERs for very good businesses and only paying significant premiums for the very best. Quite how high a PER the best businesses can deserve is a matter of intense debate. Among other things, it depends on your target rate of return and the political climate — because the best businesses are likely to have monopolistic characteristics and will therefore be at risk of regulation. Allowing for a margin of safety, though, you'd be brave to pay much more than twice your target PER even for companies of the highest quality — and most likely you'll find them available for less if you're patient.

At the other end of the spectrum, you'll find companies that hog their capital and make poor returns. The worst offenders will be overvalued even on very low PERs, and can be traps for the unwary. In this case, you're buying in at a discount because it's expected that your capital will continue to be invested at worse than average rates. And again, whether or not this proves to be a smart move will depend on how low the rate of return is, how quickly it reverts to average, and how much capital is gobbled up at those low rates in the meantime.

As we noted earlier with asset-based valuations, however, most listed companies have some sort of a market position and make a return on capital at least a little above 10 per cent. So most companies will deserve a PER a little higher than your target PER, depending on the returns they can actually make and how sustainable they are.

Making adjustments to reported earnings

So there's this underlying long-term, mean-reverting trend in return on capital, which will determine the PER you're prepared to pay for a stock. But to complicate things further, a company's earnings will be buffeted around on either side of this underlying trend according to prevailing business conditions. Even for relatively stable companies, the earnings figure is always suspect because it is based on asset values (that is, their increase or decrease in a particular period) and is therefore just an accountant's estimate of the progress made by a company during a particular period.

In practice, therefore, you'll need to make adjustments to the reported earnings. What you're after is an earnings figure that would sit neatly on a company's 'underlying long-term, mean-reverting trend in return on capital', which we talked about a moment ago. In other words, we're looking for the underlying net profit a company would make in an average year, according to its current business strength but stripping out cyclical or one-off factors, if that average year started now, so that we get our first slug of earnings in a year's time. (This is how the time value of money calculations work out; money received today would just come straight off a valuation.) We've provided a case study of QBE Insurance (see p. 101) to give you an idea of how this might work in practice.

By focusing on ‘an average year starting now’, your valuation will have a bias towards past performance, because that’s where you’ll gather most of the data to estimate the average. This means you’ll likely miss out on stocks that are set to make a sudden leap in profitability (assuming they’re priced accordingly), and you also risk being sucked into stocks that are about to take a sudden and permanent shift downwards.

If you really think that earnings are about to change substantially over the next few years — giving the company a paradigm shift in its return on capital — then it might make sense to estimate the earnings in a few years’ time and use that figure. But remember that this figure will incorporate however many years’ worth of growth (even if you’re actually expecting a fall in earnings), so you’d need to discount the valuation to get back to today’s money.

You need to be careful of forecasting earnings too far forward, in any case. Where the underlying trend in earnings is set to take a permanent shift downwards, it can be very hard to predict where they might end up, and when or whether they might start trending upwards again. Because the market tends to take too short-term a view of things, the best investments tend to be those that are set to deliver well over the long term, but which are priced cheaply on account of a short-term hiccup. Poor-quality businesses and those in declining industries rarely make good long-term investments — even when bought at very low prices. In the same way, stocks that have a brighter than usual outlook over the next couple of years are often priced higher than can be justified by their long-term prospects. We saw in chapter 3 how easy it can be to get swept up in a tide of optimism for a stock — and how that’s exactly what you need to avoid if you’re to be successful.

Some things, however, can have a pronounced and relatively predictable short-term effect on earnings and these need to be taken into account. Probably the most common adjustment to make is for acquisitions that have been completed but that aren’t fully reflected in the most recent set of accounts. The QBE case study shows how you might go about making the adjustments. On the one hand, you need to take account of the revenues and operating profit that have been added, but on the other, you need to account for the ongoing cost of the capital used to pay for the acquisition — which can include interest on additional debt, or the dilution of existing shares through the issue of new ones. At the simplest level, you might assume that the two sides balance out and that there’s no net change to earnings per share (by looking at the per share level, you take account of share issues). And you’d probably do this for small acquisitions, where any impact is likely to be lost in the wash. But for major deals, as in QBE’s case, you’ll need to piece together the impact from the company’s various announcements.

After all that fiddly detail, it’s best to close this section by making the point again that it’s better to be vaguely right than precisely wrong. You’ll get more reward from thinking about the right general adjustments to make to a company’s earnings and about the PER its stock deserves, instead of trying to forecast this year’s earnings per

share to three decimal places. Brokers' analysts tend to focus on the latter and most investors are trying to work out whether the analysts are getting it right or not. But the precise level of earnings for this year and next are relatively immaterial to the intrinsic value of a company, and you can give yourself an edge by focusing on the things that do matter. We'll look at some of the factors affecting business quality in the next chapter, but for now we'll keep going with our valuation tools — specifically the ones focused on cash.

Case study: QBE Insurance

As you can see in table 6.3 (overleaf), QBE Insurance made a net profit of \$1.925 billion for the year ended 31 December 2007. If you dig around in its preliminary results, however, you'll see that it is currently making more money on each dollar of assets and for each dollar of premium income than it has in the past 10 years — equal with last year at any rate. Chief Executive Frank O'Halloran explains in his operational review that this has been 'mainly due to a low incidence of large individual risk and catastrophe claims'.

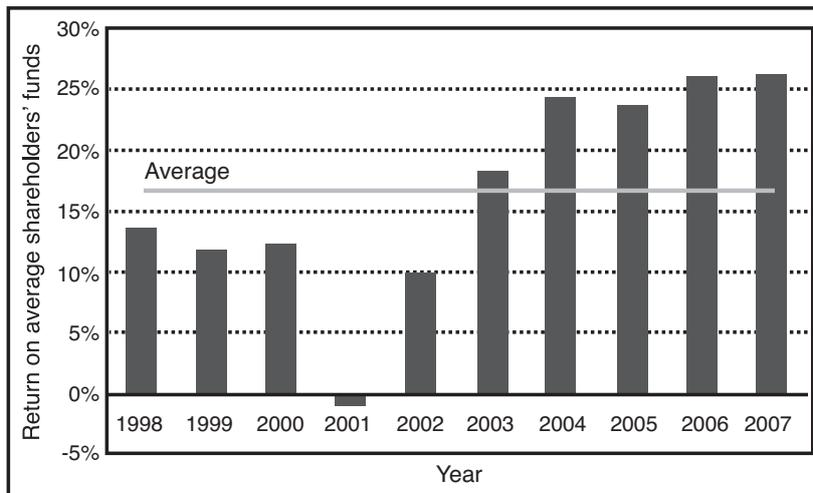
Table 6.3: various 2007 earnings figures for QBE Insurance

Valuation basis	Earnings (\$ billion)
Reported earnings	1.93
Earnings adjusted for cyclicalities	1.10
Earnings adjusted for cyclicalities and taken forward to a year from now	1.23
Earnings adjusted for cyclicalities, taken forward to a year from now, and including the effect of acquisitions	1.31

In fact, as you can see in figures 6.2 and 6.3, in 2007 QBE made a return on average shareholders' funds of 26.1 per cent (this is the same as return on equity, or return on net assets, as we saw in chapter 5, and is the closest figure to return on capital employed that the company provides for the past 10 years), and a net profit per dollar of net earned premium of 18.9 per cent, compared with long-term averages of 16.3 per cent and 9.7 per cent respectively.

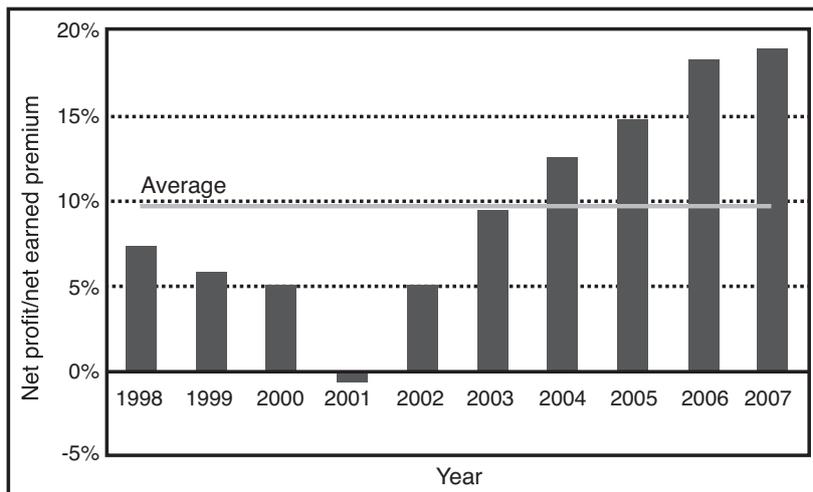
<fig 6.2 from p.102>

Figure 6.2: return on average shareholders' funds for QBE insurance 1998 to 2007



<fig 6.3 from p.103>

Figure 6.3: net profit/net earned premium for QBE insurance 1998 to 2007



Adjusted 2007 results

If we use the average figures instead, we get adjusted earnings of \$1.21 billion ($\$1.93 \text{ billion} \times 16.3/26.1$) and \$990 million (9.7 per cent of 2007 net earned premium of \$10.21 billion). Taking the average of those would give an adjusted net profit of around \$1.10 billion. So, in one fell swoop (or perhaps a couple), we've lopped 43 per cent off our earnings figure. This is by far and away the biggest adjustment we're going to make, and thinking about it should occupy most of our time. We'll go through a few further refinements, to further elaborate how the process works; for some companies these might be more significant, but for QBE the cyclicity is by far the most important factor.

Our first extra refinement is to account for timing. Our adjusted profit is for earnings for the year to 31 December 2007. It's 29 February 2008 at the time of writing, so a year from now would be one and a sixth years

after the December 2007 earnings. For the purposes of our PER calculations, therefore, we need to increase our earnings by one and a sixth years' worth of our target return, which amounts to an increase of 12 per cent ($1.1^{1.1667}$) giving earnings of about \$1.23 billion.

Impact of recent acquisitions

Further complicating matters, though, are a number of US acquisitions made over the past year. The purchases of Praetorian Financial Group and Winterthur US were completed on 1 June 2007, and a deal to buy North Pointe Holdings was announced on 4 January 2008. According to the 2007 annual report, these will add about \$3.0 billion of gross written premiums per year, of which about \$1.9 billion was included in the 2007 year.

If we accept management's view of things, gross written premiums will increase by \$1.1 billion, or about 9 per cent over last year's \$12.41 billion. And if we reckon that net profit will increase by the same amount, we get \$1.34 billion ($\$1.23 \text{ billion} \times 1.09$) — except that we have to allow for an extra five months of the interest cost of paying for the two acquisitions completed on 1 June 2007, and a full year of interest on the US\$146 million cost of North Pointe Holdings.

For the 1 June acquisitions, QBE issued US\$550 million and £258 million of debt securities, and note 24 to the accounts indicates that these carry interest rates of 6.2 per cent and 6.8 per cent respectively. Conveniently, though, both figures come out at 3 per cent for five months, or roughly US\$17 million and £8 million, which translate to a total of \$34 million at exchange rates prevailing at the time of writing. At 7 per cent, the interest cost of shelling out US\$146 million for North Pointe would be about US\$10 million, or \$11 million.

In all, then, there's an extra \$45 million in interest we need to account for at a pre-tax level, which comes to about \$32 million after tax. Taking that from our \$1.34 billion adjusted net profit, we'd have about \$1.31 billion.

Summary and valuation

After making all these adjustments, then, we might reckon on 'underlying trend earnings' of around \$1.3 billion for QBE. Anything higher would mean extrapolating from current conditions, and that's a dangerous game in the insurance market where things can turn on a dime (either because the pricing regime deteriorates, as it tends to when claims are scarce, or because of a sudden increase in claims).

Even so, QBE is a good business, making an average return on shareholders' funds of 16.3 per cent over the past 10 years — well above our target rate of return of 10 per cent. On that basis, and weighing up QBE's quality according to the factors we'll look at in chapter 7, we'll plump for a PER of 14 as being reasonable (a 40 per cent premium to our 'target PER' of 10). That would give us a valuation of about \$18 billion, which is a little below the company's market capitalisation at the time of writing of \$20 billion (with the share price at \$22.57).

So we don't think there's anything to go for in QBE at the moment. But the situation is a lot more interesting

than it was only a couple of months ago, at the beginning of January 2008, when the share price hit \$33.36 to give the company a market capitalisation of almost \$30 billion. QBE will have to get a little cheaper to get on the right side of our valuation and then provide a margin of safety, but it is at least back in the right ballpark.

Cash flow-based valuation tools

As we've just seen, a company's earnings are made up of two components: one that's flowing out to shareholders, and one that's being reinvested back into the company. As regards the reinvested portion, we can either factor it into our valuation now (as part of our current return from the investment), or we can factor it in later (as growth in that return), but we can't do both. With earnings-based valuations we do the former, whereas with cash-based valuations we do the latter.

The dividend yield

The simplest cash-based valuation tool is the dividend yield. You get this by taking the annual dividends from a company and dividing by its share price. The idea is that this provides you with a smoothed figure for a company's free cash generation per share. As we saw in chapter 4, though, we need to take account of growth by adding to the dividend yield the average rate at which we expect it to grow over the long term, to give our total expected return from a stock.

So if a share has a dividend yield of 4 per cent now, and we expect the dividend to grow at 6 per cent a year, then we'd expect it to provide a return of 10 per cent a year, and if we edged up our expectations for dividend growth to 8 per cent a year, we'd expect a return of 12 per cent a year.

Turning this around, if a share paid a dividend this year of \$1 and we expected that to grow at 6 per cent a year, and we wanted a return of 10 per cent a year, we'd need a dividend yield of 4 per cent — giving us a value for the share of \$25. And if we were aiming for a return of 14 per cent, we'd need the same share to provide a dividend yield of 8 per cent, thereby halving its value to \$12.50.

There are a few things to look out for with dividends. First of all, you're only really looking for a company's 'ordinary' dividends, rather than any 'special' dividends (which tend to be one-off in nature). Secondly, and perhaps most importantly, it's important to bear in mind that dividends are just numbers chosen by the directors. In some cases, an over-optimistic assessment of the future will lead to them being set at too high a level, and they'll actually need to be reduced. If you think that's the case, you'll need to make your own adjustment downwards to a level you think is sustainable (and indeed that corresponds to the rate of growth you then anticipate in your calculations).

The free cash flow yield

The way to bypass the directors' decision on dividends is to look directly at a company's cash flow, and divide that by the company's market value to provide a 'cash flow yield'. The starting point for this is the 'net cash flow from operating activities' that we talked about in chapter 5, and which you should be able to find near the top of a company's cash flow statement.

The trouble with operating cash flow, though, is that it doesn't take account of cash spent on maintaining or expanding the company's operations — the former being a real business expense and both being a real drain on cash flow. So to make the cash flow figure useful, you need to adjust it to take account of these things. What you come up with will be a form of what's known as 'free cash flow'.

Free cash flow is a bit like backyard cricket, in that everybody has their own set of rules for it. Stockbrokers' analysts particularly love this opportunity to express themselves, but the calculations are also profoundly important to them because the answers pop straight into their beloved discounted cash flow calculations. So at the annual analysts' dinner, people will get heated about adjustments for deferred taxation, or theoretical normalised marketing spend, or the chairman's annual underwear budget. But so long as you keep in mind where you're trying to get to — an estimate of the money a company has left over each year, before or after its investment for the future, depending on whether you then allow for the growth arising from that investment — the route you take isn't very important.

The simplest approach is to take the operating cash flow and deduct any cash spent on investing activities. This will give you a rough figure for the cash left over after investments, so in most cases it would be fair to expect it to grow over the years; in fact, it's basically the internal cash flow equivalent of the dividend. Because this figure will tend to bounce around quite a lot (owing to cash spent on acquisitions for example), you'd want to look at it over a period of time and investigate any big jumps or falls (in fact, because of its lumpy nature, this applies to all measures of cash flow).

A further refinement would be to deduct only the expenditure on plant and equipment (or similar). That would take account of expansionary spending on plant, but not on acquisitions, so you'd want to allow for growth in cash generated by the former but not the latter.

An alternative approach is to try to split a company's investment spending into maintenance and expansionary components. It's rare for companies to do that themselves, and it's rarer still for it to be believable, so the fall-back position is to use the depreciation charge as a proxy for maintenance capital expenditure — after all, this is the amount by which a company's assets are supposed to wear out each year, so it's fair(ish) to assume it's also what they cost to maintain. Of course, this assumes that the accountants are getting the depreciation charge

right, and if something has happened to make you doubt this, you'll need to make further refinements. By deducting only the maintenance spending (or a proxy for it), you'd have a figure that, like earnings, is stated before any expansionary investment, so you wouldn't want to account for it growing.

You should also watch out for how a company treats its financing charges (interest payable on the company's debt and receivable on its cash balance). Some companies include it in financing cash flows, some in operating cash flows, and some are mischievous enough to include the interest received in operating cash flows and the interest paid in financing cash flows. Wherever it ends up, you need to make sure it's deducted from your free cash flow.

If you divide free cash flow by a company's market value (or divide free cash flow per share by the share price), you get a figure for 'free cash flow yield'. If it's taken after investment for the future, you can treat it much as you'd treat the dividend yield (except that it's not dependent on the whim of directors). If you were targeting returns of 10 per cent a year, a company with a free cash flow yield of 4 per cent would need to increase that cash flow by 6 per cent per year to make your return. If, on the other hand, you deduct only depreciation to reach your free cash flow, you'll have a yield figure which, as with earnings, needs to represent your entire return on its own.

Strengths and weaknesses

The different valuation tools each have their own strengths and weaknesses. The price-to-book ratio tends to work best with low-quality businesses on steep discounts, the PER tends to work best with high-quality companies investing hard, and the dividend yield and free cash flow yield tend to be suited to mature businesses generating steady returns.

But in every case, you'll probably get closest to the truth by looking at all the different measures. You can then try to understand how they differ from what you might expect. Would the company need to make a huge return on its investment to bridge the gap between its free cash flow yield after investment and the same yield after only maintenance? Do its past returns suggest that this is likely? Does the company's competitive position mean it should sustain these returns?

We'll pull it all together in chapter 8, but before that we need to fill in the final piece of the jigsaw, which is business quality.

¹ B Graham & D Dodd, *Security Analysis*, McGraw-Hill, 1934, p. 495.

² *ibid.*, p. 499.

³ *ibid.*, p. 504.



Chapter 7

Recognising quality

'Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for.'

Peter F Drucker

The tools we looked at in the previous chapter provide useful benchmarks for valuing companies, in terms of their current earnings, assets, dividends and cash flow. But none of it means anything unless you also consider what's likely to happen to those things in future — and that, of course, is what makes valuation such an inexact science.

The trick to making decent guesses about the future is to keep your assumptions firmly rooted in the present. So instead of thinking about how things are likely to change, you think about how they are likely to stay the same. There's a subtle but important difference between these two approaches, because change compounds quickly, leading you down a multitude of dark alleys, whereas the same, well, stays the same — at least until it changes.

Transport yourself for a moment back to a feast in medieval England, where Ivan the Irascible has just thrown down a rather impressive gauntlet in front of Unwin the Unready, on account of the latter having looked at Mrs Irascible for more than the customary three seconds. Ivan is wearing the latest steel plate armour, with shield, helmet, four-foot broadsword and impressive snarl, while Unwin is dressed in rusty chain mail and carries a dagger. If pushed to prognosticate on the outcome of this contest, how would you figure it? You could try to anticipate the exact course of proceedings — a lunge here and a swoop there — or you could just reckon that, the way things stand, the odds favour the scary bloke with the big sword.

It's the same with companies. We may not be able to predict the future, but there are certain factors — present in the here and now — that should stand a company in good stead. So what are the corporate equivalents of plate armour and a broadsword? Well, the ideal company will combine three things: it'll have a product that people really want; it'll have a strong competitive position so it can provide it without too much interference; and it'll have the right management and culture so it doesn't stuff things up.

If you find a company that has all these features, and isn't too heavily regulated, then please supply details to

<info@intelligentinvestor.com.au>. We won't be holding our breath, though. Sadly (with our investor hats on), but thankfully (with our consumer hats on), when there's something we really want, lots of businesses generally spring up to take our money in return for it; and if, for some reason, they can't, the government will step in to regulate things. This is the way free-market capitalism is supposed to work. The competition arrives to make sure we don't get ripped off, and companies only get rewarded — over and above the base return on capital — to the extent that they do things better than others. In this way, the drive for progress is maintained for the benefit of all.

Sadly though (with our consumer hats on), but thankfully (with our investor hats on), the free market is run by humans, not machines, and it's not perfectly efficient. There's also a built-in resistance, because competing with big companies is hard, so the returns need to be more than marginally attractive for the competition to spring up in the first place. And even then, the incumbent might be so dominant that the supposed competition just can't compete. In theory, this is when the government steps in to shake things up a bit, through competition regulation. But it often takes a while for that to happen and, as often as not, it creates its own inefficiencies.

So the free market is inefficient and premium returns aren't always brought back to the average straight away. And 'quality businesses' are basically those where these inefficiencies look like they might lead to premium returns long into the future. But we're getting ahead of ourselves. Before the matter of competition even arises, we need to have a product that people want.

A product that people want

The best products make people's lives better — whether it's a tool that saves them money, a conveniently located shop with the products they want and service with a smile, or a soft drink that satisfies desires implanted in them by some clever marketing. If you don't have something people want (or at least think they want), you haven't got a business. And, generally speaking, the more people want your product, the better your business — at least for starters.

Adding value

It all comes down to what might be called added value, and it works on several levels. Take the humble motor car, for example. At a basic level, cars add a lot of value because they mean, for example, that we can live a long way from our place of work, enabling us to get a better job, or live in a nicer place, or both.

So cars add value, compared with walking at least, but what about compared with other alternatives? How about a horse and cart? Almost certainly — especially for the horse. How about compared with a train? Well, that

would depend on the walk to the station, the price of a ticket, the price of petrol and a host of other things. Every day people are weighing it all up, according to their circumstances, and deciding whether to drive or take the train. Enough people find that the car adds value to keep the industry going.

But what about the value of one car compared with another? What's the value added by a Honda Jazz compared with a Toyota Corolla, or a vintage E-type Jaguar? Well, this isn't *Wheels* magazine, so we'll leave that argument to people who have a clue, but it's safe to say that this is where the car industry falls down. In the right circumstances, cars add a lot of value compared with the alternatives, but they don't add much compared with each other. This inability of car companies to differentiate their product is a major source of competitive friction between them, and we'll say more about it shortly.

But let's stay a little longer with the product. The ultimate arbiter of quality is return on capital employed, because that tells you what return a business is making on the money put into it (see p. 68), but it can be hard to get an accurate fix on this because of the accounting assumptions that go into the figures on a company's balance sheet. So the best way to see evidence of added value is to look at a company's margins, because they reflect the additional amount charged for a product over the direct costs of providing it. The gross margin shows the value added to the raw materials that go into a product, and the operating margin shows the value added compared with all operating costs (so long as things like depreciation are worked out correctly, of course).

The margins can't tell you the whole picture, though. As we saw in chapter 5, Billabong makes an operating margin of 20 per cent compared with only 5 per cent for Woolworths, but we'd consider both to have very good products. The difference is that, while the operating margin takes account of the costs that go into a product, it ignores the opportunity cost of the capital that needs to be tied up to create it. Woolworths is able to make up the margin difference between itself and Billabong, and overtake it in terms of return on capital employed, because it can generate much more revenue for each dollar of capital, so even apparently thin margins are enough for it to make healthy returns. Margins are most useful, therefore, when comparing companies in the same industry; you won't learn much from comparing Woolworths' 5 per cent operating margin with Billabong's 20 per cent, but the contrast with Coles' 3 per cent margin (in 2007) speaks volumes.

Controlling prices

All this assumes, though, that companies are always trying to gouge the most they can from their customers (not to mention suppliers), so that it's only just worth using their product over the alternatives. This makes for unhappy customers, and the slightest improvement in the value proposition from competitors will lead to defections. What you really want is to have a product that adds value far in excess of what you charge for it, so

you can make a nice profit while still leaving some value on the table for your customers, thereby keeping the competition at bay.

Take Cochlear, the maker of ear implants, for example. It actually charges a bit over \$20 000 for its basic product, but there are plenty of formerly profoundly deaf people who'd say it's worth far more. So why doesn't Cochlear charge more? Well, for starters, the (relatively) low price stimulates extra sales in what is a nascent and fast-growing market. And those greater sales should lock in repeat sales in future (more on this in a moment), and will make it easier to cover fixed costs such as research and development. The low prices also keep governments, insurance companies, doctors and patients onside, consolidating the company's dominant position, deterring regulation and discouraging competition.

In short, Cochlear sets its prices according to its own agenda, not anyone else's, and it's a great position to be in. Another local example is ARB Corporation, manufacturer of bull bars and other four-wheel drive accessories. When you're buzzing around in the outback, the last thing you want is for your locking differential to freeze up (or so I'm told), so people aren't thinking too much about price when they buy these things. What they want is reliability and, perhaps as importantly, a reputation for reliability — and ARB offers plenty of both. So it has been able to pass some major recent cost increases — notably from steel and oil — onto customers and, even with a major headwind from the rise in the Australian dollar, its operating margin has only slipped from 16.8 per cent in 2004 to 15.0 per cent in 2007. Weaker businesses in tougher industries might be struggling to turn a profit in such a hostile environment.

Repeat sales

One snag ARB faces is that some of its products — such as bull bars — are pretty occasional purchases (or so its customers hope). So it works hard at developing its brand and getting customers to buy its other products. Making more frequent connections with a customer offers a double boost if handled correctly, because it increases revenue and provides the opportunity to enhance brand loyalty.

Features of a great product

- ⇒ *Added value* — inherently, and compared with alternatives and direct competitors. Compare margins within industries.
 - ⇒ *Pricing control* — stimulates sales, deters regulation and discourages competition.
 - ⇒ *Repeat or follow-on sales* — particularly powerful when combined with high switching costs.
-

Repeat sales become especially valuable, though, if you can lock your customers in by selling them a product with high switching costs. This is sometimes known as the ‘razor blade’ model, in honour of Gillette, which famously sold its razors cheaply to lock in a lucrative stream of revenue from its higher-margin blades. A new razor might not have cost much, but it was a lot more than a pack of blades, so the switching costs were relatively high.

Cochlear enjoys these benefits today, with its ‘installed base’ of implants providing a locked-in market for upgrades and spare parts. MYOB, the provider of accounting software, is in a similar position. Customers would have to overcome major hurdles if they wanted to switch to a different product, in terms of re-entering data, retraining staff and a short-term drop in business efficiency while the new systems are bedded down. And the result is that 82 per cent of MYOB’s 2006 revenues came from existing customers, through upgrades and add-ons such as training and services.

It’s not all chips and gravy with repeat sales, though. Sophisticated customers will see through it, and if you don’t have control over your prices in general, locked-in sales won’t help. This is where the manufacturers of airplane engines find themselves: there’s good money to be made on the spare parts and servicing, but competition between them means they make relatively little on the new engines. All in all, it works out as a pretty tough business.

A strong competitive position

All this goes to show that having a product people want is a good place to start, but it won’t do you much good if you can’t add some value vis-a-vis the alternatives, which is where competition comes in. The best-known framework for thinking about competition was put forward by Michael Porter in his 1980 book *Competitive Strategy*, where he picked out five forces (shown in the box below) that influence a company’s competitive position.¹

Porter’s five forces

- ⇒ Existing rivalry.
 - ⇒ Threat of substitution.
 - ⇒ Barriers to entry.
 - ⇒ Bargaining power of suppliers.
 - ⇒ Bargaining power of customers.
-

While there's quite a bit of overlap, these 'forces' form an excellent basis for thinking it all through. We'll look at them more closely in the following pages.

Existing rivalry

Existing rivalry is a bit like a squabble between kids over a box of toys: the greater the number of kids, the more equal their size, the more effort they've put in to get there, the fewer the alternative toys and the lower the capacity to share, the greater the potential for tears.

So the greater the number of companies fighting over a particular industry and the more equal their size, the greater the competition will be. And, like the effort required to get to a toy box, the greater a company's fixed costs, the harder it will fight to get a piece of the action. A lack of product differentiation is like there not being enough different toys to go around, while industry growth is like someone chucking in an extra toy once in a while. Without growth, the drive for expansion becomes a fight for market share.

The antithesis of industry growth is additional capacity, which is like one of our kids suddenly inviting a friend along. Cyclical industries are particularly at risk from excess capacity, because of the fluctuations in demand, and the problems are most severe where the capacity takes a long time to add and remove, or where it gets added in large chunks — as with a major new plant or a new newspaper, for example.

Long payback times on investment can also cause particular problems. Corporate memories are short, particularly if the executives charged with selling a product are different from those who developed it. The new executives will have an incentive to sell the product cheaply, to show how good they are at pulling in revenue, while blaming the previous regime for overspending on development. The airline industry tends to suffer from this: don't expect Boeing and Airbus to remember how much they spent on the A380 and the 787 Dreamliner when it comes to selling them in hot competition a few years down the line; don't expect Rolls-Royce to remember how much it spent developing engines for them; and don't expect Qantas to remember how much it paid for them when it comes to selling seats. Once capacity has been created, there's a major incentive to use it any way you can. High fixed costs create similar problems: if you're burning dollars anyway, there's a major incentive to pull in whatever revenue you can get.

Factors affecting existing rivalry

- ⇒ Number and size of competitors.
 - ⇒ Investment payback times.
 - ⇒ Product differentiation.
 - ⇒ Fixed costs.
 - ⇒ Industry growth.
 - ⇒ Competitors with different strategic agendas.
 - ⇒ Incremental increase in capacity.
 - ⇒ Barriers to exit.
-

Low barriers to exit are like a whole new toy box in another room: if a child has the capacity to go and find it, it will make life easier for everyone. In the same way, if companies are able to put their capital to use elsewhere, competition will be less intense than if they're tied to a particular industry. Note that it doesn't necessarily require someone to leave an industry; knowing that they could leave might be enough. The most mobile capital is cash, followed by assets that are expected to be turned quickly into cash, such as inventories and receivables. Property can also have low barriers to exit, depending on things such as planning permission and fit-out costs. Immobile capital would include specialised factories and intangibles like brands and patents. Companies with large piles of immobile assets will always stand and fight rather than up sticks and run away.

Even with all these problems, things might not be too bad if everyone understands the situation and behaves themselves. Cartels and price fixing are illegal, but most industries have some sense of what's best for all, which is rather like a sense of sharing between kids. A diverse group of participants with different motivations, though, can make it hard for an unwritten code to become established. Some airlines, for example, seem more interested in flying the flag for their country than in making money, thereby spoiling things for everyone.

The fighting between rivals can take different forms, depending on the circumstances, and this can have radically different effects on profitability. In a mature industry, for example, price cuts will tend to hurt everyone, as will aggressive advertising. But in a growing industry, an advertising battle and perhaps even limited price-cutting may actually stimulate demand and benefit all.

An example of aggressive advertising in a mature industry is car manufacturing. You can barely get through 10 minutes on prime-time TV without someone trying to sell you a car. But, with everyone at it, it's a defensive measure that just increases industry costs without a compensating rise in revenue.

Indeed, you could use the poor old car makers as an example for almost all the problems of existing rivalry — which is why they struggle to make money even though colossal barriers to entry have virtually stamped out new competition. There are only so many players in the industry, but they're pretty evenly matched and they're relatively diverse, coming from different cultures all over the world. There's a little growth, but product differentiation is low, fixed costs are high, capacity is added in large increments, investment lead times are long and barriers to exit are high. We'd rather them than us.

Threat of substitution

If existing rivalry is like a bunch of kids squabbling over a toy box, the threat of substitution is like the toys getting broken. If a new product appears that makes the existing one obsolete, it's game over and everyone has to go home. So an industry has to make sure that its product continues to add more value than potential substitutes, and if it can't do that through superior performance, it will have to do it through price. And if the cost of the product exceeds that price, then the future is bleak — particularly if there are major barriers to exit.

There are scores of examples of substitution throughout history. Take the horse and cart, for example. All of a sudden, Henry Ford started running off thousands of Model Ts, and life was never the same again. A similar fate met the old ice delivery service after the invention of the refrigerator, and you can imagine Thomas Edison didn't get too many invites to the Candle Makers' Union Christmas bash.

Traditional newspapers and TV companies are facing these problems today, with the internet increasingly providing a more useful product at a lower price. Newspapers are having to deal with online news sites providing up-to-date information, with a rich combination of text, sound and video content, while the likes of Seek and Realestate.com.au steal their traditional classified advertising businesses. TV companies, meanwhile, are having to cope with websites serving up films and other video content. A few years ago there were five TV stations in Australia but, in a decade or two's time, there could effectively be thousands. All may not be lost for these businesses if their capital — largely their brand value — is sufficiently mobile, and if their management and culture is sufficiently innovative to adapt. We'll say more about that later in this chapter, but it's a big ask for companies that are used to having things their own way.

Factors affecting the threat of substitution

- ⇒ Technological change.
 - ⇒ Substitute on an upward trajectory.
 - ⇒ Cost increases for incumbent.
 - ⇒ Substitute earning high profits.
-

Areas exposed to changing technology obviously provide the greatest risk of substitution. There was more than idle humour behind Warren Buffett's quip, in the Berkshire Hathaway annual report for the year 2000, that he had 'embraced the 21st century by entering such cutting-edge industries as brick, carpet, insulation and paint. Try to control your excitement'.² But it can be hard to say where change might rear its head, and even these supposedly boring industries will have to keep themselves ahead of the game. Porter himself provided the example of the US fibreglass insulation industry, which enjoyed boom conditions in the late 1970s owing to high energy costs and severe winter weather. But its ability to increase prices was limited by the presence of substitute products such as rock wool and styrofoam.

A new technology is particularly dangerous if it's on an improving trend, adding more value and costing less, and particularly so if it's making good profits, thereby giving its providers an incentive to steal everyone's lunch. The incumbents are particularly at risk if they're on a declining trend, whether because of declining value, increasing costs or something else, such as greater regulation. And, as we've already intimated, when change is afoot the formerly dominant businesses can have a tendency to rest on their laurels, while the new kids on the block have less to lose and are more used to trying new things.

Barriers to entry

While existing rivalry incorporates the ability of competitors to add capacity, and substitution is about a new product appearing, barriers to entry provide protection against new competitors appearing and taking the incumbents on at their own game. This particularly exacerbates competition, because as well as increasing the number of players, new entrants often have different strategic objectives — such as a mission to grab market share through low prices. They also tend to represent large incremental increases in capacity.

Barriers to entry are especially important to good businesses, simply because poor businesses, offering marginal returns, aren't so attractive to would-be competitors. This is a bit like the chicken and the egg, because the more lucrative a business, the more protection it will need, and the more protection a business has, the more lucrative it will be.

The ideal situation is to have an unregulated monopoly through which to supply a highly desirable product, so you can just keep milking your customers for as much as they can pay. The trouble is that too much milking tends to upset the competition regulators, so unregulated monopolies are usually pretty shortlived. They can sometimes fly under the radar for a while, particularly if they operate across a lot of borders. Ultimately, though, most companies end up being too dependent on a few large countries or economic groups. This is the fate that befell Microsoft. One imagines that the Republic of Vanuatu would have got short shrift if it had complained about Internet Explorer being bundled in with Windows, but US and European regulators couldn't be ignored. Some monopolies are prone to heavy-handed regulation, while others seem to get away with murder. It seems to depend on whether a particular cause can be manipulated to win votes. Telstra gets kicked around constantly, because we all use the phone and care deeply about the bills. The Australian Securities Exchange, on the other hand, tends to get a light touch because the customers it milks are mostly big institutional investors (although ultimately, of course, it's our super money), and they're generally quite happy to pay up so long as no-one upsets their own lucrative apple cart.

So regulation is best avoided, but the flip side is that you'll have to fend off competition from elsewhere, and that will require barriers to entry. Probably the biggest and best of these are economies of scale. At a basic level, they arise from having some element of fixed costs, so that greater revenues lead to higher margins and more flexibility over pricing. This effect is called operational gearing and, for businesses with a large element of fixed costs, it can work wonders on the way up — and it can be very messy on the way down (as we saw in chapter 5).

But economies of scale can go further than this because, as your sales increase, you might also be able to reduce your variable costs. By commanding more volume, you might be able to get better terms from your suppliers. Or you might be able to find efficiencies in distribution — the same truck, for example, might be able to supply two or more customers. Increasing scale might also enable you to diversify into associated markets, thereby adding further volume and sharing costs between a greater range of products. By combining rubber gloves and condoms, for example, Ansell can spread out its technology and development costs.

Scale can also bring industry knowledge and experience. Larger operators may have more data with which to analyse their industry, and they may also build greater experience. The trouble with experience, though, is that it tends to move easily to competitors, through simple observation, 'reverse engineering' and staff turnover. Too great a reliance on experience can also stifle innovation.

Where a product brings customers together in a network, scale can bring further benefits. The utility of a

telephone network, for example, increases proportionately with the square of its number of users, because not only can each new user make connections with everyone on the network, but everyone on the network can make connections with the new user. The communications industry is best known for these ‘network effects’, but there are other examples. Brambles’ pallet-pooling operation, CHEP, for example, enables pallets to pass along supply chains without them having to be returned and reissued every step of the way. And these supply chains can be further linked together to form larger networks. If a store in the US sources its goods along a supply chain originating in Germany, for example, at the end of their trip CHEP might pass the pallets on to a local US customer that is shipping goods back to Germany, thereby removing the cost of the pallets making the return trip empty. The greater the number of businesses involved in CHEP’s networks, the more useful — and entrenched — they become.

So scale can give you an excellent — even unstoppable — head start, but size isn’t everything. Barriers to entry can arise for other reasons. A company may have valuable proprietary technology, or it might own a factory close to its primary source of raw material, in an area where new development is restricted. Favourable access to distribution channels can also create barriers to entry. The large fund managers, for example, have spent years developing relationships with financial planners, and new entrants face a major struggle to get their products sold instead. Switching costs can be even greater where there’s an installed base of existing products requiring upgrades and other aftermarket servicing, as we saw earlier with Cochlear and MYOB.

Common barriers to entry

- ⇒ Economies of scale.
- ⇒ Favourable access to raw materials.
- ⇒ Knowledge and experience.
- ⇒ Favourable access to distribution.
- ⇒ Network effects.
- ⇒ Large investment required, particularly if risky and unrecoverable.
- ⇒ Proprietary technology.
- ⇒ Government policy.
- ⇒ Customer switching costs.
- ⇒ Expected retaliation.

Government policy can also stifle competition, although inevitably it will be at the expense of tight regulation.

Industries needing government licences, such as banking and gambling, are obvious examples of this, as are those using a limited resource, such as mining, and the radio, TV and telecommunications spectrum. Some licences must be bid for in competitive auctions, thereby making them only marginally valuable.

In some industries, would-be new entrants need to commit large amounts of capital, with no assurances about how the incumbents and their suppliers and customers might react, and therefore whether there'll be a profit to be made at the end of it. This is particularly unappealing where the investment is highly specific to the opportunity, making it unrecoverable if the venture fails. This would be the case, for example, with money spent on marketing a new product.

The anticipated level of retaliation is an additional factor relevant to all barriers to entry; an industry expected to accommodate a further competitor without a whimper will be more attractive than one that might be expected to blow itself apart rather than sustain an attack. Relevant factors here would include dominant existing players with substantial resources and a history of vigorous retaliation. With the notable exception of the number and size of competitors, the factors that exacerbate existing rivalry — such as slow industry growth and barriers to exit — will also tend to cause existing players to fight hard; but that, of course, is a double-edged sword.

Bargaining power of customers and suppliers

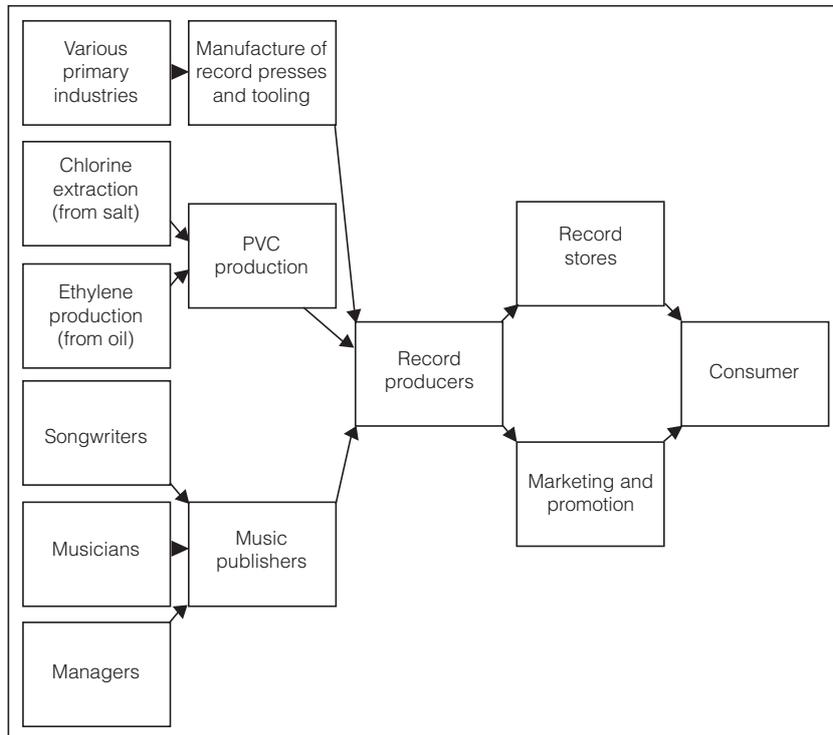
Porter's final two forces concern indirect competitors — those that appear at different levels of your industry supply chain. These companies aren't out to steal your lunch, as such (at least not usually), but they'd like to dominate the supply chain and make the most money out of it. Take the old vinyl record industry, whose supply chain is represented, in simplified form, in figure 7.1 (overleaf).

Of course, the music industry has moved on from vinyl records. CDs have replaced PVC with polycarbonates, thereby removing chlorine from the picture, and with the advent of MP3 files you can knock out most of the top of the chart. But back in the swinging 60s, you couldn't have done much in the record industry without salt, oil, songwriters and musicians. And if anyone had been able to control any of those things, then they could have held the entire industry to ransom.

As it happens, though, they were all in abundant supply. While it might appear that value in the music industry is added by the likes of Lennon and McCartney, stars such as these are products of the system rather than causes of it. The truth is that there's a huge range of music being made all the time and the real value is added by filtering through it to decide what consumers will want to buy, and then doing all the right marketing and promotion to persuade them to do so. This work is undertaken by music publishers and record producers who, as a result, have always had an iron grip on the industry.

<fig 7.1 from p.128>

Figure 7.1: record industry supply chain



But that's not to say that the publishers and producers have it all their own way, because they have to compete with each other. So if a music publisher tells a promising musician to take a hike, he might be handing a big opportunity to a competitor. To consolidate their power, therefore, many publishers and producers have teamed up as integrated record companies, thereby making it harder for songwriters and musicians to find other opportunities if they don't do what they're told.

At the end of the chain, as with most things, are the stores. The music industry has tended to have specialist stores, but it is gradually moving towards large general stores (particularly for the more commoditised items where price is a greater issue), and it's now moving online. Whatever the case, though, there's enough competition between the different 'routes to market' to ensure that the producers and publishers retain the upper hand — if they can keep control of their copyrights, that is. Stores have had more success in controlling areas such as grocery retailing, where consumers put a premium on freshness, convenience and price, all of which can be improved by a large retailer through economies of scale.

So what determines whether a particular link in a supply chain will, in the economic jargon, be a 'price setter' or a 'price taker'? Broadly speaking, they're the same things that affect the competition at any particular level. If there is fierce rivalry between your suppliers, they enjoy few barriers to entry and you have the option of substituting their product with something else, you should be able to get a good price and exceptional service.

But if a supplier has few rivals and enjoys substantial barriers to entry, and you have little choice but to use its product, you'll probably just have to take what you can get. All this works in reverse for your customers, for whom you, of course, are a supplier.

Note that we're not just talking about the companies you deal with directly. Anyone who puts something into your supply chain above you is effectively a supplier, and anyone further down the chain is a customer. It doesn't matter to the consumer of MP3 files, for example, that he or she has a wide choice of online music stores, if they all have to do what they're told by a limited number of music producers.

Inputs of value to a supply chain don't always come from the obvious sources, either. A company's employees need to be considered as suppliers, particularly in areas such as investment banking where the right employees can really make the difference in a business — and know it. But it's not just high-flying bankers that are in tight demand. Resources specialists are currently writing their own pay cheques, and ARB Corporation, whose control over prices we've already written about, recently opened a new factory in Thailand to overcome a shortage of skilled welders in Victoria. Its problem was specifically to do with finding enough of them, but no doubt this helped them negotiate decent packages. By opening up a new supply of skilled welders, ARB has reduced the influence they have over the company.

Other industries deal with unions, which have the effect of reducing a large number of competing suppliers down to a single entity, thereby increasing their power. Of course, other suppliers and customers may also try to organise themselves into industry groups. Sometimes these work and sometimes they don't, often depending on the extent of the rivalry between them — too much and someone will eventually break rank. Industry bodies such as this are subject to tight regulation, though, and can be illegal.

The right management and culture

So, to generate high returns, you need the right product and to be free from excessive competition. But ultimately a company is only as good as the decisions it makes, so management and corporate culture are essential components of a quality business.

Don't pay twice for good management

The trouble is that judging management is notoriously tough. People get to the top of companies by being charismatic and persuasive, so it's no surprise to find these characteristics in most chief executives. Indeed, if you spend 10 minutes talking to any CEO about his or her business, you're very likely to come away impressed with both. In extreme situations, CEOs develop fan clubs in the stock market and the prices of their shares can

reflect that. This can lead to investors paying for good management twice: not only are the company's earnings maximised because of good management, but those earnings are placed on a high multiple because of management's ability to maximise them.

Time and again we see examples of supposedly good management gone bad. Bond Corporation, for example, carried a premium rating for Alan Bond's expert guidance in the 1980s, until it all went wrong. And the same thing happened over at Christopher Skase's Quintex Corporation and, more recently, at HIH Insurance. Other famous examples from around the globe include Enron and WorldCom in the US, and Marconi in the UK.

The best way through all this is to make sure your investments have good management, as far as you can tell, but not to pay up for it. So, when you're valuing a company, don't use 'good management' as an excuse to stretch premium returns on capital out for a few years longer, and don't be prepared to add a couple of notches to its PER. Do, however, be ready to scratch from your list any companies where too many 'red flags' are raised over management.

Management red flags

Ideally what you want is a talented, hardworking and honest management team, working in the interests of shareholders, so anything that tends to detract from these things is a worry. You'd expect the first two of these categories to be givens for people that have reached the top of their companies (or indeed founded them and developed them successfully), but occasionally you'll come across managers with a track record of failure, or who give you other reasons for doubting their abilities. Too much management jargon, for example, is often a sign that someone is out of his or her depth. And sometimes you'll come across a manager who, after many years in command, is showing signs of taking it easy, or taking on too many external engagements. When the boss loses interest, it's hard for everyone else to remain focused.

You'd also hope that honesty would be a given, but there are too many examples of where it's been lacking to make that assumption. Spotting dishonesty in managers is probably not very different from spotting it in everyday life, except that it tends to raise its head in particular ways — notably evasiveness, attempts to cover up mistakes, and a tendency to say one thing and then do another.

Management red flags

- ⇒ Poor track record.
- ⇒ Excessive pay.
- ⇒ Too much jargon.
- ⇒ Small shareholdings.
- ⇒ Too many external activities.
- ⇒ Overemphasising the short term.
- ⇒ Evasiveness and covering up mistakes.
- ⇒ Telling the market what it wants to hear.
- ⇒ Saying one thing and doing another.
- ⇒ Talking up the share price.

But most of all ...

- ⇒ External appointments to senior positions.
- ⇒ Expansion for the sake of it.

Acting against shareholders' interests

Not acting in shareholders' interests is probably the area that has the potential to raise the most red flags, since it's directly to do with actions rather than personality. The most common problem here, by far, is expanding for the sake of it. Not only are senior managers a self-selecting group hardwired for expansion — you don't get to the top by wanting a smaller empire — but they also have a direct incentive for it: the bigger the company, the bigger the pay cheque for managing it.

Profitable organic expansion, made by investing incrementally on top of a company's existing business at its prevailing, or perhaps higher, rates of return is great — at least where the company makes decent returns — but it tends to be a slow process and won't take you far over a five- or 10-year stint in the top seat. So expansionist managers look for ways to augment this growth, and that generally means issuing shares or borrowing to pay for acquisitions. And not all acquisitions are bad. Small bolt-on purchases that deliver economies of scale and improve a company's competitive position can work wonders, but too often managers go for the big company-changing deals, and these can bring a host of problems.

Bear in mind that every acquisition has a seller, who probably knows the business better than the buyer and thinks they are getting a good price. Normally the pricing discrepancy is overcome because the buying

management thinks it can do more with the assets than the selling management, but this very often turns out to be wishful thinking.

Excessive boardroom pay, particularly when combined with low management shareholdings, is another obvious sign that management is feathering its own nest at the expense of shareholders. Large option packages can be particularly worrying since, depending on their terms, they can encourage risk-taking; a steady performance might lead to moderate remuneration, while a risky strategy might lead to moderate remuneration in the case of failure, or a bonanza if the risk pays off.

Chief executives can also give themselves away by overemphasising the short term, telling the market what it wants to hear, or talking up the company's share price. These are signs that they are more concerned with hanging onto their job rather than actually doing a good one.

Owner-managers and internal appointments

A benign dictator is often said to be the best form of government, and the best form of corporate government is the benign owner-manager. Managers who own a large slice of the companies they manage naturally have a close alignment with the interests of shareholders, but there are other advantages: they're likely to have a strong track record and a stack of industry experience, and they'll have a lot invested in the company emotionally as well as financially. Perhaps most importantly, though, owner-managers are far more likely to do things for the long-term benefit of a company, without fear of any short-term criticism they might receive.

If you can't have an owner-manager, an internal appointment of someone steeped in a company's culture comes a respectable second place. They'll have the track record and experience, a lot invested in the company emotionally (and probably financially, relative to their overall wealth), and they should have a strong enough power base to make the tough long-term decisions.

What you definitely don't want is an MBA lured in from a different industry with a huge option package. They'll reckon they have five or so years to put their stamp on the company and make some money out of it, and that's frequently a recipe for disaster.

Happy companies are alike

Leo Tolstoy began *Anna Karenina* with the observation that 'All happy families are alike but an unhappy family is unhappy after its own fashion', and it's the same with companies. A lot of things need to be right for a company's culture to flourish, but the cracks can appear in a multitude of ways.

To enjoy a strong culture, a company will need to be at least moderately successful and the workers will need to be engaged, satisfied, reasonably remunerated and, above all, respected. When the right ingredients are present,

they can be self-reinforcing. Great companies are known as stimulating and rewarding places to work, so they get the best people joining at the bottom. And those people are happy and work hard and get promoted, and they continue to nourish the culture. Some workers ultimately get promoted to the senior positions, and the people joining at the bottom can see that good performance does indeed get rewarded. A strong culture can sustain itself like this for decades.

When the cracks appear, though, they can spread quickly and it can be hard to patch things up. Eventually you might get a restructuring, or a takeover, or a chief executive dragged in from outside with a swag of options. These things don't tend to do much for the culture, so the workers remain unhappy and the performance continues to deteriorate. The right new ownership or management can turn a culture around, as Wesfarmers is hoping with Coles, for example, but it can be like turning around a tanker: small adjustments take time to have an effect and much patience is needed.

So it's generally pretty easy to spot the companies with the strong cultures. And, while we're reluctant to pay a premium for good management, a strong culture probably does deserve a higher valuation, because it tends to be more durable. But culture matters more in some businesses than in others, with the obvious examples being 'people businesses' where there's a lot of interaction between employees and customers. Flight Centre and Woolworths are obvious examples of companies scoring highly in this area. A mining company, by contrast, will live or die according to what it finds in the ground, rather than the smile on its miners' faces; if it finds the right stuff, it'll be able to pay enough to keep its workers happy.

Management and culture together

Ideally, a company's management and culture will be so closely connected that you can't think about one without considering the other. Either the founder is still at large, continuing to infuse the company with the things that made it great (as with Gerry Harvey at Harvey Norman, Graham Turner at Flight Centre, Frank Lowy at Westfield or Alf Moufarrige at Servcorp), or the culture has taken over, nurturing the best managers and ensuring their promotion to senior positions (as at Woolworths, Wesfarmers and Macquarie Group, for example).

Westfield and Servcorp are particularly interesting cases, because leadership is in the process of moving to the next generation of owner-managers. With the right personalities and a careful transition, this can work well, because it maintains some of the benefits of owner-management and provides continuity of culture. But sometimes the children aren't so well equipped for the task. Probably the best indicator of a successful transition is parents and children both with their feet on the ground. The omens seem to be positive in this respect at

Westfield and Servcorp.

Change is inevitable

Most of this chapter, so far, has been about picking out existing attributes that should equip companies well for the future. But change is inevitable, and you need to adjust your thinking as circumstances change. If Ivan, the irascible knight from the introduction to this chapter, managed to snap his broadsword in two, then you'd need to make a reappraisal of the odds, as you would if Woolworths' board suddenly lost its collective mind, sacked Michael Luscombe and appointed some MBA from the mining industry as CEO, with a mandate to shake things up.

The good news here is that, since the market isn't focused on these things in the first place, it can often be slow to spot when they're changing. And even when it does, a short-term focus can lead to the wrong conclusions. Things that won't show up in a company's earnings in the next couple of years might be ignored, while things that have a major short-term effect, such as a price war in a mature industry, might be given more significance than they deserve (although they might also be symptoms of a greater long-term problem).

So you will sometimes get an opportunity to exit a high-flying stock before it falls back to earth or, if you're brave, to back a company that looks likely to benefit from change. This latter approach can take you dangerously close to predicting the future, though, so you need to take great care.

So what are the things to look for? Well, it's anything that might change the factors that we've discussed. A merger between your top two customers might enable them to push prices down, for example, or the insolvency of one of your suppliers might end a price war, leading to higher input costs. Some of the things to look out for are listed in table 7.1.

Table 7.1: factors affecting industry dynamics

Factor	Possible effects
Change in political environment	May affect regulation and bargaining power of unions
Margins slipping	May indicate a reduction in added value or a loss of pricing control
New entrants in industry	May exacerbate competition
New capacity being added	May exacerbate competition
Takeovers and mergers	May affect balance of power
Insolvencies	May indicate a fundamental problem in the industry;

	may affect balance of power
Industry becoming more specialised	May increase product differentiation, but may also increase barriers to exit
Price or advertising wars in mature industry	May signal underlying problem
Technological upheaval	Raises threat of substitution
Improving trend for substitute products	Raises threat of substitution
Defections of key staff	May pave the way for increased competition
Loss of proprietary technology or change in access to raw materials or distribution	May pave the way for increased competition
External appointments to senior positions	Possibly inferior management and may harm culture

On the whole, the dominant incumbents in any industry have most to lose from any change, because not only do they benefit most from the status quo, but there's a good chance that any changes are specifically designed to reduce their influence.

Dealing with change

The ability to deal with change is one of the most important attributes a company can possess. The curious thing here is that, unlike most other things, being the dominant player in an industry tends to equip you badly for it. Just as it takes an open mind for people to cope with change, it takes openness in an organisation to deal with it, and companies used to having their own way can become very set in their ways.

As ever, though, it depends on the company and its industry. In developing industries, the leading player may be well used to dealing with change. Flight Centre, for example, has been through change at every turn since it started shaking up the travel industry 30 years ago. In fact, the entrepreneurial spirit that flows through its decentralised business model is much of the reason for its success. The same would be true of a company such as Harvey Norman which, despite its size, is still able to empower employees and franchisees at all levels to make decisions.

Mention of Flight Centre and Harvey Norman brings out another point: this might be another area where having a founder still in charge gives a company an edge. Entrepreneurs who have built large companies from scratch will tend to have more experience of change, and a greater capacity to make the tough calls, than those who have been promoted into the top job of an existing company.

The real trouble comes when change is forced on a company that isn't used to it, and which has developed an

autocratic culture that prevents employees from taking responsibility. As we saw earlier, companies such as Seek and Realestate.com.au are hungrily munching into Fairfax's lunch at the moment and, to counter the threat, Fairfax will need to risk harming some of its existing businesses to build new ones. Whether it has the appetite for such bold moves, only time will tell. But one thing is for sure: 10 or 20 years ago you'd have valued Fairfax as a dominant force in the media industry, but today you might even apply a discount to reflect the difficulties the company faces.

A company like Woolworths is in a slightly different position, because although it seems to be a pretty autocratic regime, it's hard to imagine where any major change might appear from. Indeed, in such a stable business, a rigid structure might even be a benefit. Of course, a re-energised Coles, under Wesfarmers' ownership, might pose greater competition, but that's hardly a new threat, and the appropriate response would probably be 'more of the same but better'.

Wait for the price to come to you

So these are the factors that make a company great: it must have a good product, a powerful competitive position and strong management and culture that are open to change. If you find all these qualities together, you'll have a business that's making excellent returns on capital. You should be able to confirm this by calculating that number from the accounts for the last few years, and checking how the cash is flowing through the business, as we saw in chapter 5.

The next step is to work out a PER that you'd be happy to pay for the company, or a dividend yield or a cash flow yield, or all three. Then you wait, making adjustments to your valuation as needs dictate, so when the price comes into range, you'll be ready to pounce.

¹ M Porter, *Competitive Strategy*, Free Press, New York, 1980.

² W Buffett, *Berkshire Hathaway annual report*, 2000.



Chapter 8

An exceptional business priced as average

'Our objective is plain: manage people's money thoughtfully and well, and the business should prosper.'

Kerr Neilson

To help flesh out the ideas we've talked about in the past few chapters, we're going to pull it all together into an example, with what we regard as one of the best recent opportunities on the stock market — international fund manager Platinum Asset Management. Bear in mind, though, that all this is being written as at 29 February 2008, with a Platinum share price of \$4.50, and things may have changed considerably by the time you read this book. The price and intrinsic value of the shares may each have gone up, down or stayed the same, and the margin of safety might have become wider, narrower or even moved into negative (that is, overvalued) territory.

Appearing on the radar

The first thing a stock market opportunity needs to do is appear on your radar. There are many ways you can help them do this, but they basically all involve scanning the news. So you read newspapers, magazines and investment newsletters such as *Intelligent Investor*. It also helps to chat about things with friends and colleagues. Some people also use computer programs (available on various websites) to scan lists of companies for those trading cheaply according to various quantitative metrics, such as those we looked at in chapter 6.

What you're after is a company that's being treated badly by the stock market. That might be because it's an average company being beaten down to very cheap levels, or because it's a great company being treated as average. But you're looking for situations where the market is being too negative about a company's prospects — and that's normally because it's putting too much weight on a relatively poor short-term outlook.

Platinum Asset Management has been on our radar since its high-profile flotation in May 2007. In fact, we'd previously followed the investment musings of its founder, majority shareholder, managing director and chief investment officer Kerr Neilson, through his fund reports and by attending the annual meetings of the Platinum-managed listed investment company Platinum Capital Limited. The \$5 float price looked attractive, but there was a limited availability of stock, and the opportunity quickly passed by as the shares raced to \$8.80 on their

first day of trading.

Still, we kept our eyes on the company, in case sentiment turned against it, and that's exactly what seems to have happened, with stock markets tumbling and some investors withdrawing money, meaning that earnings are likely to fall in the current year. But, as we're about to see, this looks suspiciously like a short-term problem for a high-quality company, and that's what brought Platinum to the centre of our radar.

Of course getting onto the radar is just the start of things; what really matters is how an opportunity stacks up under closer examination. Before we get into that, though, we need to ask ourselves a crucial question: is the stock within our circle of competence?

Circle of competence

Although fund managers will do their utmost to make it look complicated, to disguise their excellent margins (which we'll discuss shortly), few businesses are as simple to understand. They take people's money and invest it, and for doing that they take a fee. The better they do and the more money they can pull in, the more fees they'll get and the more profit they'll make. A large proportion of costs are fixed, so once revenues pass this hurdle, profits can mount up quickly. And with little required in the way of capital investment, the profits metabolise quickly into cash.

So the financial characteristics are attractive, but there is a big risk in terms of investment performance. As we'll see, most fund managers get around this by making similar bets to everyone else so as to ensure that their performance is never too far out of line. The larger managers also tend to have a selection of funds, so there's always at least one fund that's doing better than its benchmark.

Some managers, however, are prepared to go out on a limb in terms of their investment selections, and Platinum is one of them. Likely future investment performance is an important component of the valuation of these more adventurous managers, but predicting it is notoriously hard, as we saw in chapter 1. There's certainly a lot more to it than looking at past performance; you need to think about the manager's approach and how it's implementing it, and that requires expertise and experience. It goes without saying that we'd expect those investing on the basis of value to perform well over time, but not everyone that calls themselves a value investor is really looking at value in practice, and some that are might call themselves something different (some of the better fund managers think that 'value investing' as a concept goes without saying — Platinum itself tends to use the expression sparingly).

To pay much over the odds for a fund manager, then, they'd need to be exceptional investors, and you'd need to be exceptional at judging that. But for your common or garden fund manager, or one that's priced

undemandingly, there's nothing in this business that's beyond most people's comprehension. With that out of the way, let's take a closer look at Platinum.

Assessing business quality

Platinum Asset Management is an 'absolute return manager', meaning that its funds aim for high absolute returns, rather than returns relative to a particular market index — although of course it aims to make these absolute returns higher than the index return over the long term. It uses a value approach, investing in stocks it considers undervalued. It is also prepared to bet against stocks, industries or regions if it thinks them overvalued, which it does by 'short-selling'; that is, selling securities it doesn't own (and hopefully buying them back when their price has fallen), or by buying instruments that have a similar economic effect.

One side effect of this absolute return approach is that it makes it very hard to keep up with a run-away bull market, such as we saw around the world between 2003 and 2007. And sure enough, Platinum's funds mostly performed broadly in line with their benchmarks over this period.

The flip side is that Platinum can do much better than others in difficult conditions, and its relative performance picked up in early 2008 as markets fell. As you can see from table 8.1 (on pp. 146–147), all but one of Platinum's funds beat their benchmark over the year to 29 February 2008, with the Platinum International Fund, the Platinum Unhedged Fund, Platinum Capital Limited and the Platinum International Healthcare Fund outperforming their benchmarks by eight, nine, six and eight percentage points respectively. The one laggard was the Platinum European Fund, which trailed its benchmark by five percentage points over one year and by three percentage points per year over three years, but even it was ahead by one percentage point per year over five years, and a healthy five percentage points per year over seven years.

The longer term performances are particularly notable, partly because they're what Platinum actually aims for (and what actually matter), but also because they include the 2002–03 global bear market as well as the recent one. All nine of Platinum's funds that have records extending that far have outperformed their benchmarks over the past seven years (and more) — five of them by more than 10 percentage points per year.

So the pattern appears to be one of tagging along when markets perform well and shooting the lights out (relatively speaking) when they do badly. The trouble at the moment, of course, is that with markets doing badly some investors have taken their money out anyway. For some people who have lost money in Platinum funds over the past year, it's obviously little consolation that most other investors have lost more. And the market falls themselves have also played a part in reducing funds under management, and therefore profits, in the short term. But as we saw in chapter 6, you have to try to iron out these short-term ups and downs. Looking at the longer

term, Platinum will probably emerge from the current bear market with its reputation enhanced.

The second main point of difference is that Platinum doesn't pay commissions to financial planners, and it doesn't have any sales or marketing staff. This is a brave approach, because most people are more easily swayed by a fancy advert or a financial planner who's getting a hefty whack of commission than by sound investing principles and a first-rate long-term track record. But if you're good enough to get away with it — as Platinum seems to be — then it has a couple of important consequences.

First of all, you save a heap of money. Platinum charges a pretty standard 1.54 per cent of assets each year for managing its retail funds, with somewhat lower fees for its large institutional mandates (although the details aren't disclosed). But with much lower costs, its margins are way ahead of the industry average (we'll get to this shortly, but to save any suspense, Platinum's 2007 operating margin was a whopping 87 per cent).

Table 8.1: Platinum Asset Management fund performance as at 29 February 2008

	1 year	3 years	5 years	7 years	10 years	
	(%)	(% per annum)	(% per annum)	(% per annum)	(% per annum)	
Australian dollar-based funds						Fund size (A\$ million)
Platinum International Fund	(6)	7	11	7	14	8338
Platinum Unhedged Fund	(5)	13				56
Platinum Global Fund (MLC)	(10)	7	13	6	12	2186
Platinum Capital Ltd	(7)	6	11	8	15	182
Platinum Asia Fund	13	23				3059
Platinum European Fund	(17)	5	14	6		572
Platinum Japan Fund	(24)	1	10	6		572
Platinum International Brands Fund	(13)	10	15	13		538
Platinum International Health Care Fund	(10)	4				19
Platinum International Technology Fund	(15)	4	10	4		52
Indices (A\$)						
MSCI All Country World Net Index	(14)	5	8	(2)	2	
MSCI All Country Asia ex Japan Net Index	9	19				
MSCI All Country Europe Net Index	(12)	8	13	1		

MSCI Japan Net Index	(26)	1	5	(4)		
MSCI All Country World Health Care Net Index	(18)	0				
MSCI All Country World Information Technology Net Index	(15)	1	3	(9)		
US dollar-based funds						Fund size (US\$ million)
Platinum Fund Ltd	6	9	15	13	16	969
Platinum Japan Fund Ltd	(11)	4	15	11		204
Indices (US\$)						
MSCI All Country World Net Index	2	11	17	6	6	
MSCI Japan Net Index	(12)	7	15	4		

Secondly, it means that the investors it does attract are likely to be more sophisticated and more patient, making them less likely to jump if performance goes through a rough patch.

So, we've found an interesting opportunity and we think we have the capacity to value it. The next step is to assess its business quality. To work through it all, we'll look at the three main elements we raised in chapter 7: does the company have a product that people want? Does it have a strong competitive position so it can provide it without too much interference? And does it have the right management and culture so it won't stuff things up?

A product people want

Funds management is not only a product people want, it's one they need. At least 9 per cent of our earned income flows into superannuation (maybe more in future), and we want it to work as hard as possible. As we saw in chapter 1, over the long term that means getting the money into shares, and that means either doing it yourself or using a fund manager. Hopefully we've shown that doing it yourself is a viable option, if you're so inclined, but thankfully for the funds management industry, the majority of people just aren't interested — and this is particularly true of the international investing in which Platinum specialises.

Adding value

It's extremely hard for any fund manager to show that it adds value over a cheap index fund, but it's very easy — with the help of a fat marketing budget and some juicy commissions to financial planners — to suggest that it might. The irony with Platinum is that it turns this on its head. It puts very little effort into showing itself off,

but partly because of this, and because of its culture and process and long-term past performance, it's one of the few fund managers you might reasonably expect to beat the markets over the long term.

Without the showing off, though, Platinum must rely on sophisticated investors to recognise its strengths for themselves (or perhaps on the recommendation of the less commission-hungry financial planners who often advise them). As we've already noted, the good news is that these investors are the best clients to have if you can get them — they tend to be wealthy and they're more likely to stick with you through the inevitable periods of underperformance.

So it's hard to be sure that Platinum really adds value compared with an index fund, despite its excellent long-term track record. But it's a lot more likely to do so than most, and that's what matters to most people.

Controlling prices

By cutting out commissions and marketing expenses, Platinum also has more in the tank to share between itself and its investors. This gives the company some control over prices: it could probably raise charges a little without too much effect on funds under management, or it could increase the attractions of its product by cutting charges, while still maintaining higher margins than its competitors.

This is unlikely to happen, however, since the one of the attractions of the funds management industry is its insensitivity to charges; although they have a major impact on long-term returns, they tend to get lost among the short-term ups and downs on which most people base their decisions. There has been some pressure to cut charges, mostly from the administrators of wraps and master trusts (through which investors are offered a range of different funds across which to spread their money), but Platinum has resolutely refused to bow to it, and we'd say it is very unlikely to do so. It's nice to be able to make these decisions for yourself, though, and Platinum has greater pricing flexibility than most of its competitors, whether or not it chooses to use it.

Repeat sales

Platinum also gets a big tick for repeat sales, through its 'installed base' of existing customers. This installed base is particularly attractive because there are significant switching costs — financially and in terms of the time and effort involved. Platinum's more sophisticated investors might be more likely to make this effort, if they felt it necessary, but as we've already noted they're also more likely to show patience.

A strong competitive position

Platinum looks like it has one of the better products in the funds management industry, and that's a good start, but a great business isn't just about having a good product: you need to be able to provide it without too much

interference from others. So let's take a closer look at Platinum's competitive position using the Porter framework we set out in chapter 7.

Existing rivalry

Existing rivalry in the funds management industry is pretty intense. Following the long bull market, fund managers in Australia are not only too numerous, they're too numerous to mention. And no-one is so big as to command any control. In fact, no-one except an index fund could realistically reach such a position in the domestic market as they'd be investing so much of the money that they'd become an index fund by default.

There's also little to choose between most products. Most funds are so terrified of the consequences of serious underperformance that they build portfolios first and foremost to match their benchmark, and therefore each other, and then hopefully sneak slightly ahead. They'd like us to believe otherwise, though, and they put a lot of money and effort into making us think they're different. They're mostly successful in this, but it all costs money and that comes out of margins.

Fund managers also have to contend with a cost base that is largely fixed. It only costs so much more, in terms of systems, research, salaries, office space and compliance, to manage \$10 billion as to manage \$10 million — at least to manage it well. Aspiring fund managers have to overcome this hurdle before they even start making money and, after that, each dollar of revenue is more profitable than the last, which provides a big incentive to go chasing market share.

The industry also has a variety of competitors with differing agendas. Industry super funds, such as HESTA and Cbus, for example, and self-managed listed investment companies, such as Australian Foundation Investment Company and Argo Investments, don't leak any charges to outside fund managers, so they have much lower costs than managed funds, and this gives them an advantage in terms of net returns. They still have to employ the same investing skills, but by keeping them in house they reduce the need for marketing and remove the need to make profits for shareholders of a funds management company. But this, of course, is their weakness; without a big marketing budget they struggle to get their message across, and are a smaller part of the industry than they deserve to be.

Offsetting these problems is a decent rate of industry growth. Total funds under management across Australia have increased at around 10 per cent a year for the past 20 or so years, and are expected to continue to do so for the foreseeable future.¹ So all these undifferentiated fund managers fighting hard for their next dollar should, on average, be able to get 10 per cent more of them every year before they start eating each others' lunch.

Platinum enjoys specific advantages in most of the above areas. Competitors in the Australian funds

management industry might be numerous, but there are comparatively few specialising in overseas shares, and Platinum is by far the largest of them. So it's a big fish in a small pond as far as its customers are concerned, but it's a small fish in a very large pond where the world's stock markets are concerned, so it's in little danger of size getting in the way of performance. Platinum's international focus also helps in terms of product differentiation, as does its focus on absolute returns. And growth in funds under management is expected to be higher for international investment than for investment in Australia, as greater access to international news makes people more comfortable with investing overseas.

Some of the factors that affect existing rivalry are shown in table 8.2.

Table 8.2: factors affecting existing rivalry in the funds management industry

	Industry generally	Platinum specifically
Number and size of competitors	☹	☹
Product differentiation	☹	☺
Operational gearing from fixed costs	☹	☹
Competitors with different strategic agendas	☹	☹
Industry growth	☺	☺

Threat of substitution

The most obvious substitution threats to the funds management industry are the cheaper (and mostly superior) index funds, industry funds and internally managed listed investment companies. But, as we've already noted, these investment vehicles are cheaper and superior precisely because they can do away with the marketing expenses and they therefore have trouble getting their message across. We'd love to think that the nation's savings might migrate to these vehicles, but a major shift looks unlikely. If it did happen, Platinum's pricing control, which we looked at on p. 149, would make it better placed than most.

Barriers to entry

The main problem with the funds management industry is its lack of barriers to entry. Anyone with a few dollars cobbled together can set up a fund and begin establishing a reputation, and there are plenty of people trying to do exactly that.

There are only two major hurdles they face. The first is economies of scale. Fixed costs may exacerbate rivalry, but they also provide a major barrier to entry. If you reckon on costs of a few hundred thousand dollars (depending on staff costs) and income of about 1.5 per cent of funds under management, you'd need to be

managing a few tens of million dollars before you even began to be profitable.

To pull in that kind of money, you need distribution, and that's the second hurdle — although perhaps it's more accurate to think of it as an alternative, because with the right kind of distribution you can zip straight past the fixed costs. Distribution to retail investors comes from having a reputation with financial planners (which itself generally means having an established track record), or paying them a generous commission, or by having a relationship with an organisation that has access to people when they're making decisions about money — typically a bank (for example, think of Colonial First State's and MLC's relationships with their respective parents Commonwealth Bank and National Australia Bank).

Distribution to institutional investors relies almost entirely on reputation. A decent track record will no doubt help, but that can be overcome if the reputation is good enough — as with investment-bankers-turned-fund-managers Chris Mackay and Hamish Douglass, who recently established Magellan Financial Group.

Wrap platforms and master trusts can be thought of as hybrids of the institutional and retail categories, and they combine the distribution channels. You need a reputation with the platform administrators to get yourself listed, and some kind of edge with the retail investors to get yourself chosen.

When Platinum started life in 1994, it was able to rely on Kerr Neilson's big reputation with institutions and his track record from his time at Bankers Trust. Over time, though, the company's reputation has spread to retail investors, and about 40 per cent of its funds under management now come from this source. The remainder comes from institutional mandates, wraps and master trusts. Platinum funds are listed on most of the country's larger platforms, where they appear to be very popular among retail investors.

The company has been able to achieve all this without significant marketing and without paying commissions, and that all comes down to performance. As we saw earlier, the Platinum International Fund returned 14 per cent a year in the 10 years to 29 February 2008, compared with just 2 per cent a year for the MSCI All Country World Net Index, and people will seek out that kind of performance.

Because of its excellent reputation and relatively patient investors, it would probably take quite a few years of sustained underperformance to see sizeable falls in funds under management, but this is a possibility that can't be ignored. Platinum's absolute return approach may help to differentiate its funds, but it does open the company up to the business risk that others are seeking to avoid by hugging the indices.

Other minor barriers to entry into the funds management industry include customer switching costs (commissions as well as time and effort), government regulation (the cost of compliance) and the large and mostly unrecoverable up-front investment in marketing for start-ups that don't enjoy a big reputation.

Bargaining power of customers

As we saw in the previous section, 40 per cent of Platinum's funds come directly from retail customers, who are individually too small to exert any real pressure over the company. The other 60 per cent, however, come from institutions, wraps and master trusts, and these groups have a lot of power. To attract money for your funds, you need to be listed on these platforms, and they can use this to their advantage. Apparently they've been doing exactly that recently, to press fund managers into reducing their fees.

Platinum has refused to cut its fees, and shows no signs of weakening on this position, so the fact it's still listed on the majority of platforms is a testament to its market strength. It has achieved this because of its strong reputation, particularly among intermediaries. Platform administrators themselves are judged by the performance of the products they offer, and they'd look pretty stupid if they cut Platinum just before a sustained period of outperformance. Again, though, a sustained period of underperformance for Platinum would severely weaken its position.

Bargaining power of suppliers

The only supplier with any kind of control over Platinum is its staff, but this more than makes up for the smooth sailing elsewhere. As we've seen, all of Platinum's competitive advantages ultimately depend on its performance, and this ultimately depends on the skills of its staff.

It's the job of fund managers and analysts to assess value, so it's no surprise that the good ones have a pretty clear idea of their own worth. Platinum has a lot of good ones and they'll expect to be rewarded at some point. This means they're likely to keep asking for more money until it reaches a point where it makes sense for them to set up shop on their own and trade fully off their own brand.

This is what Kerr Neilson himself did by leaving Bankers Trust and founding Platinum, as did Peter Morgan and Anton Tagliaferro, for example, by leaving Perpetual to found, respectively, 452 Capital and Investors Mutual. No doubt, in years to come, a small group of capable fund managers will break away from these companies to found their own businesses. But the biggest risk, of course, is that Neilson himself decides to hang up his calculator and call it a day. Asked about his plans in a recent podcast with Intelligent Investor, he explained how he still enjoyed analysing and visiting companies — but he would say that, wouldn't he.

Platinum is doing everything it can to minimise its reliance on key staff. Kerr Neilson and his second-in-command, Andrew Clifford, will be aware that this is ultimately what's required to maximise the company's value, so they're working hard to establish an investment process and a culture that can survive them. Whether this is successful remains to be seen, but along with the possibility of staff members losing their touch, actually

losing them ranks as the biggest risk facing the company.

The right management and culture

This brings us to the question of management, culture and not stuffing things up. We're big fans of owner-managers at Intelligent Investor, and Kerr Neilson certainly fits the bill. He and his family still own around 58 per cent of the company, so his interests are fully aligned with shareholders. It's usually a source of comfort that the founder of a company is still at the helm, but it's particularly so when that founder has such a good idea of what makes money for shareholders over the long term.

And culture is one of the things Neilson most emphasises in Platinum's investment process. In the recent Intelligent Investor podcast, he explained: 'It's very easy to believe that the numbers are everything when you look at a company, but the reality is there's a whole ecosystem behind those numbers that allows them to be created; and if you don't understand that it is the embodiment of that culture — the energy that goes into organising those people — then you're missing the whole point of what you're really buying as an investor'.²

Neilson undoubtedly extends this to his own company and, as we noted in the previous section, Platinum works hard to develop an investment process and culture that can survive the departure of key staff. This sort of thing is easier to say than it is to do, but the fact that Platinum takes these issues so seriously is a very good start.

The fact that Platinum so obviously puts its customers first, and is happy to be judged according to its performance rather than twist anybody's arms, also speaks volumes about its culture — as does the plain-speaking of Kerr Neilson himself. In fact the company doesn't raise a single one of the management red flags we discussed in chapter 7, as you can see from table 8.3 — quite the opposite, in most cases.

Table 8.3: no red flags for Platinum

	Presence	
	at	
Red flag	Platinum	Comment
Poor track record	***	One of the best in the industry.
Too much jargon	*	Seems to try to avoid jargon, but some can't be helped.
Too many external activities	*	No doubt Neilson has a few hobbies, but he has little else to occupy his time in the business world.
Evasiveness and covering up mistakes	**	Very open about mistakes — see annual reports and quarterly investment reports for example.
Saying one thing and doing another	**	Very consistent in dealings with investors and investment industry generally.
Excessive pay	**	In 2007 the company's top three executives, Kerr Neilson, Malcolm Halstead and Andrew Clifford, respectively earned \$400 000, \$350 000 and \$266 000 — very low by industry standards.
Small shareholdings	***	Neilson and his family own around 58% of the company, and at the time of the float other staff owned a further 18%.
Overemphasising the short term	**	Platinum adopts a long-term value investing strategy and this extends to its own operations.
Telling the market what it wants to hear	**	Neilson is often quite outspoken in telling the market what it doesn't want to hear.
Talking up the share price	**	Platinum doesn't offer earnings guidance, but was quick to pour cold water on over-optimistic earnings forecasts.
External appointments to senior positions	***	The company's top three executives, Kerr Neilson, Malcolm Halstead and Andrew Clifford, have all been there since the company's foundation in 1994.
Expansion for the sake of it	***	There have been no acquisitions at all, and it's very unlikely that there will be any. Buying in funds under management would be completely against Platinum's business philosophy.

Summing up on business quality

Fund managers with established and durable distribution channels make excellent businesses — which is no doubt why there's such a temptation to hug close to the benchmarks and not risk the kind of significant underperformance that can mess things up.

Superior funds management businesses can be real money-making machines while the going is good, as Kerr Neilson can testify with his multi-billion-dollar fortune, but they're difficult to establish and even harder to maintain. Right now, Platinum has some useful competitive advantages — but they all depend on continued top-rate performance and that depends on staff. And so it's here that Platinum faces its biggest risks over the long term. Ultimately Kerr Neilson will leave the business, as will Andrew Clifford and all the others.

Platinum is doing everything it can to overcome these problems, by providing staff with share options following the float and by establishing investment processes and a culture that can survive key individuals. But really good fund managers are hard to come by, and we'll have to wait and see whether Platinum can produce a new generation of them.

Financials

From our look at its business fundamentals, we've established that Platinum ought to have high margins, high operational gearing, strong cash generation and a monumental return on capital. The next job is to check this with a look at its accounts. We'll break it down into the three main accounting statements. You might find it helps to have a copy of Platinum's 2007 annual report handy as you read through this section.

Income statement

We've reproduced the key numbers from Platinum's 2007 income statement in table 8.4. Fund managers don't really have raw materials, so gross profits aren't relevant for Platinum, and we'll go straight to the operating profit. We've made a few adjustments to the reported accounts to reach this figure. Specifically, we've excluded interest and other investment gains, as well as the float costs. The investment gains are to do with how the company is financed rather than its underlying operations, and will go up and down with cash and debt levels. Float costs are a one-off, and also have nothing to do with operations. So we've shifted these items down to the bottom.

Table 8.4: Platinum Asset Management adjusted income statement

	2007 (\$ million)	2006 (\$ million)
Management fees	251.0	200.1
Performance fees	37.6	80.6
Administration fees	11.1	8.7
Total operating revenue	299.7	289.3
Staff costs	17.0	15.2
Custody and unit registry costs	10.4	8.4
Marketing	3.4	2.8
Research	1.5	1.0
Technology	1.0	1.0
Rent	0.9	0.8
Other administration and operating costs	5.2	3.1
Total operating expenses*	39.4	32.4**
Operating profit	260.3	257.0
Interest income	22.7	17.6
Other investment income and gains	14.9	27.1
Float costs	(22.0)	
Profit before tax	275.9	301.7
Tax	89.7	90.4
Profit after tax	186.2	211.3
<i>Operating margin</i>	<i>86.8%</i>	<i>88.8%</i>

* Excluding float costs

** We've gained 0.1 here owing to rounding differences

After this jiggery pokery, we get an operating profit of \$260 million and an operating margin of 87 per cent. Because of the fixed costs (see below), the margins of big fund managers tend to be pretty high, but 87 per cent is almost off the scale. It's easily the highest of any listed company in the sector and compares, for example, with a 44 per cent margin at Perpetual for the year ended 30 June 2007 and a 40 per cent margin at BT Investment Management for the nine months ended 30 June 2007.

A slight concern is that the margin slipped a little during 2007, reflecting an increase in costs across the board. There was also a drop of \$43 million in performance fees, although this was offset by the \$51 million increase in management fees. The 22 per cent increase in costs seems to fly in the face of our theory about fixed costs, but most of it is probably down to short-term effects. You'd expect even fixed costs to grow at the rate of economic growth over the long term, but this will encompass ups and downs. Staff costs, for example, were certainly on the up in the funds management industry over Platinum's 2007 financial year. And although dominated by fixed costs, there is, of course, a variable element to the cost base — you'd expect custody and unit registry fees, for example, to be sensitive to funds under management.

As for the mix of revenues, performance fees will come and go in this kind of business — as we'll see when it comes to valuation. What matters is whether Platinum has the strength to charge a good rate for its services over the years. From our business analysis that would seem to be the case, and this is supported by the very high margins.

Another thing to note from the income statement is the operational gearing — or lack of it. Notwithstanding what we've said about fixed costs and operational gearing, the overall expenses at Platinum are so small compared with revenue that profit will rise at pretty much the rate of revenue growth, whether costs do or not. However, competitors with similar, but larger, cost bases will feel the operational gearing more, and this will keep the industry rivalry bubbling along.

The final item on our list of things to look at in the income statement from chapter 5 is financial gearing and interest cover. But since Platinum had net cash of \$73 million on its June 2007 balance sheet and no debt, this isn't really an issue (at 31 December 2007, the cash balance was \$147 million). Talking of balance sheets, let's move on.

Balance sheet

We've produced some highlights from Platinum's 2007 balance sheet in table 8.5.

Table 8.5: highlights from Platinum's 2007 balance sheet

	2007 (\$ million)	2006 (\$ million)
<i>Current assets</i>		
Cash	73.1	457.4
Trade receivables	24.1	22.2
Other current assets	1.0	2.6
Total current assets	98.2	482.2
<i>Non-current assets</i>		
Fixed assets	2.7	1.7
Financial assets	-	112.3
Other non-current assets	4.3	6.2
Total non-current assets	7.0	120.2
Total assets	105.2	602.3*
<i>Current liabilities</i>		
Payables	9.8	3.9
Tax payable	16.2	63.2
Provisions	1.4	1.4
Total current liabilities	27.4	68.4*
Total non-current liabilities	0.0	4.5
Total liabilities	27.4	72.9
Net assets	77.8	529.4
<i>Equity</i>		
Contributed equity	629.1	-
Reserves	-587.5	-
Retained earnings	36.2	500.8
Minority interest	-	28.7
Total equity	77.8	529.4 *

<i>Return on equity</i>		
Net profit	186.2	211.3
Post-tax return on equity	239.3%	39.9%
<i>Return on capital employed</i>		
Operating profit	260.3	257.0
Net debt	-73.1	-457.4
Capital employed	4.7	72.1
Return on capital employed	5537.3%	356.9%
<i>Gearing ratios</i>	N/A	N/A

* we've lost or gained 0.1 here owing to rounding differences

The first thing to notice is that the 2006 figures are a bit messy — at least some of them are very different from 2007. There's cash of \$457.4 million (compared with \$73.1 million in 2007), non-current financial assets of \$112.3 million (compared with none in 2007) and retained earnings of \$500.8 million (compared with \$36.2 million in 2007). Overall, it looks like cash and 'financial assets' (from the company's investment portfolio) have reduced by \$496.6 million, while retained earnings have fallen by \$464.6 million, and the similarity between these figures is the clue to where they come from — presumably the company paid a fat dividend before floating.

A quick look at the cash flow statement confirms this. In fact, the dividend amounted to \$650.8 million, which neatly adds up to the \$464.6 million fall in retained earnings plus the \$186.2 million of earnings made in 2007. The extra \$154.2 million of cash to pay the dividend (on top of the \$496.6 million reduction in cash and financial assets) came from cash flow during 2007.

The other two major curiosities in the balance sheet are the contributed equity and reserves figures, which went from nothing in 2006 to \$629.1 million and -\$587.5 million respectively in 2007. The balance sheet entries cross-refer to note 8, which explains how it all relates to a restructuring in the share capital prior to the float.

With the net assets falling from \$529.4 million to \$77.8 million, it's no surprise to see that the return on equity has risen from 40 per cent to 239 per cent, despite the fall in net profit. Taking out the cash, capital employed fell from \$72.1 million to a paltry \$4.7 million, giving returns on capital employed of 357 per cent in 2006 and over 5000 per cent in 2007. These figures are pretty crazy and only tell us one thing, which is that the company basically doesn't require capital.

This backs up our theory that profits should be metabolised quickly into cash, with almost no need for further

capital investment even if the company grows quickly. We should be able to see this in action (without the rapid growth at any rate) by looking at the cash flow statement.

Cash flow

You can see an adjusted version of Platinum’s cash flow statement in table 8.6. We’ve made a few alterations to the published accounts, most particularly to shift interest and dividends received into a new category ‘cash flow from financial investing activities’. Income from investments isn’t really part of operations, even for a fund manager, as the owner can just take them out — as, in fact, has happened. Tax is also shown separately since, even though you can’t escape it, it’s part of the sharing out of returns between shareholders, banks and the government, rather than part of operations per se. The new financial investing category also helps us separate financial investing activities from capital expenditure on the business.

Table 8.6: adjusted cash flow statement for Platinum Asset Management

	2007 (\$ million)	2006 (\$ million)
<i>Cash flow from operating activities</i>		
Receipts from operating activities	297.8	282.8
Payments for operating activities	(53.8)	(31.5)
Net cash flow from operating activities	244.0	251.3
<i>Cash flow from financial investing activities</i>		
Interest received	22.6	16.8
Dividends received	0.5	0.7
Purchases of investments	(18.5)	(50.7)
Proceeds from the sale of investments	150.8	22.2
Total cash flow from financial investing activities	155.4	(11.0)
<i>Capital expenditure</i>		
Purchase of fixed assets	(2.2)	(0.5)
Proceeds from the sale of fixed assets	1.6	0.0
Net capital expenditure	(0.6)	(0.5)
<i>Other</i>		
Effects of exchange rate differences	0.0	0.1
Tax paid	(145.0)	(37.7)

Total other	(145.0)	(37.6)
<i>Financing activities</i>		
Payments from/(to) related parties	0.3	0.0
Proceeds from issue of shares	12.3	17.0
Dividends paid	(650.8)	(26.5)
Net cash flow from financing activities	(638.1)	(9.5)
Total increase/(decrease) in cash for year	(384.3)	192.6
Cash held at start of year	457.4	264.8
Cash held at end of year	73.1	457.4
<hr/>		
<i>Operating cash flow</i>	<i>244.0</i>	<i>251.3</i>
add notional interest	6.0	6.0
less notional tax (30 per cent of profit)	75.0	77.2
Cash flow after notional interest and tax	175.0	180.1
Capital expenditure	0.6	0.5
Free cash flow after all capital expenditure	174.4	179.6
Depreciation	0.6	0.7
Free cash flow after maintenance capital expenditure	174.4	179.4
<hr/>		

The cash flow statement does indeed confirm what we've already suspected about Platinum's metabolism. Net capital expenditure in 2006 and 2007 was \$0.5 million and \$0.6 million respectively, compared with depreciation charges of \$0.7 million and \$0.6 million — so the company is investing about as much as its accountants deem things to be wearing out. The figures are tiny compared with profits in the hundreds of millions, though, so to all intents and purposes, all the company's profits appear immediately in its bank account. And the directors have said that they plan to shift it quickly into shareholders' bank accounts, by paying out between 80 per cent and 90 per cent of net profit as dividends. We'd expect it to be at the higher end of that range, and even then cash will likely mount up on the balance sheet.

Apart from the large dividend and the removal of the company's investment portfolio, discussed in the previous section, the main difference between 2006 and 2007 is the tax bill, which rose from \$37.6 million to \$145.0 million, even though the tax expense shown in the profit and loss account for the two years was about the same (based on similar profits) at \$90.4 million and \$89.7 million respectively.

A look at the balance sheet hints at an explanation, because tax owing to the ATO fell from \$63.4 million to

\$16.2 million, so it looks like there was some tax stored up from previous years that got paid in 2007. This is confirmed by the reconciliation of profit to cash flow, shown as note 13 to the accounts, which reveals that in 2006 the amount of tax owing rose by \$48.0 million, while in 2007 it fell by \$47.0 million.

The main figures we need to dig out of the cash flow statement, for the purposes of valuation, are those for free cash flow, which we get by deducting net interest payable, tax and capital investment from the operating cash flow. The idea is that we then get a figure we can compare with the company's market capitalisation (the total price of all its shares on the market). Since this takes account of any cash or net debt, we need to adjust the cash flow for interest so we're comparing like with like. To do this, we'll add \$6 million, which is a guess at the interest on the company's average cash balance for the year. We've estimated the average cash balance at \$100 million, because although it stood at \$147 million at 31 December 2007, much of this will be needed to pay tax and dividends. We can afford to be rough and ready with this since the numbers are small compared with overall cash flow. But if we didn't adjust for interest, we'd need to make any comparisons with enterprise value (as explained in chapter 5).

As we've already seen, there's a big difference between the tax paid in 2006 and 2007, so we'll use a notional tax charge of 30 per cent of profit in each year (note 2 to the accounts sets out how the actual tax expense differs from a 30 per cent charge; the main difference is an adjustment relating to the investment portfolio, which shouldn't apply in future). This leaves us with adjusted cash flow after interest and tax of \$175 million in 2007 and \$180 million in 2006.

From these figures, we want to obtain two figures for free cash flow, one that deducts all investment, of both a maintenance and an expansionary nature (see p. 78), and one that simply deducts maintenance expenditure (for which you might use depreciation as a proxy). As we saw in chapter 5, the former is akin to a dividend and we should allow for it to grow, while the latter is akin to earnings and to allow for growth would be double counting. For Platinum, however, there's not much difference between the capital expenditure and depreciation figures and they're tiny anyway, so the free cash flow basically comes out the same however you look at it — as you can see from the figures given at the bottom of table 8.6.

Pricing

Really bad companies tend to make bad investments however you cut it, because they destroy capital, but it doesn't follow that great companies always make great investments. For that, as with any investment, you need to buy them at a price that allows a decent margin of safety. So let's see how Platinum measures up according to the valuation yardsticks we looked at in chapter 6, under the headings of assets, earnings and cash flow.

Assets

We can knock asset-based valuations into touch pretty quickly, as we've already established that Platinum needs virtually no capital to operate. You could say that it has a large slug of intangible assets, in the form of its brand and reputation, but the only way to value that would be to see what it can earn, in which case you might as well base your valuation on the company's earnings.

Earnings

For earnings-based valuations, you may recall from chapter 6, you need to get a figure for the underlying net profit Platinum might make 'in an average year, according to its current business strength but stripping out cyclical or one-off factors, if that average year started now'.

The first things to remove from the earnings figure are the float costs of \$22.0 million and the interest and investment gains of \$37.6 million. With much fewer financial assets now, interest and investment income will be much lower. In fact, as already explained, we're guessing at an average cash balance of around \$100 million and annual interest of around \$6 million before tax and \$4 million after tax. The two other main variables in the earnings are funds under management and the contribution made by performance fees.

On 29 February 2008 funds under management (FUM) were \$17 793 million. As you can see from table 8.7, management and administrative fees were 1.25 per cent and 1.30 per cent respectively of our estimated average FUM in 2006 and 2007. We'll split the difference and go for 1.28 per cent, which gives us adjusted management and administrative fees of \$228 million.

Table 8.7: Platinum's movements in funds under management for 2006 and 2007

	2007	2006
Opening FUM	18 985	14 312
Closing FUM	21 219	18 985
Estimated average FUM	20 102	16 649
Management and administration fees as per cent of FUM	1.304%	1.254%

The other main variability in the profit figure is the contribution made by performance fees. The flotation prospectus explains that there are two types of performance fee: 'performance share fees' (much the greater of the two) are charged on individual investment mandates and tend to be calculated on an absolute basis (that is, all gains made in a fund), while 'performance fees' are calculated relative to a benchmark (that is, gains above a particular index) and apply to the listed investment company Platinum Capital Ltd and are a fee option on the

Platinum unit trusts. We've set out the company's fee breakdown since 1995 in table 8.8.

Over the past 13 years, total performance fees have averaged 32 per cent of total fees. Since they're mostly based on absolute returns, they'll depend more (at least in the short term) on what happens to global markets than on how well Platinum manages its assets. The past 13 years haven't been particularly unusual for global markets, so we might expect similar in future. It's possible that in its early days there was a higher performance element in Platinum's investment mandates, so an average over the past five years might be more accurate; but then global stock market performance over the past five years has been relatively strong, even in terms of the rising Australian dollar. All told, we'll go for performance fees being 20 per cent of total fees, which means they'd be 25 per cent of the management and administration fees, which comes to \$57 million.

Table 8.8: performance fees

	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995
Management and													
administration fees	262	209	151	108	64	41	24	16	10	10	9	8	4
Performance share													
fees	38	80	43	46	8	8	5	26	5	4	3	8	4
Performance fees	0	0	0	0	2	9	5	0	0	0	0	0	0
Total performance													
fees	38	80	43	46	10	17	10	26	5	4	3	8	4
Total fees	300	289	194	154	74	58	34	42	15	14	12	16	8
Performance fees													
as per cent of total	13	28	22	30	14	29	29	62	33	29	25	50	50
5-year average	21												
Overall average	32												

Source: Platinum Asset Management flotation prospectus

This gives us total operating income of \$285 million (\$228 million plus \$57 million). We'll guess that costs rise to \$44 million, which is a stab in the dark influenced by the fact that salaries in the investment industry have been rising rapidly. Whatever figure we choose here will have very little impact on earnings, though, so we can afford to be a bit blasé and save our time for more important matters. With other companies, you'd try to split costs between variable and fixed elements, increasing the former along with revenue growth and the latter along with general economic growth (or perhaps inflation in some cases).

So our adjusted operating profit is \$241 million (\$285 million less \$44 million). To this we can add our \$6 million interest, to give a profit before tax of \$247 million, and take off a 30 per cent tax charge to give us underlying earnings of \$173 million. Dividing that by the current 561 million shares on issue, we get earnings per share of 30.8¢. Remember that this is not a forecast for 2008 (in fact we expect 2008 earnings per share to be around 28¢); it's what we see as the company's current underlying level of earnings. Based on the share price at the time of writing of \$4.50, that gives us a PER of 14.6 and an earnings yield of 6.8 per cent.

That's some way above the average PER for the All Ordinaries Index of 12.9 at the time of writing, and also some way above the target PER of 10 we discussed in chapter 6 (based on our target return of 10 per cent; see p. 97). As we noted, though, it might make sense to pay a PER much higher than your target PER for companies with lots of potential to reinvest large portions of their earnings at high rates of return. Platinum doesn't have much scope to reinvest its earnings (as evidenced by its high proposed dividend payout ratio of 80 to 90 per cent), but this is more a reflection of its astronomical return on capital than any restrictions on growth. In reality, Platinum has the best of both worlds: it can grow as quickly as it's able to gather funds to manage, at the same time as paying out almost all its earnings as cash.

Cash flow

As we've already noted, we're expecting earnings per share for the 2008 year to be around 28¢. Based on management's suggestion of a payout ratio between 80 and 90 per cent, that would suggest dividends for the current year of between 22¢ and 25¢. As already explained, we'd expect to see dividends near the top of the stated range and a dividend of 12¢ is to be paid for the first half of the year. So we'll go for 25¢ for the full year. At the current price of \$4.50, that would give a dividend yield of 5.6 per cent. To give us our target return of 10 per cent, this would need to grow at 4.4 per cent, which is not far from the overall level of economic growth.

Any growth we might expect above 4.4 per cent would therefore contribute to our margin of safety. In fact, the industry is expected to grow at about 10 per cent for the foreseeable future (at least it is according to funds management industry researcher DEXX&R), and so long as Platinum's funds continue to perform well, there's

no reason it shouldn't at least take its share of that. That would provide returns of about 15 to 16 per cent.

Free cash flow comes to \$174 million, both before and after expansionary investment, which amounts to 31¢ per share — and the difference between that and the anticipated dividend of 25¢ is why we expect cash to build up on the balance sheet (and be returned eventually). So, at the current share price of \$4.50, that gives us a free cash flow yield of 6.9 per cent, which we might expect to grow at similar rates to the dividend, leading to slightly higher valuations (since we're starting off with a yield of 6.9 per cent instead of 5.6 per cent).

Conclusion

One way or another, then, Platinum looks like an exceptional business being priced as average. There are two ways to look at this: either you can try to put a value on Platinum's exceptional qualities and look at the premium this gives you over the market price; or you can just assume that it's at least an average business and that all the company's exceptional qualities — the added value, the pricing flexibility, the competitive edges, the top-rate management and the excellent culture — are what give you your margin of safety. The second approach is certainly easier and it's probably no less accurate, since any explicit valuation of Platinum's advantages would be fraught with danger.

In fact, even an average fund manager — at least a large one with established distribution channels — deserves to be valued at a premium to the average company on the stock market. First of all, growth in the industry is expected to be above average and even average fund managers don't need to invest much to achieve it. Secondly, compared with most companies, fund managers get a much higher proportion of their earnings as free cash flow. And even if Kerr Neilson and other staff members left, and even if fund performance was average for the next few years, Platinum would at least be an average fund manager — although it might have to rethink its approach to distribution.

All the short-term trends are pointing in the wrong direction for Platinum at the moment: stock markets have been falling around the world, while Platinum's fund performance has been relatively poor over the past few years (at least by its own high standards) and its funds under management have suffered. So the short-term sentiment has moved against the company, yet it has considerable long-term advantages. In this respect, Platinum makes a great example for this book, because it encapsulates everything we've said about playing the long term against the short.

So, at the time of writing, Platinum looks like an outstanding opportunity. In fact, at a price of \$4.06 in January 2008 *Intelligent Investor* slapped one of its rare 'Strong Buy' recommendations on the stock (this was downgraded a notch to 'Buy' on 31 March 2008 at \$5.09) and, at the time of writing, several members of staff,

including the author of this book, own the shares. But investment doesn't begin and end with finding good opportunities. You also need to decide how much of your portfolio to put into them, and when to sell. We'll look at this in the final chapter.

¹ Funds management industry research company DEXX&R is forecasting growth of 10.8 per cent per year for the 10 years to 2016.

² S Johnson, interview with K Neilson, December 2007, available at <www.intelligentinvestor.com.au>.



Chapter 9

Putting the value in your portfolio

'It is the part of a wise man to keep himself to-day for to-morrow, and not to venture all his eggs in one basket.'

Miguel de Cervantes Saavedra

Finding undervalued stocks is a prerequisite to superior investing results, because if you can't put the odds in your favour, you'll be better off as the know-nothing investor, from whom we parted company back in chapter 2. But successful investing isn't just about tipping the odds in your favour; you also need to make sure the odds come down on your side, and for that you need to manage your risk.

Two types of risk

Risk is uncertainty, and it comes in two main forms. The first, which we'll call event risk, is the uncertainty over how things will pan out. The second, which we'll call knowledge risk, is the uncertainty over whether we've actually got our sums right.

To make things a bit clearer, we'll turn again to Don Bradman and his test batting average of 99.9. The event risk comes from the fact that although we know he'll average 99.9, in any one innings he could make anything from 0 to 334.

But of course, if you take yourself back to 1930, when Bradman was just lining up for his first tour of England, you couldn't have known that he would end up averaging 99.9. You'd have known he was a fabulous player with a terrific eye, but you might have worried how his slightly unorthodox style would measure up to test cricket. So when considering your bets, whatever average value you came up with for a Bradman innings, you'd have to accept a degree of risk in your estimations.

And, of course, your degree of knowledge risk would depend on your expertise at judging cricketers, and your specific knowledge of Bradman. If you were an Australian selector, or perhaps had been at school with Bradman, you might reckon you had a better idea of his potential than if you'd never heard of him until yesterday.

It's the same with shares. Throughout this book, we've been working on assessing a share's intrinsic value,

which is what we expect as the average outcome, but there will be a degree of event risk about that valuation. Everyone needs to take account of this kind of risk, and it means that even the best investors, with intimate knowledge about the stocks they're invested in, need a portfolio of at least five to 10 shares, or more if the selections are particularly risky. We'll talk more about the number of holdings shortly.

Every share valuation you make will also carry a degree of knowledge risk, which will also dictate your level of diversification. Where you have no confidence in your valuations, you should adopt the tactics of the know-nothing investor we talked about in chapter 2 and aim for the widest diversification you can achieve reasonably cheaply. The most accomplished investors, on the other hand, might almost dismiss this risk entirely, which is how they sometimes end up with highly focused portfolios of five to 10 stocks.

How many stocks?

Most of us lie somewhere in between these two extremes. So how many stocks is enough? There are a number of factors to consider with this, but the mathematical rule of thumb operating here is called the 'square root law', and it says that the expected variation in a sample of equal uncorrelated events decreases proportionately with the square root of the sample size.

Now we'd normally suggest that whenever someone starts throwing around expressions like 'equal uncorrelated events', you plug your ears and hum loudly. But the relationship does tell us a few handy things.

To start with, you have to do more to halve your risk than just double your holdings. In fact, all things being equal, you need to quadruple your number of holdings. It's also a case of diminishing returns, because to halve risk again, you need to go to 16 holdings (then to 64, and then to 256). And it tells you that if you suddenly take a fancy to risky resource stocks, for example, and increase the risk in each of your individual holdings by, say, a factor of four, then you'll need 16 times as many of them to bring the overall portfolio risk back to your original level.

In the real world, of course, all companies have different risks, they're not uncorrelated, and you never have equally sized holdings anyway. Most troublesome of all is that not all share opportunities are created equal from the point of view of your expected return; every time you add a holding in the spirit of diversification, you actually replace exposure to your preferred investments with something you're less keen on. And to top it all off, the more stocks you hold, the harder it will be to keep track of them all. Quoting Broadway impresario Billy Rose, Warren Buffett summed this up succinctly: 'If you have a harem of 40 women, you never get to know any of them very well'.

Splitting chips

A good way to work through all this is to split your portfolio into individual ‘chips’. For most know-a-little investors, a chip size of 5 per cent will be about right, based on 20 equally sized holdings in the portfolio. So your typical new investment will be 5 per cent, but you might allocate two chips (that is, 10 per cent) to a stock if it’s very safe, very undervalued or you’re very confident about it — preferably all three. By the same token, if a stock is particularly risky and/or you’re not very confident about it, you might decide half a chip is appropriate (it’s taken for granted that you think such a speculative situation is very undervalued, else why would you bother with it).

You might choose to hold two stocks in the same sector to reduce your knowledge risk, and perhaps some of the event risk (that part of it that is specific to the individual stock), but there will be a degree of overlap. So you also need to think about how many chips you have in particular sectors. In the larger sectors, such as banks, you might be happy to have three or four chips, but it should trigger a re-evaluation if an obscure area like essential mail services nudges much beyond a couple of chips.

Of course, as Robert Burns told us, ‘the best laid schemes o’ mice an’ men gang aft agley’, and a carefully constructed portfolio with nicely matching chip sizes will never last a week. Some stocks will do well and some will do badly; it’s one of the nice things about investing that your problems get smaller, while the good performers cause the difficulties. We’ll talk more about selling in a moment, but a sensible approach is to have a percentage cap when you’ll start to reduce a holding. So you might set a cap at 20 per cent of your portfolio, or four chips, and when a stock reaches this level, you might sell one or two chips’ worth, to reinvest elsewhere. By doing this, you’ll never get the full benefit of a stock that increases ten or more times, but you won’t take the risks either, and successful stocks can become handy ‘feeders’ for the rest of your portfolio.

Using this approach, a confident investor, investing in relatively safe stocks, might end up with a portfolio of 10 to 15 stocks, while less confident investors, including a few risky stocks in their portfolio, might end up with 25 to 30 individual holdings. Much more than this isn’t really recommended. As per the square root law, you’d have to add quite a few stocks to make much difference to your risk at this level, and you’d have a big problem keeping up with them all. If you feel you need this many holdings, then you might as well go the whole hog and invest in an index fund, which will give you greater diversification for (most likely) lower costs. If your purpose is to learn, then perhaps put the bulk of your portfolio into index funds or the equivalent (see chapter 2), and run a more focused portfolio with the remainder.

When to sell

The aim of portfolio management is to build a portfolio of undervalued stocks, while keeping your overall risks at an acceptable level. As we've seen in the first part of this chapter, this means being careful about the amount you initially invest in any stock or sector. But buying is only part of the equation. As the stocks in your portfolio wax and wane, some will need to be sold — perhaps because they hit a self-imposed portfolio cap, or to provide funds to invest in a more attractive opportunity. And this is the key to understanding when to sell — it's just part of the process of making adjustments to your portfolio to make it as undervalued as possible, within acceptable levels of risk.

Cutting the previous eight chapters down to three little rules, you'll buy a stock when:

- (a) it is within your 'circle of competence' and you are therefore in a position to make confident assessments of (b) and (c); and
- (b) the transaction makes your overall portfolio more undervalued; and
- (c) it maintains an acceptable portfolio balance.

You'll notice that (b) is a relative question. Its answer depends on your assessment of the level of undervaluation of your potential purchase and the level of undervaluation of your existing portfolio — or, more particularly, of the stock you'd sell to provide the funds to make the purchase, which might not be the least undervalued stock in your portfolio, depending on your answer to (c). So buying and selling are really just two sides of the same coin. Flipping it over, you'd sell a stock if:

- (a) it is no longer within your circle of competence and you are not therefore in a position to make confident assessments of (b) and (c); or
- (b) the transaction makes your overall portfolio more undervalued; or
- (c) it restores an acceptable portfolio balance.

Note that we have now replaced the 'and's with 'or's. A stock needs to meet each of (a), (b) and (c) to find a place in your portfolio, but it only has to fail one of the tests to find itself on the scrap heap.

A stock might need to be sold, then, because it (or your level of knowledge) has changed so that it no longer falls within your circle of competence, or because your portfolio's risks (or your risk tolerance) have changed and you need to make a switch to bring it back within bounds.

More often than not, though, you'll sell a stock for one of two reasons: either its price has risen by more than its value (or fallen by less) and you no longer feel it has a sufficient margin of safety, or you've found something else you want to buy and the stock that's for the chop is the least undervalued holding in your portfolio.

In the latter case, you have a ready-made replacement and therefore an obvious benchmark, but what about the former case, if you feel a stock is no longer undervalued but you can't find a suitable replacement? The answer is that you replace it with cash (or possibly, as a longer term solution, an index fund). So the benchmark against which to measure the stock becomes cash (or possibly the overall market), rather than another stock.

As the stock market becomes more expensive, and opportunities become thin on the ground, cash becomes an increasingly attractive option and you'll probably find that your portfolio balance is improved by holding some. In the same way, when more bargains appear, cash becomes less attractive.

The main problem that most people encounter when putting all this theory into practice is overconfidence. As we saw in chapter 3, humans tend to prefer activity over inactivity, but if you traded a share every time the thought occurred to you, you'd rapidly hand over your portfolio to your broker. After all, with analysts and the media highly polarised on most stocks, it's never hard to find reasons for buying and selling a stock. In contrast with this, most of *Intelligent Investor's* recommendations are boring, but realistic, holds.

Trading shares can be rather like shifting lanes in steady traffic: it feels as though you're doing some good, but you're probably just burning through a lot more fuel. Generally speaking, you'd be best to get into a decent-looking lane and stay put. Particularly if you're a bit of a lane-shifter, then, you may need to take steps to slow yourself down on the trading front. This comes down to your margin of safety: make sure you only make a switch (whether into another stock or cash) if you're very confident that it improves matters. Having given yourself this margin of safety in the purchase of a stock, you can then afford to give the stocks in your portfolio the benefit of any doubt.

So some degree of commitment tendency, which we looked at back in chapter 3, is in fact a good thing — so long as it arises from an understanding of the difficulties of picking a superior investment, rather than any psychological distortion of the returns available from your existing investments.

At the other end of the spectrum, you also need to be careful that you're not pig-headedly holding onto a stock simply because of an unwillingness to face up to a loss. One way to cope with these emotional factors, as we saw in chapter 3, is to note down what you expect from a stock — in terms of earnings, market positioning and so forth — when you buy it, and check back periodically to see how it's travelling. Of course, nothing will turn out exactly as expected, so you need some flexibility, but your notes should at least provide some anchor points. If one of your holdings has recently embarked on an aggressive acquisitive strategy in eastern Europe, then it should at least prompt a rethink if your notes remind you that you entered the stock because of its niche market position at home.

Tax can also complicate matters, although it's hard to go into any detail because everyone's situation will be different. The key here is to compare the funds you'll be able to reinvest in a different opportunity (or hold in cash), after paying costs and taxes, with what you've got at the moment. As always with investing, it's all about the cash that you stand to make in the future — maximising it within acceptable limits of risk. This applies to valuing stocks, to buying them, to selling them, to paying brokerage and fund charges and to paying the tax.

The key ingredient

It's important to recognise that everyone is playing blind to a large extent, so don't beat yourself up over your mistakes. You will buy dud stocks and you will sell good ones too early. So will we. So will everyone else. The name of the game is to be right more often (or for greater value) than you're wrong. To do this you need to remain objective, and a quick way to lose your objectivity is to get hung up on past mistakes.

Perhaps more than anything, a degree of humility is the key ingredient to a lifetime of successful investing. The know-nothing investor will come out ahead of the overconfident, overtrading know-it-all, and the realistic know-a-little investor will come out ahead of the know-something investor who tries to stretch things too far. This is a wonderful thing, as humility isn't known for its material rewards, but you need to make sure you're on the right side of the fence. There's only a little to be lost by not doing enough, but there's a great deal to be lost by trying to do too much.



Notes

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Chapter 8

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