

INVESTOR'S GUIDE



Charting

2nd edition

Analysis for the
Intelligent Investor



Prentice Hall

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INVESTOR'S GUIDE TO

Charting

SECOND EDITION



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INVESTOR'S GUIDE TO

Charting

**An analysis for the
intelligent investor**

SECOND EDITION

ALISTAIR BLAIR

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Preface

Without question, some people have made astonishing amounts of money from studying share price charts (and virtually nothing else) and foretelling whether the shares would rise or fall. It is equally certain that further astonishing amounts of money have been lost in the same endeavour. Sometimes the same people have clocked up both achievements, or just the second. But a few have restricted themselves to the first. And many more strive to do so.

This book is intended to help non-chartist investors understand what chartists do.

Few claims in the world of investment attract more divided views than whether a head and shoulders formation denotes anything more than nothing. Many investors have heard of this and other oddly named tools of the chartists' trade, without understanding them. Even if you see no financial benefit in gaining this understanding, you may well be interested to discover how the other half lives (and if you take in the currency, commodities and derivatives markets, it is probably more than half).

There may well be more books about charting (or technical analysis as it is also known) than there are books about the more conventional approach – fundamental analysis. This book's modest claim to differentiation is that it is not written by a chartist. It tackles the subject from your side of the fence.

Although I have both feet in the fundamentalist's camp, I do not scorn every chartist utterance. A significant fraction, but not all. I do believe that some chartists – a comparative few, indeed – have been remarkably successful over very long periods of time. In the 12 years to 1991, Mr Gil Blake, a small private US money manager, averaged a 45 per cent annual return. This was not the outcome of a few lucky years combined with many poor ones: his lowest annual return was 20 per cent. All of Mr Blake's investment decisions are derived from technical analysis. In the 1980s, Mint, another US investment management company (but 50 per cent owned by the UK firm Man Group) achieved annual returns of

between 13 and 60 per cent from its trend-following system, which used a variety of technical analysis methods. Mint did not maintain this performance during the 1990s, but that does not wholly invalidate its earlier record.

Chapter 1 puts charting in perspective. It compares the approach with fundamental analysis and finds a few points of agreement. It deals, only briefly, with the supposed crowd psychology explanation of why charting might work. This book is not a justification of charting, but an exploration.

Chapters 2, 3 and 4 are an account of the chartist's tool box. Here you will find and should be able to get behind everything from a trend line to Welles Wilder's RSI. Chapter 4 includes the complete methods of working out some of the popular mathematical indicators. This is the 'hardest' section of the book and you may wish to skip it on first reading. Worked examples are given which will enable you to set up technical analysis programmes on a computer spreadsheet or, if you have the time, on paper.

Chapters 5 and 6 deal with two specialised forms of charting: Japanese candlesticks and point and figure charts.

Chapter 7 deals with the prominent charting theories, including Elliott Wave Theory, the Coppock indicator and the outlandish notions of W.D. Gann.

Chapter 8 briefly covers a few people who have made documented fortunes from charting techniques. Not all of them hung on to these fortunes.

Chapter 9 is a key part of the book. In most books on the subject, you will find what you may consider an undue preponderance of charts showing successful charting signals: this head and shoulders heralded a price decline of 50 per cent and so on. But a large fraction of charting signals fail. Chapter 9 includes ten years of share price graphs for the UK's top 20 quoted companies. Each is examined to show what signals it gave and whether they were successful. You will gain a lot of understanding by working through this chapter.

Chapter 10 gathers together a few conclusions for all investors and considers how you might put charting techniques to use.

The internet has been a boon for chartists. Chapter 11 surveys this development.

Introduction

About 20 years ago, I observed that chartists usually had dirty raincoats and large overdrafts ... Even now, I do not know many rich chartists. However, since those early days, I have met one or two who have made their fortune and read about a few more.

Jim Slater, The Zulu Principle

The internet, which was all but unheard of when this book was first published in 1996, has had as big an impact on how equity investment is carried out as it had on investment valuations (and so much more lasting). Small investors interested in charting techniques have been among the biggest beneficiaries of this impact, since high quality charts are now freely and easily available from many sources, whereas previously they required considerable effort or expense to obtain.

Accordingly, I was pleased to be asked to update my book and add the new Chapter 11 to guide you to the best charts on the internet.

However, apart from this Introduction and the Further Reading section, the rest of the book is relatively unchanged. This is because the subject matter is relatively timeless. The method of calculating MACD is the same now as it was five years ago. The appearance and meaning of a trend line or a head and shoulders formation is unchanged. On the outer edges of charting, one or two brand new indicators have been minted, such as the hauntingly named aroon oscillator. Aroon is a Sanskrit word meaning the dawn's early light and this oscillator seeks to give chartists the insight to identify the very earliest beginnings of new price trends. It sounds promising. But it was never the mission of this book to take you to the frontiers of charting. Rather, it was to give you a feel for the lie of the land between here and there. It is intriguing territory.

All this is being described to you by someone who tries to be a value investor (when I am not being seduced by growth stocks). When I make an investment decision, I try to imagine how the facts I'm pondering would look to Warren Buffett. What's the intrinsic value of the company? Does it have exceptional economics? Do these managers think like owners? And I

certainly buy that nugget of wisdom from his teacher, Benjamin Graham, which Buffett quoted in the 1987 Berkshire Hathaway annual report:

Imagine market quotations as coming from a remarkably accommodating fellow named Mr Market who is your partner in a private business. Without fail, Mr Market appears daily and names a price at which he will either buy your interest or sell you his.

Even though the business that the two of you own may have economic characteristics that are stable, Mr Market's quotations will be anything but. For, sad to say, the poor fellow has incurable emotional problems. At times he feels euphoric and can see only the favourable factors affecting the business. When in that mood, he names a very high buy-sell price because he fears you will snap up his interest and rob him of imminent gains. At other times he is depressed and can see nothing but trouble ahead for both the business and the world. On these occasions he will name a very low price, since he is terrified that you will unload your interest on him.

Mr Market has another endearing characteristic: he doesn't mind being ignored. If his quotation is uninteresting to you today, he will be back with a new one tomorrow. Transactions are strictly at your option . . .

Mr Market is there to serve you, not to guide you . . . it will be disastrous if you fall under his influence.

(Reprinted with permission from Warren E. Buffett)

And yet, very often I look at a share price chart and cannot help but notice that there seems to be a pattern in Mr Market's quotations. Consider this chart of the share price of Diageo, one of the world's biggest branded drinks companies (Figure I.1). You will come across this chart again in Chapter 9, but I reproduce it here because I find it very striking. Do you not agree with me, that these shares seem to know exactly where they are going and that nothing is going to stop them getting there? And that anyone who joins them for the full journey arrives 50 per cent wealthier than when he or she set off? And that even if the true nature of the journey only became apparent to observers halfway through, they would still have found it well worth their while to hop aboard then?

As chartists say, 'The trend is your friend.'

It's mainly a coincidence, but it's worth telling you, that when I wrote the Introduction to the first edition of this book, the chart which featured in this self-same spot was of virtually the self-same company, Grand Metropolitan (which merged with Guinness to form Diageo). Back in 1996, I owned Grand Met shares and had been intrigued by how they had

maintained a very narrow price channel for months on end. Most of the time, most shares live up to the academic 'random walk' theory. Charting is an attempt to identify the occasions, such as that one by Grand Met and this one by Diageo, when randomness is suppressed.

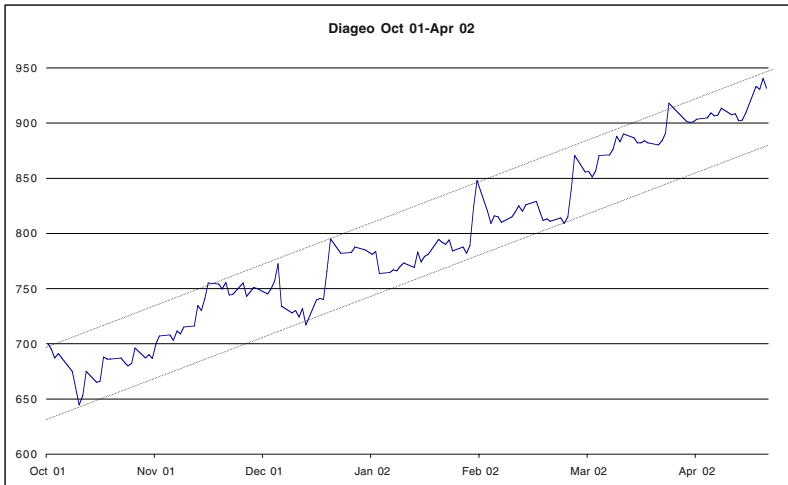


Figure I.1 Diageo knows where it's going

And there is another interpretation of this chart, because not only is the main trend regular, but so are the subtrends. As a value investor looking for a meaty gain, I'm just not interested in assessing share prices with razor-sharp precision. When I say I'm looking for 50 per cent, I mean 40 to 80 per cent. I'm not looking to 'scalp' it. Nor am I going to sell the share if it goes down by 20 per cent, unless some more information turns up to alter my fundamental view.

But some investors make a living out of scalping. And look at the amazing scope they have with this share. Those tram tracks are its trend channel. Take a close look: they're 80p apart. And every time the shares come off the bottom track, they put on a useful little rise. And *almost* every time they come off the top channel, they make a useful little fall. You could almost count on it. And if you could almost count on it, you could probably make money from it. If I practised a different style of investing, I might have made money out of these fluctuations: not 50 per cent, more like 2 per cent per deal after all expenses.

But 2 per cent is 2 per cent, especially if it's earned in a week or two. The average investor is doing well to earn 12 per cent a year on his money, if he does it year in, year out. A few 2 per cents out of Diageo would be very useful. And had I been so inclined, I could have tracked down a derivative which would have magnified the underlying 2 per cents into a much larger number.

The pattern traced out by Diageo's shares is just one of scores of patterns that chartists look for. In fact, knowingly or otherwise, most investors attach much more significance to share price patterns than to anything Buffett ever said. To stick with the Buffett style, you have to be very patient. Few of us are. Nothing demonstrates this more tellingly than the practice of taking profits. Look at what happens every time the Diageo shares rise by 50p or so. The shares fall back by 30p or 40p. In this seven-month period, they never give up all of a gain (that's what makes this such a powerful chart: each high and each low is always higher than its predecessor).

And yet all the time, the shares were heading firmly to their destination. This pattern contains an important truth about investing. *Many investors are less interested in maximising their gains (should that mean risking a gain already made) than in taking gains when they are available.* This factor is as potent a force in setting share prices as any which guides Warren Buffett. The philosophy of making investment decisions on the basis of share price patterns recognises forces every bit as real as those which are tracked by fundamental analysts. Fear, unthinking greed (as opposed to thinking greed) and the idea of profiting from what the crowd thinks (whether the crowd is right or wrong) are present in at least as many investment decisions as are considerations of intrinsic value and whether the managers think like owners.

And sometimes, despite my best efforts, I see these in myself. I'm pretty good at holding a share for the bigger gain. But I find it difficult to buy a share, whatever the fundamentals, if it looks irredeemably out of favour – the evidence for which would be a share price that has not moved despite positive developments. In such situations, I will wait for the share to bottom out and take a decisive upturn before buying it. Of course, that often means I miss it altogether. What has looked like a bargain for weeks at 100p, somehow doesn't look so attractive if it moves up to 130p in a matter of days.

So these are the considerations that make charting interesting to me. But there is a countervailing force. Charting has a downside. Or two. It is

exceedingly difficult to do. Second, it rarely owns up to this. That's just not in the nature of the people who do it.

While working on this edition, I came across a simple little animated advert on a US website for a charting service. It featured a share price chart being plotted in real time. The chart started with an upswing. Soon, the word, BUY flashed out close to the bottom of this promising development. Then the chart turned down. Immediately after the peak was made, the word SELL started to flash away from it. Another two centimetres along the banner, the chart turned up again, with another mesmerising BUY tag. Now the chart went through the top of the banner. This time, the advice was RETIRE.

For me, there is something somewhere about charting that says this is how it sees itself and, more dangerously, how many entranced outsiders see it. Now the banner advert strategy is indeed the identical one I was suggesting just five paragraphs ago could be adopted with respect to Diageo. But I am about to spend a significant proportion of 200-odd pages explaining to you the pitfalls and worse that you will find along the way. And take it from me right now: THIS BOOK IS NOT A ROUTE TO AN EARLY RETIREMENT.

Maybe I shouldn't get so excited about an advert. And yet, no matter how humble its advocates – 'Don't expect to find the Holy Grail,' says Carl Swenlin of the US charting website www.Decisionpoint.com – there is something dangerously alluring about it. I have yet to meet a professional chartist who does not write or talk as though he has some special insight. Every chartist always sounds as though he has an edge. But in the financial markets, an edge means a fortune. It does indeed mean, buy–sell–buy–retire. A prominent professional chartist recently told me how he identified that Marconi was a sell at £10.50. Since it is currently 7p, he needs only to have had two or three similar insights in his career now to be a very wealthy person (as in buy–sell–buy–retire). Far too wealthy to be sitting there cranking out dozens of charts a week.

The fact of the matter is, that even a successful chartist is going to make almost as many bad calls as good ones. Charting is not buy–sell–buy–retire. It is a very long slog, if your resources and self-discipline last the course.

Six years after writing this exploration of charting, I remain on the sceptical side of the fence. And yet I remain respectful of some charts and some chartists. And I often use basic charting insights. I like shares whose

charts show extended bottom patterns. With less personal conviction but plenty of respect, I see the virtue of shares with momentum – such as Diageo's.

Look at the charts in Chapter 9 and you will see ample evidence that the trend is your friend, if only you can identify it. And you will also see how support and resistance levels can repeat – to the very penny – years after they were first established. There is something here worth trying to understand.

I would like to thank Lindsay Bogdan, Danny Ambrose and Nicola Fordham at Thomson Financial Datastream, Patrick Mathurin at the *Investors Chronicle* and Amanda Thompson at Pearson for their help in producing this second edition.

Alistair Blair
August 2002

1

The art of the chart

Fundamental vs technical analysis

The common-sense appeal

Non-equity investments

Selling short

A psychological explanation?

If you want to invest in shares or any other investment, you need a way of making buying and selling decisions. Astrologists, coin tossers and those claiming divine guidance all get a look-in from time to time, but most professionals use one of – or mix – two approaches. They look at fundamentals or price patterns.

This book is a guide to the techniques used by those who concentrate on price patterns. Such people are known as *chartists* or *technical analysts*, two terms which will be used interchangeably. Chartists are in a significant minority, at least among professionals in the stock markets. A big stockbroking firm would typically have dozens of fundamental analysts on its staff for each technical analyst it employed. Indeed many top firms don't employ any technical analysts. It's important at the outset to consider why.

FUNDAMENTAL ANALYSIS

Fundamental analysis means sifting through the factors that determine a company's future profits as a starting point in deciding whether its share price is cheap or expensive. The starring role in any fundamental analysis goes to the profit forecast, but this is only the tip of the iceberg. Figure 1.1 outlines some of the questions which most fundamental analysts will at least consider before deciding whether a company's shares are a good buy.

Fundamental analysis has many shortcomings, not least that it piles estimate upon estimate, then lathers the whole heap with subjectivity. Who's to say the managers are skilled? They might have done well in last year's conditions, but times are forever a'changing. Few proponents regard fundamental analysis as hard science, but would say that, like many other disciplines, it's the best we can do. Fundamental analysis also tallies with common sense. Most people, no matter how inexperienced they were in investment analysis, would reckon that the obvious starting point is to try to work out whether the company they were thinking of investing in will prosper.

- 1 *Is the economy heading up or down?*
- 2 *Is the sector in which the firm operates likely to follow a different path from the economy as a whole?*
- 3 *Does the firm have anything going for it?*

For instance:

- a really impressive product
- superior marketing
- skilled management
- built-in growth*

*'ClevaNuShops', a new kind of shop, has opened in five towns and been very successful. All other things being equal (and they never are) ClevaNuShops will grow simply by 'rolling out' new shops in other towns. For obvious reasons, an investment which should grow in this way is, on the face of it, attractive. ClevaNuShops could be a better investment than another retailer which runs its nationwide chain of shops exceedingly well but is past its roll-out phase.

- 4 *Based on all the above and on past experience, what profits will the firm make this year and next?*
- 5 *Do I have enough information to estimate the picture further out too?*
- 6 *Based on my profit forecast, what will earnings per share be?*

To get earnings per share (EPS), subtract tax and sometimes other items from pre-tax profits. Divide the result by the number of shares which the company has in issue.

- 7 *Based on EPS, what is the price/earnings ratio?*

The share price divided by EPS. The price/earnings ratio is also known as PER, PE, p/e or rating.

Price/earnings ratios are very important because they allow direct comparisons of individual shares. For instance Tesco has a current year PE ratio (as I write) of 17 whereas Shell's is 11. In other words, if both companies continue to earn the same profits in future (and don't issue any more shares), it would take 17 years for Tesco to earn the amount of money you would pay for one of its shares, but only 11 years for Shell to do the same. Shell appears to be cheaper. As you can see, PE ratios are outrageously simplistic. However, no one has yet devised an equally straightforward, but better, method of comparing share prices. But they are confusing. You need to know which year's profits the PE ratio is based on. It's a common mistake to compare one firm's historic PE with another's forecast PE.

- 8 *Can I work out price/earnings ratios for future years?*
Only if future profits have been estimated.
- 9 *On the basis of the company's expected future growth of earnings and dividends, and its PE ratio compared with those of similar firms, are its shares cheap or expensive?*

You'd pay more (in the form of a higher PE ratio) for a firm which was expected to grow its profits faster, especially if you thought this would continue to be the case.

10 *Is the firm financially sound?*

A company can be highly profitable but financially stretched (or unprofitable but stuffed with assets that it could sell for more than its shares are worth). The fundamental analyst will look at a company's balance sheets to check that it is not borrowing too much (this is known as being *overgeared*) and that it generally has the resources to sustain its profitability and to cope with setbacks.

Figure 1.1 Fundamental questions: what the (pure) chartist ignores

TECHNICAL ANALYSIS

But there is another way. Try technical analysis. To the committed technical analyst, estimates of future profits are a waste of time. In fact in theory and in practice, the process can be carried out even without knowing the identity of the investment. Consider Figure 1.2. It's full of technical significance. To most chartists, it screams 'buy'. Even you, the beginner, may be able to appreciate this. If you do, note that you don't know the profits outlook, management competence or even the firm's identity.

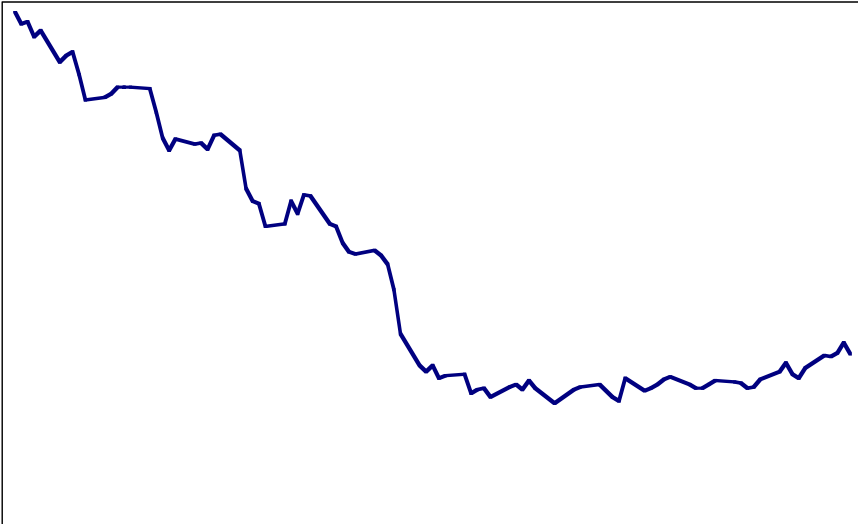


Figure 1.2 Can you see a message here?

Now in fact it's rare for a technical analyst totally to eschew all reference to the fundamentals. But it's worthwhile recognising at the outset that some do. And this emphasis on price history as opposed to the fundamentals may help you to recognise why charting is seen by some fundamental analysts as akin to tealeaf reading. Further, technical analysts are wont to point to totally unexpected events in the life of a company with the observation, 'Well, it had to happen, because the chart said it would.' Just before I started to write the first edition of this book, I interviewed Robin Griffiths, one of London's best-known technical analysts. The week before, Inchcape, the international trading company and UK importer of Toyota cars, had taken the market aback with a profits warning. Its shares were hammered. Griffiths had not forecast Inchcape's difficulties but having looked at its chart after the event, felt that a problem of some sort had been inevitable because its chart was due for a downleg. This 'even the unexpected is predetermined' view of the world is anathema to fundamental analysts.

'How can you begin to consider an investment without putting primary emphasis on its future profitability?' ask the sceptics. 'We can, because our systems work,' reply the chartists. This assertion raises the hairs on the back of a fundamentalist's neck. 'And furthermore,' goes on the chartist, 'when did you last beat the index?' The observation stings many fundamentalists into silence.

NOT SO DIVIDED AFTER ALL?

Most of the time, though, the two schools co-exist in a spirit of live and let live, sometimes verging on active co-operation. The oft-heard recommendation from a fundamental analyst, 'Buy on weakness', sounds akin to the sort of injunction that a chartist would issue. Another weakness on the fundamental side is their frequent readiness to issue buy or sell recommendations based on slim value discrepancies. For instance: 'Buy X because it is 20 per cent undervalued compared with Y and Z and this gap should be closed.' This kind of recommendation stems from the fact that stockbrokers' livelihoods depend on investors buying and selling shares, not on buying and holding them. They need to find arguments to persuade investors to shuffle their portfolios. If there are no compelling arguments, then an unconvincing one will have to do.

Many people with experience of stock market investing and who take their decisions on the basis of the fundamentals would consider the prospect of a 20 per cent gain as simply not tempting. However, from the point of view of a technical analyst, this sort of prospect sounds quite attractive. He uses short horizons and can be happy to win lots of modest share price gains: 'Let's collect this scalp and then move on to the next one.'

Moreover, even the most hardened fundamental analysts acknowledge the importance of *timing* – the matter of whether the market as a whole is soundly valued or not. It's relatively easy to compare two shares and come to a conclusion about whether one looks significantly cheaper than the other. But what if, while there is a worthwhile disparity in the two shares' values, both, and all the other shares which form the background against which the decision is being made, are over- or under-valued? Here, you have the issue of market timing.

Fundamental analysts tend to address market timing by asking themselves whether the market's rating (i.e. the average PE ratio across all shares) is out of line with historic norms. This can sound suspiciously close to the chartists' argument that what has gone before is a pointer to what's going to happen next.

And there is a tool called *beta* which most fundamental analysts are happy to use, even though it comes straight out of a share's price graph. Beta is a measure of volatility, that is, of how much a share will move for a given move in the market. Betas tend to fall in the range 0.5 to 2.0 (although some shares have much higher ones, and they can occasionally be negative). A share with a beta of 0.5 will tend to move half as much as the market. Thus, if the market moves up by 10 per cent, Yak plc with a beta of 0.5 will move up 5 per cent. But consider Zebra plc, whose beta is 2. Should the market move by 5 per cent, Zebra's price will supposedly change by 10 per cent. That's the theory at any rate. Many high grade pieces of fundamental research include a share's beta as simply another routine statistic, alongside dividend yield and the price/earnings ratio, noting that each industry tends to have a fairly standard beta, and it's best to know what this is before you invest in it.

But where does beta come from? It comes from a painstaking day-by-day study of how a share price moved in comparison with how the market moved on that day. Average out your calculations for three or five years and you have your beta.

How do you use beta? Typically you will take a whole portfolio and calculate its average beta. This gives a measure of how volatile your

portfolio is, and how well-positioned it is against your expectations for the market. Expecting the market to decline, you might judge your portfolio beta to be rather high and weed out a few of the highest beta shares. If you anticipated an advance in the market, you might instead weed out the lower beta shares. None of this has much to do with the fundamental value of a share. So what is it doing in the fundamentalist's tool kit? True, many of them would regard it as a pretty minor piece of equipment, but it's there all the same. Beta is a grey area where fundamental analysts somewhat sheepishly find themselves meeting up with the technical fraternity.

Perhaps the most compelling argument for the chartists is the one that would appeal to any student of the roulette wheel. If you had seen eight blacks come up in a row, would you bet on red? No? How about 16 blacks or 32? The statistician, here in the guise of the fundamentalist of the roulette table, can give you good evidence that even if there have been 32 blacks in a row, the odds stay even for the next turn of the wheel. Unlike you, the wheel has no memory – it could as easily be black as red. But just as most people would consider that analysis of a company's value should start with its future profitability, so those same people would at some point yield to the argument that red's a good bet – even those who appreciate the statistician's argument.

Many of the recommendations which emanate from technical analysis are parallel to this common-sense view that after 32 blacks, red is a good bet. In the past, observes the technical analyst, seven times out of ten when we have had event *x* (a run of 32 blacks or a 'triple bottom'), then it has been followed by event *y* (a red, or a share price rise). Now, we've just had event *x*, so let's bet on *y*. Seven times out of ten, you'll note. The chartist is quite prepared to be wrong, more so than the fundamentalist. This is normally recognised by the advice, fairly standard alongside technical recommendations, that the trader (probably a more appropriate term than investor for those driven by charts), at the same time as buying into Yak plc, simultaneously puts in place arrangements to sell if what actually happens to its share price is the opposite of what was expected. This is known as the *stop-loss order* and takes the form: 'Buy Yak at 200p, anticipating a share price rise. However, instruct your broker to sell them should the price go down below 170p, because if it does, the expected rise above 200p is unlikely to happen.'

The idea of a stop-loss has great appeal to many commonsensical investors. Not everyone has the wisdom or patience of Warren Buffett, and the accompanying confidence that if a share's price goes down after they

have bought it, then more of the shares should be bought. Many people want the fun and satisfaction of investing their money directly instead of handing it over to a unit trust manager. They do not have the time or the ability to appraise an investment so that its prospects are beyond doubt at the time they put their money into it. Moreover, they know they have these shortcomings. Maybe they should put more time and effort into analysis, but the fact is, they don't. Against this background, the idea of selling a losing investment has lots of appeal.

Selling an investment for no other reason than that in the short term its price has fallen should be anathema to any fundamental investor. It's pure chartism (or sometimes, it's lazy or nervous fundamentalism). But many people do just this. This is a group of people who might as well get wise to technical analysis, even if they think of it as tealeaves.

Despite its apparently scientific attention to unarguable facts – past prices – as opposed to the often subjective analysis carried out by fundamentalists, technical analysis is more like art than science. Just as Picasso and Rembrandt would have delivered up strikingly different images of the same figure, so you can find technical analysts who will give you wholly different interpretations of the same price histories. They all talk in terms of *triple bottoms*, *upswings*, *consolidations* and *breakouts*, just as Picasso and Rembrandt would have agreed on reds, blues and yellows. But what's a triple bottom? What portends a breakout? Make no mistake, here just as in every other professional endeavour, you'll find as much disagreement as agreement. Technical analysts use a huge number of indicators to arrive at their conclusions. Look through the central chapters of this book and you will find oscillators, trend lines, relative strength indicators, point and figure charts, candlesticks and many more (and this is just scratching the surface). Each has adherents. Others use a combination. It should not be surprising that chartists offer up different conclusions.

SURELY, IF THESE PATTERNS ARE SO OBVIOUS, YOU CAN'T PROFIT FROM THEM?

Can technical analysis be self-defeating? It's often said that a system designed to beat the market cannot work once the market as a whole starts to use it. But an excellent example of this argument at work comes right

from the fundamentalists' camp. During the 1980s, the attractions of small companies were regularly espoused by commentators who pointed out that a portfolio kept in a random selection of small shares since the 1950s would have far outperformed one composed of market leaders. Small companies should be more capable of serious growth than larger companies, went one of the explanations for this effect. Apparently, this characteristic outweighed the fact that small companies are weaker than large ones and therefore also more likely to falter. There were many launches of unit and investment trusts designed to capitalise on the *small companies effect*.

But in the 1990s the small companies sector disappointed. These new trusts sank to the bottom of the performance tables. One explanation was that small companies were less suited to those recessionary times than their larger brethren. But another was that the historical pattern was bound to disappear as soon as it was discovered. All that money which was diverted into small companies' shares could not fail to lift their share prices relative to other sectors. This very act corrected the anomaly. After that it was impossible to profit from it.

It will be years before this argument can be concluded. However, the second explanation deserves attention. It is easy to see that once an anomaly has been ironed out, it is of no use to investors.

So, doesn't the same go for chart patterns? In many cases, precisely the opposite, in fact. The problem may be not that the market latches on to them, but that it fails to do so. Many a chart signal fails because what's supposed to happen does so, but tardily. Charting is an attempt to profit by forecasting a relatively short-term price movement. The chartist stands before the supposed movement, and says, 'This is what's going to happen next.' If the market climbs on to his bandwagon, his forecast becomes self-fulfilling. His shorter investment horizons would save him from putting long-term money into a once-in-a-lifetime discovery such as the small companies' effect, unless he could get in before the market latched on to it. By contrast, the huge quantity of money that went into attempts to capitalise on the small companies effect was after the event.

Nonetheless, it is true that a good signal, which has worked often, will start to fail if everyone begins to use it. The chartist recognises this. He uses lots of signals, putting aside any that seem to have stopped working and reintroducing previously worn out ones if they seem to show renewed promise.

THE STOCK MARKET IS NOT WHERE YOU'LL FIND MOST CHARTISTS

This book deals with charting in relation to investing in shares. However, the great bulk of chartists are to be found not in the stock market but in the currency and commodities markets. The international currency markets are much larger than any stock market and are far more liquid (that is, they see much more turnover, or trading). Trading of the euro against the dollar or of either against the pound or yen exceeds the turnover in any share, with total global foreign exchange turnover exceeding two trillion dollars a day by some estimates. This figure does not include trading of currency derivatives such as futures and options. By contrast, the New York Stock Exchange sees turnover of \$70 billion on a busy day, and that is spread across 3,000 or more stocks. Domestic turnover on the London Stock Exchange is worth around £10 billion daily (\$15 billion – all figures in this paragraph as at 2002.).

OPTIONS, FUTURES AND INDEXES

If you are going to receive a worthwhile amount of some foreign currency in the future – say dollars from your US customer – you may want to avoid (*hedge against* or just *hedge*) the possibility that when the dollars arrive the exchange rate has moved against you (i.e. that your dollars convert into fewer pounds than you had been anticipating). You can avoid this risk in several ways, but the commonest these days is to use one of the international financial futures exchanges, such as LIFFE. Here, paying very low commissions, you can get a price today for dollars you won't receive until some date in the future. The low cost of dealing and the immense liquidity of these markets, even for huge transactions, mean that they are used not only by people with genuine needs to exchange currencies, such as companies receiving payments for exports, but also by money managers who are responsible for looking after large pools of money. These include government agencies, such as the Saudi Arabian Monetary Authority, and private funds whose *raison d'être* is to make money by speculating on movements in currencies and anything else they think might offer the opportunity of a profit. Other players include banks

who, as well as operating in these markets on behalf of customers, also dedicate some of their own money to speculating in these financial futures. Proprietary trading, it's called. It's what sank Barings.

Interest rate movements too are covered by these financial futures markets. Suppose that, instead of a foreign currency, you are going to receive a large payment in your own currency – in, say, a year's time. You won't be spending it immediately and will want to earn interest on it for a few months. Of course, interest rates move up and down just like currencies. You don't want to be a prisoner of next year's interest rate: you'd like to know, today, what interest rate you're going to get next year. No problem. The same financial futures exchanges also offer contracts which will enable you to secure a rate today for next year's (or next month's) money. All the same players, banks, international companies, government agencies and private funds operate in interest rate markets too.

There is also outstanding liquidity in the trading of commodities such as soya beans, orange juice, oil, gas and metals and in stock index futures. These allow you to protect yourself against, or bet on, future movements in Stock Exchange Indices such as the FTSE 100 and the S&P 500. To the average UK private stock market investor, these may seem weird investment areas. But the turnover in many of them, on exchanges such as the Chicago Mercantile Exchange, Chicago Board of Trade and London Metal Exchange, more than rivals that for most shares.

In addition to futures contracts, the same exchanges and players also offer *options* contracts which work in a slightly different way. For most investors, the essence of an option is that the buyer has to complete only if it is in his favour to do so. The opposite applies to *option sellers* (also known as *option writers*). They are only ever called upon to complete the deal when it is not in their favour to do so; in return, they get the price of the option whether the buyer completes or not.

Take the dollar payment you are going to receive from your US customer. It's due in 90 days. You can buy a futures contract today which enables you to fix the value of your future payment at \$1.38. Buy it and you will lock into this rate. But you may think the dollar will be stronger than that. In that case, you could buy an option. This is available at \$1.40. It's more expensive than the futures contract because it offers you extra flexibility which doesn't come free. Now, if your own feelings turn out to be right and the dollar does indeed strengthen, to say \$1.32, you can forget about the option contract and sell your dollars at \$1.32. But if you were wrong and the dollar instead weakened to say \$1.44, you're protected by

your option. Using this, you sell at \$1.40 and convert into a higher amount of pounds than you would have got at \$1.44 (which will be lessened, however, by the amount you paid to buy the option).

Trading in options is meat and drink to any regular participant in the currency, commodity and index markets. Exchange rates can be confusing to anyone who doesn't deal in them regularly. A good rhyme to have in mind is '*Hello, Bye-bye – Sell low, Buy high*'. Figure 1.3 gives a summary of the above. Apart from being bigger, these three arenas – currencies, interest rates and commodities, traded in either 'spot', futures or options forms – also share another characteristic which distinguishes them from stock markets. This is that the translation of fundamental factors into prices tends to be a much fuzzier process than is true in the stock market (and it is pretty fuzzy there). For instance, a currency's value against other currencies should, on the face of it, depend upon whether the country's imports exceed its exports, how much money its government is borrowing, and the rate of interest available to people who hold money in that currency. These factors and the expectations about how they will change in the future 'should' be the crucial determinants of a currency's value, just as earnings per share and other fundamentals go to explain the price of a company's shares.

<i>Assume the dollar payment was \$10 m:</i>		
If you sold these dollars at	\$1.44, you receive	£6.944 m
or at	\$1.40	£7.143 m (less cost of option)
	\$1.38	£7.246 m
	\$1.32	£7.576 m (less cost of option)

Figure 1.3 Sell low, buy high

WHERE FUNDAMENTALISTS WRING THEIR HANDS

Now, it is certainly true that earnings per share, especially in the short term, can be but poorly related to that share's price. Nonetheless, over a two- or three-year time frame, marked changes in the former tend to lead to marked changes in the latter. In currencies, however, the time frame required for

marked changes in fundamentals to translate into prices is often much longer. None of the three supposed drivers – the balance of imports against exports, government borrowing and interest rates – exerts the same pull on currencies as earnings per share do upon a share price. Currencies with atrocious trade and debt deficits have been known to overcome all selling pressures for years by keeping interest rates at attractive levels. In theory, the downwards pressure from the first two problems should not have been counterbalanced by the generous interest rate on offer; but they often have been.

Perhaps it is because of this difficulty of interpreting how the fundamentals in these markets will affect currency, interest rate and commodity values, that it is in these areas, not in the stock markets, where you will find the vast majority of chartists. Another explanation put forward is that because of their immense liquidity, these markets display the characteristic patterns looked for by chartists more frequently than the less liquid stock markets. If you're looking for a certain price wiggle that signals a profit opportunity, it's best to look in a place where prices wiggle often. In comparison, share prices are sloth-like.

With these enormous markets comprised in large measure of chartists, all looking for chart patterns and knowing that their fellow chartists are doing the same, and moreover making a living out of it, it is difficult to support the assertion that chart patterns are useless as soon as the market latches onto them. The market knows all about them already.

However, as mentioned above, different chartists use different indicators, or different combinations of indicators. A professional chartist would not see a triple bottom as an investment opportunity. He might want to see it accompanied by, say, a rise in turnover (which he calls *volume*), improving momentum and followed by a golden cross. Now, here you have a trading system that can be devalued by widespread adoption. If the combination of these four indicators has turned into a profit opportunity several times in the recent past on the pork bellies (also known as *bacon*) market of the Chicago Mercantile Exchange, every chartist there will know all about it. The result will be that the next time the first three occur, many won't wait for the golden cross. They will anticipate it by buying pork bellies now. What was a four-indicator signal becomes a three-indicator signal. But whoever settled upon the four-indicator version, if he has been sticking to his tried and tested system, will be disappointed. As he waits for the fourth crucial indicator – the one

that sealed the decision to buy – he finds it has already happened in the twinkling of an eye after the third.

Chartists who use complex indicators like this one have to anticipate that the market will steal their findings if they are at all successful. And adapt. But simpler indicators endure. The triple bottom, pure and simple, is not in the same league as a complex indicator. If you looked hard, you would find dozens of examples in a few years of share price histories. It's too fleeting, too regular and too often unsuccessful to attract a great pile of money into its next occurrence. That does not mean it cannot be useful.

CHARTISTS DO IT UP AND DOWN

A central part of the chartist philosophy is the belief that falling share prices can be as profitable as rising ones, and this is another point of differentiation from the fundamentalist approach. It's not that the latter doesn't expect share prices ever to fall; rather, their longer investment horizons make it more difficult for them to turn expectation into profit. Fundamental analysis of a company may conclude that its shares are over-valued, but will not normally uncover a timetable according to which the share price will fall.

There are two ways of profiting from the belief that a share price will fall: selling shares you do not have (known as *selling short*), or buying a put option. Selling shares you do not have is a very short-term tool and only genuinely available to large investors. A sell deal can be settled by borrowing shares, but this involves hefty costs. You would have to be anticipating a considerable, and preferably quick, fall in the share price to enter into a share borrowing transaction.

A put option allows you to sell shares at a future date (the strike date) at a price fixed today (the strike price). Like the options available on the financial futures exchanges, a stock option is a deal you can walk away from if that suits you. The LIFFE equities division offers options on a variety of strike prices and strike dates for the 100 or so leading shares on the Stock Exchange. If Blue Chip plc is currently trading at 300p, you could buy an option to sell it at 275p, 250p or 225p with strike dates in three, six or nine months' time. You can also buy options on all other shares, using the traditional options market operated by the Stock Exchange. This is less flexible, offering only a single strike price (today's share price) and a single

strike date (in three months' time). Nonetheless, it allows you to back your judgement that a share price is due for a fall (or a rise). *Call options* are the opposite of puts: they work in exactly the same way and are used by people expecting a share price to rise.

If you think the price will fall further than the difference between today's price and the strike price (and by more than the cost of the option), then you can buy the put option and wait for the share price to fall. Assuming it does, you would then buy the shares in the normal way at the lower price and immediately sell them at the higher strike price to whoever had sold you the option (the option writer). In fact, in the traded options market you don't go through the rigmarole of buying the shares and selling them to your option writer. Instead, the market simply pays you the profit you would have made had you done so. See Figure 1.4 for an example of how this works.

<i>Blue Chip plc</i>	
Today's share price	500p
Three-month put option over 1,000 shares:	
Strike price	475p per share
Option price	£100
Three months later, the share price turns out to be	420p
Your profit:	
The difference between the strike price and the actual price on the strike date, i.e. 475p – 420p	= 55p
Multiplied by 1,000 shares	= £550
Less cost of option	= <u>£100</u>
Profit	£450

Figure 1.4 How a put option works

This is all very well except, from the fundamentalist's point of view, in the little matter of timescales. Assuming you are not using borrowed money which has to be repaid by a set date, buying a share and holding it allows you to profit (if the share rises) without worrying at all about timescales. The fundamentalist isn't banking that the shares he buys this month will rise next month, over the next three months, or perhaps indeed over the next year. He just expects them to rise. Period. He didn't say when. Yes, it's wonderful if the rise happens sooner rather than later,

but he recognises that it could take time. Of course, he takes the same attitude towards shares that he thinks will go down in value.

Now you can see why profiting from share price falls is a province that the chartists pretty much have to themselves. The chartist, you will remember, says, 'This is what's going to happen next.' He's quite happy to back his judgement by buying a put option because he thinks 'next' means in the next few weeks or months. Of course, the world is not as black and white as this. Plenty of fundamentalists buy options. While most of the time they don't want to make judgements about timescales, from time to time, they will have a firm conviction that a share is due for a serious short-term price adjustment. And when they do, they will seek to profit from this judgement by buying an option.

BUYERS, SELLERS, FEAR, GREED AND PSYCHOLOGY

Why does or should technical analysis work? Explanations usually centre on the the psychology of buyers and sellers and, in particular, the price at which they bought their shares. This is another piece of the chartist compendium that should strike a chord in the mind of the sceptical observer.

What is the significance of the price at which you bought your shares? It determines the profit or loss you will make on your transaction. And that's that, isn't it? Of what significance today is your buying price of six weeks ago? Nil. What matters today is today's price and the company's and the market's prospects as of today. To the rational and cool-minded investor, the price at which he originally bought his shares is history. He should get up every morning and review his investments anew. Today, they're a 'buy', 'sell' or 'hold' at today's prices. The buying price is irrelevant. Isn't it?

But if you believe all that then presumably you've never given a moment's thought to stock advice such as 'Secure some profits now by selling half your holding.' Who is as cool as to ignore his buying price? For every investor who operates on the cool and rational principle, there must be 1,000 who do not. Of course the buying price is important, and even the rational cool-minded investor knows this. You bought shares in Red Chip at 250p. They've been to 140p, but have now recovered to 250p. They're set to continue rising. But what goes up can go down, as it did so painfully

before. The choice is simple. Get out now and get your money back, or hold on for the profit you were expecting when you first bought them: the profit that turned out to be a loss last time you were here.

Now, it's certainly not the case that there will be 1,000 sellers for every holder, but there will be 1,000 who go through this thought process, and plenty of them will decide to get out. Here, fear wins. And many of them went through the same thinking three weeks ago when Red Chip was at 220p. They decided to hang on just a little longer to see if they could get all their money back rather than just most of it. Then, greed won.

Even though it 'shouldn't' be, the price at which people buy shares is often significant in a subsequent decision to sell them. Chartists know this very well and seek to profit from it.

Example

Every now and again, share price patterns emerge which reveal that particular prices have special significance for the shares in question. Figure 1.5 shows an example. A technical analysis of this chart might run as follows:

Investors who held the shares all the way up to 900p in January 1994 are, by March, disappointed that they didn't sell at the peak. It's been a memorable run and that nice round figure sticks in their minds. They resolve to sell if ever they see it or anything else close to it again. These investors will set up *resistance* at 900p, by selling their shares at that price and preventing them from advancing past it, until they've sold out.

At the same time, other investors who sold out at 820p to 850p on that sharp pullback in January are disappointed that they sold too early. These investors decide to buy RTZ back if ever the shares come down to their selling price. In March, they get the opportunity. They have set up *support*.

Now, there's an oscillation between the two camps. In the low 800s, out come the buyers who were disappointed not to have had the full run. For months, they can be relied upon to come back and support the share price at that level. But as the price approaches 900p, investors who have seen this price before and failed to bank it aren't going to pass up the opportunity too often in the coming months. There they go in April and May, and again in August and September, selling out and so preventing the share price from breaking out above 900p. By this time they are supplemented by a third group: those who bought in at 900p. These are the investors who correspond to the Red Chip shareholder described above. To them, it now looks less likely that this share price is going anywhere serious soon. Just as with the first group, 900p has become the price at which they will sell.

The chartist should have been able to identify these support and resistance levels by say May or June at the latest. Now he has an opportunity to profit: buy at 820p, sell at 880p. Still better, wait for one or other level to be broken, because when that happens, 'This is what's going to happen next.'

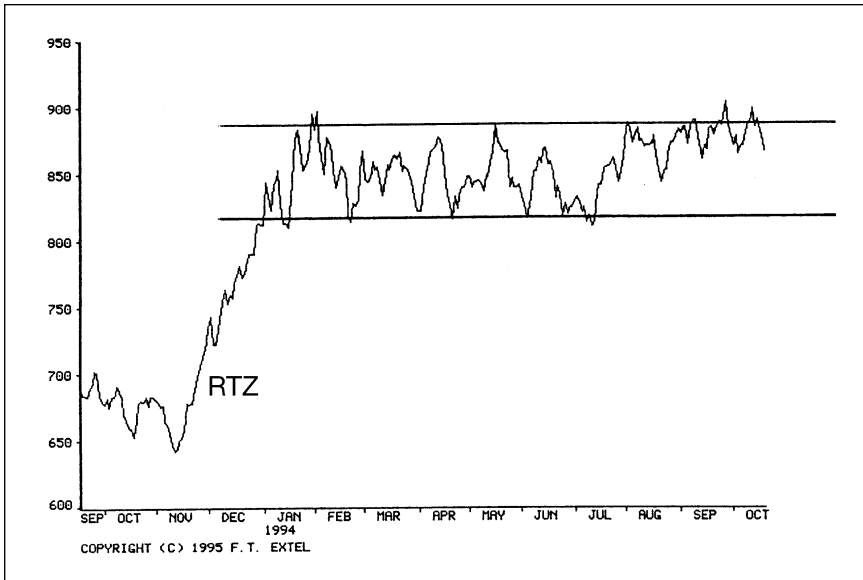


Figure 1.5 The central concept: support and resistance

Another explanation for how particular prices can become significant would lie in the buying and selling decisions of institutional shareholders. When a fund manager decides to invest in a company, he will very likely be unable to buy the size of holding he wants in one fell swoop. If he's managing a £400 million fund, he wants at least a few million pounds worth of the shares; otherwise the benefit he gets from holding them is going to be so diluted, there's little point to it. Suppose the company he likes is worth £100 million and he wants to put £5 million into it: 5 per cent of the company, but only 1.25 per cent of the fund. And 5 per cent of the company could represent several weeks' or months' worth of normal turnover in that share.

Trying to acquire such a holding quickly would certainly drive the price up against the fund manager. Likewise, in a sale: if his holding represents significantly more than a normal day's turnover in the share, it will often be best not to look for the sale to go through in a single transaction. (It may also happen that at the same time a fund manager wishes to sell, another wants to buy. In this happy situation, it can be possible for each to meet his objectives very quickly.)

Sometimes the only way to acquire or sell big positions is to do so over a period of weeks. This means that a price or price bracket must be set and kept good for that length of time. Accordingly, the fund manager may give his dealer or broker instructions along the lines of: 'I'd like around three million shares in XYZ Co. Don't pay more than 300p for the moment but keep me in touch.' This might be a sensible instruction to give at a time when the company's share price is 280p.

Or consider: 'I want to get out of my ABC Co. shares. I've got 800,000. I see the price is currently 92p. I'm willing to take anything above 85p – if the price goes below that, come back to me.'

It is easy to see, therefore, how support and resistance can be set up for shares, especially those of smaller companies where an individual fund manager's actions could account for a lot of the business in the share; and indeed, *inclined* support and resistance.

The dealer charged with selling the 800,000 share parcel may move 200,000 shares on the first day at 90p. Three days later, he moves another 150,000 at 87p. With another 450,000 shares of what the chartists call overhead supply to come and the stockbrokers and market-makers who execute the dealer's sales by now sensing it, it is easy to see how the dealer could later be moved to accept 85p, then 84p. (This last deal should not upset the fund manager: his average exit price is still well above the one he originally set.) Here you have inclined resistance – the idea of a sloping line that passes through different prices and is absolutely central to technical analysis. As we shall now see.

2

The trend is your friend

Basic components of any price chart

Charles Dow and the trend

Short-, medium- and long-term trends

Bar charts

Moving averages and the golden cross

Logarithmic scales

TRENDS

The first two features of a graph which most chartists look for are the long-term and medium-term trends. These are reassuringly easy to grasp, at least when they are set out before you in terms of historical share price graphs. Of course, they are not so easy to spot in real time, but then there would be no need for technical analysis.

In order to make the basic points about chart components without letting complicated reality get in the way, all the charts in this chapter are happy fictions which make the points clearly. The real world we'll leave until later.

Charles Dow, the editor of the *Wall Street Journal* at the turn of the century, who invented the Dow Averages and many of the concepts of charting, considered that the market as a whole was at any time in the grip of three trends: long, medium and short. Long-term trends last for months or years, medium-term trends for weeks to months and short-term ones, for days or possibly a few weeks. In Dow's view, short-term trends were relatively unimportant. He likened the three categories to 'tides, waves and ripples'. Although Dow's area of study was the whole stock market and groups of shares within it, his terminology has been adopted by chartists to describe individual shares and individual commodity and currency markets.

Figure 2.1 shows the history of a share price over four years and illustrates long-term and medium-term trends. The share in question has undeniably been basically going up for four years. Therefore its long-term trend is upwards. If the graph were of a share index such as the All Share, the period would be looked back upon as a bull market. Obviously, a long-term trend is not a one-way street. It is made up of medium-term trends alternately in the direction of, or in the opposite direction to, the long-term trend. The reasons why a share price takes half a step backward for every step forward are straightforward.

There will always be some investors who wish to take advantage of the latest peak by cashing in profits. Correspondingly, in a downtrend, the

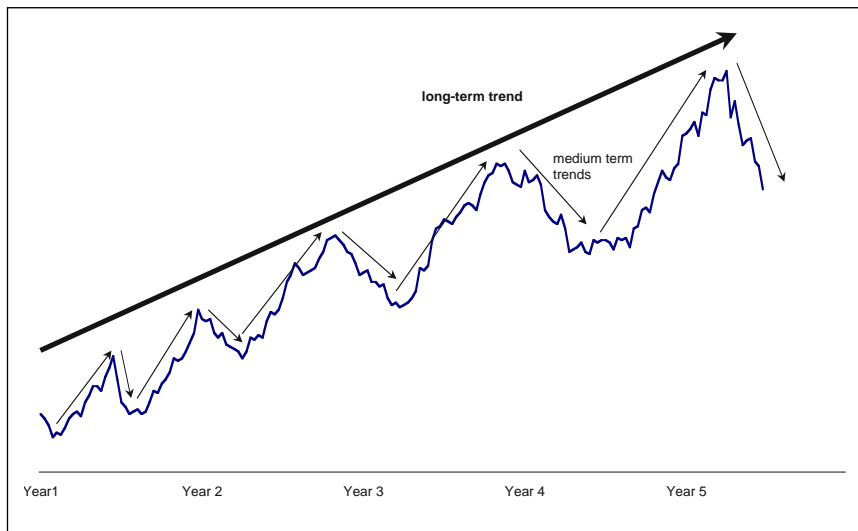


Figure 2.1 Long- and medium-term trends

latest lurch downwards will always make the shares look unbeatably cheap to someone. The fundamentals of the company will change too. Perhaps, looking at Figure 2.1, in the fourth year earnings were disappointing, forecasts of which weakened the share price. Another explanation for a reaction against the prevailing trend is that substantial changes in value have to be proven: they are rarely instantaneously recognised by all investors. If buyers believe that a share which was worth 80p last week could be worth 160p by the next time it reports profits, it is not surprising that some holders will feel that's overdoing it. Not everybody reads the same fundamental facts with the same skill or degree of belief: sceptics decide that 120p is fine for them and bring a lot of stock onto the market at that point. So the share's progress up to 160p will rarely be smooth.

There will be periods when it might seem to some holders of the shares that the long-term trend has reversed. However, the chartist believes that it is intact until a new low and a new high form below their predecessors. This is a very important definition. Figure 2.2 shows the same price graph as Figure 2.1 and emphasises that in a rising long-term trend, new highs are higher than previous highs and new lows are higher than previous lows.

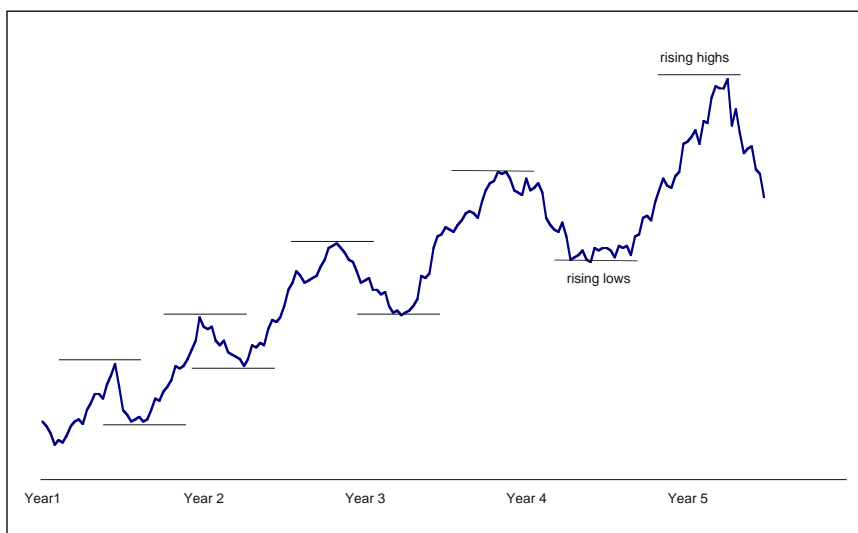


Figure 2.2 A trend's not over until ...

Medium-term trends which go against the direction of the long-term trend are known as reactions. Some of these *reactions* are significant, retracing say around half, perhaps two-thirds (these two amounts – along with several others – are favoured by chartists as expected extents of reactions) of the upwards price movement from the end of the previous reaction.

A significant reaction is known as a *correction*. In addition to being significant in price terms, corrections also tend to last longer – perhaps for two or three months – than minor reactions, which would be over within a few weeks at the outside. Of course, some corrections turn out to be not medium-term trends within the old long-term trend, but the beginnings of a new long-term trend. These are the ones which form a peak or a low which interrupts the previous pattern of rising highs and rising lows. See Figure 2.3, where the later price points show that the old long-term rising trend has fairly surely been replaced by a new, falling one.

It will be apparent that all these features can only be identified in retrospect and even then there is room for debate. The long-term trend could of course as easily be down as up. It could also be sideways, a version sometimes confusingly known as *trendless*.

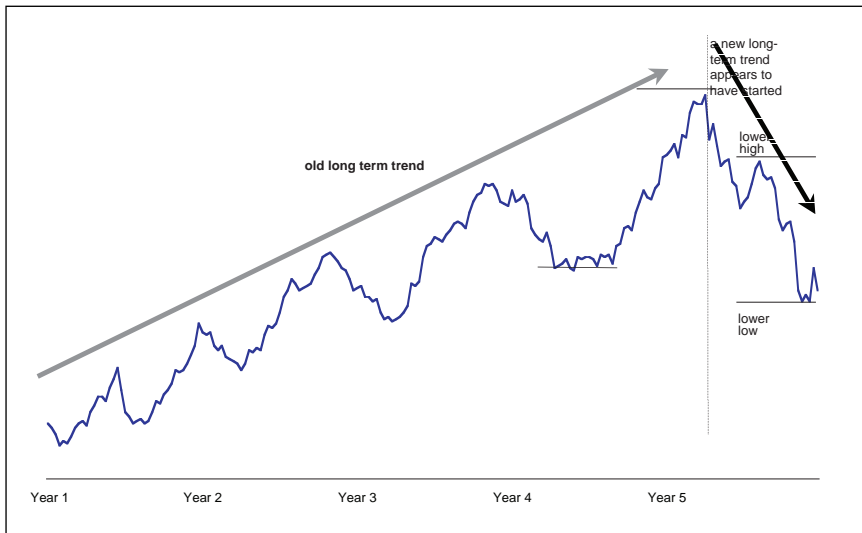


Figure 2.3 ... it's over

A medium-term trend is composed of short-term trends which the chartist analyses in exactly the same way, and using the same terminology as he applies to long- and medium-term trends. Higher highs and higher lows in a medium-term trend mean that it is intact. Similarly, a reaction would appear to be over, once the daily chart showed its own individual pattern of lower highs and lower lows had come to an end.

Whereas chartists believe that there is some predictability about the stock market's long- and medium-term trends, there are few who believe the same of its short-term trends. As discussed in Chapter 1, this differentiation does not apply in the commodity and currency markets, where most transactions are designed to reap profit from short-term trends. In the stock market, there's comparatively less speculation based on readings of short-term trends alone. However, they are carefully analysed all the same, as the basis for forecasts about their medium- and longer term cousins.

Obviously, a short-term trend takes less space to depict than a medium- or long-term trend. This means that it is possible to put more information onto the paper or screen. Figures 2.1 to 2.3 simply give a single *data-point* for each week – the closing share price on each Friday, such as could be taken from a newspaper. When the chartist looks at daily movements in share prices, to examine the short-term trend, he wants more: at the very

least, daily highs and lows in addition to closings. This presentation is shown in Figure 2.4.

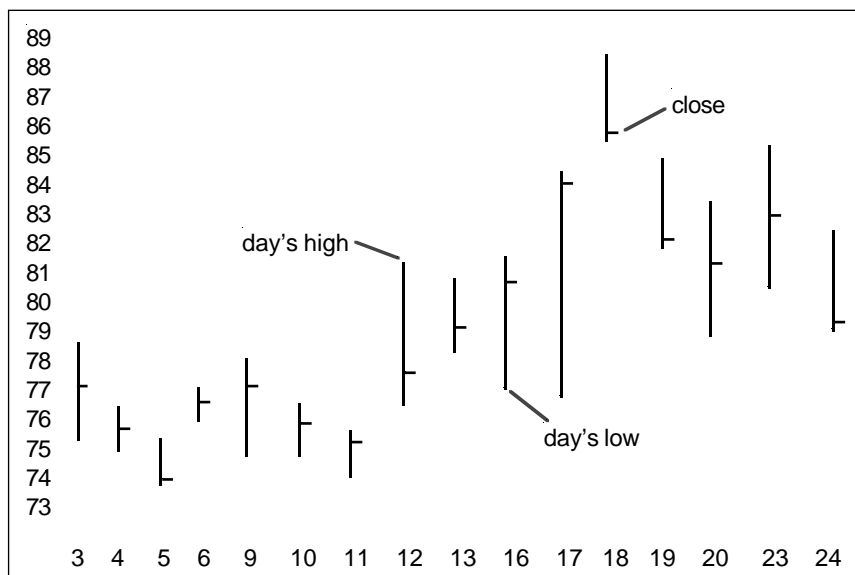


Figure 2.4 A bar chart

Figure 2.4 deserves a little study by anyone not familiar with this type of graph. It has three data-points for each day. There is no continuous line, although you can imagine where that line would be if this were a more conventional graph by focusing on the tick marks in each vertical bar, which show the price at which the share closed each day. For instance, on the 10th it closed at 76p, and that's the price you'd find in the next day's newspapers. But the graph also shows the highest and lowest prices at which shares changed hands during the day – 77p and 75p respectively.

This share shows three short-term trends: up to the 11th, the share moved sideways, then it rallied until the 18th after which it fell. So far, so simple. To the non-chartist, this would simply look like the *random noise* that you'd get by looking at any share price over a short period. But the chartist can sometimes detect signals in the noise, especially when he has the benefit of three data-points each day. For instance, between the 11th and 12th there is a *gap*: the lowest price on the 12th was higher than the highest price on the 11th. Another kind of gap can be seen on the 18th: the lowest price on this day is higher than the highest of both the preceding

and following days. This is known as an *island*. It is unusual and can presage significant price movements. We will return to gaps and islands.

Because of the extra information given by bar charts (you would not be able to detect gaps or islands on a simple line graph such as Figure 2.1), technical analysts prefer to use them even for graphs covering very long periods. Often, the opening price is shown too, usually by means of a tick on the left-hand side of the daily bar or by using the Japanese candlestick format we will consider later. Heaven is four data-points a day.

TREND LINES

Trend lines are the chartist's way of depicting the support and resistance lines described at the end of Chapter 1. Trend lines are an attempt to define trends: the trend (whether long, medium or short) may be up or down, but is it steep or shallow? Trend lines also help in identification of the end of the trend.

The basic idea is to connect the danger points in a trend. Thus for a rising trend the lows dictate the trend line. In a falling trend, the highs dictate the trend line (see Figure 2.5). It may seem strange to consider highs as danger points, but remember the chartist is happy to make money out of any trend. In a downtrend, he's counting on it continuing to fall. For him, the downtrend's danger points are its highs.

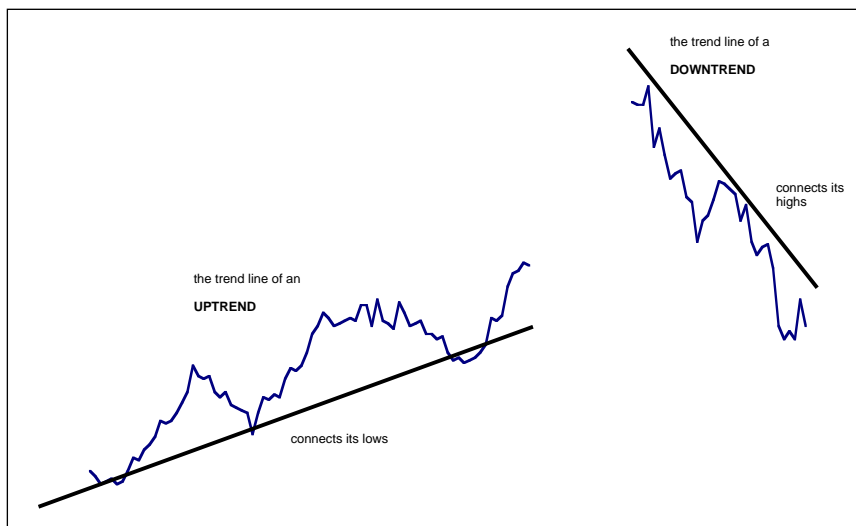


Figure 2.5 Trend lines

Once the trend line has been drawn, a lot of chartists but by no means all, draw a parallel line and fit it as best they can to the highs of their uptrend or lows of their downtrend. This is known as the *return line* and the space between as the *trend channel* (see Figure 2.6). For obvious reasons, the upper line in a trend channel is often referred to as the resistance line (or just resistance), and the lower line as the support line (support).

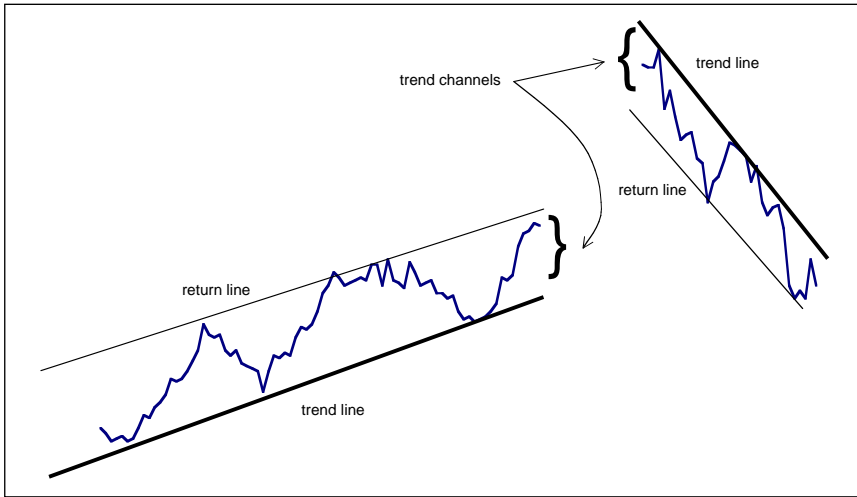


Figure 2.6 Trend channels

Trend lines are useful to the chartist because they generate buy and sell signals. For instance, a share which is in a downtrend and approaching its trend line (resistance) might be one to sell as the expectation is that the rally which has taken it up to the trend line is about to give way to a price drop. However, a share that pierces its trend line might be about to reverse its trend. Note that these two very similar price *events* (in both, the price in a downtrend is close to the trend line) lead to opposite outcomes. Such rules by themselves would normally be regarded as too simplistic: they need to be supplemented with other tools from the technical tool kit.

The big problem with trend lines is that they're never in place for long before they need to be reconsidered. As you can draw a straight line between any two points, most chartists look for a third point of contact to confirm the trend line. But this has a niggling habit of being off the straight line given by the other two points. It gets worse when a fourth high or low has to be taken into account. Chartists react to this challenge in different ways: maybe the discrepancy will be ignored, if it's small

enough; maybe the trend line will be redrawn. Even chartists joke that a thick pencil can solve the problem (see Figure 2.7).

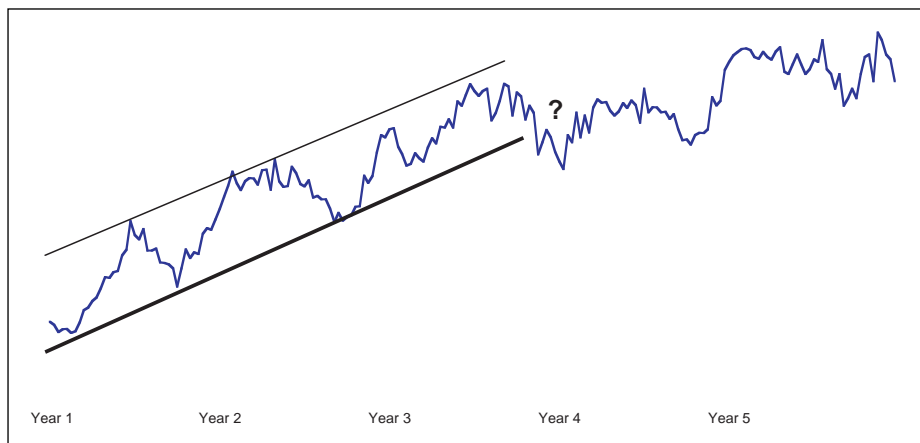


Figure 2.7 Where's the trend line?

In Figure 2.7, the trend line could have been drawn in, as the expectation of where things were going, as soon as the second low was completed halfway through Year 1. Encouragingly, its parallel return line fits not just two but three highs. But in Year 4, things seem to go out of kilter. The uptrend itself is still in place (despite the low having pierced the trend line), but the trend seems to have slowed down. What now? Where is the true trend line, which is the essential starting point for charting decisions? Take your pick.

Let's assume that the chartists are considering the graph in Figure 2.7 at the beginning of Year 5 with a view to analysing what's going to happen in Year 6. One response is to try to find a new trend line which fits all the price history under consideration reasonably well, as in Figure 2.8.

Hey presto – the trend's intact! Possibly this chartist has spotted an earlier low, a year or two before this graph starts, which gives him confidence that the trend lines should be shallower than those in Figure 2.7. Alternatively, he may not be so rigorous about the number of points of contact. Or he might decide that it's time to redraw the long-term trend, recognising the fact that it is no longer as strong as it was: see Figure 2.9. The little bulge over the new resistance line in Year 3 could be explained away by *materiality*: a view that an exception of 4 or 5 per cent is insufficient to disqualify the analysis.



Figure 2.8 It's here ...

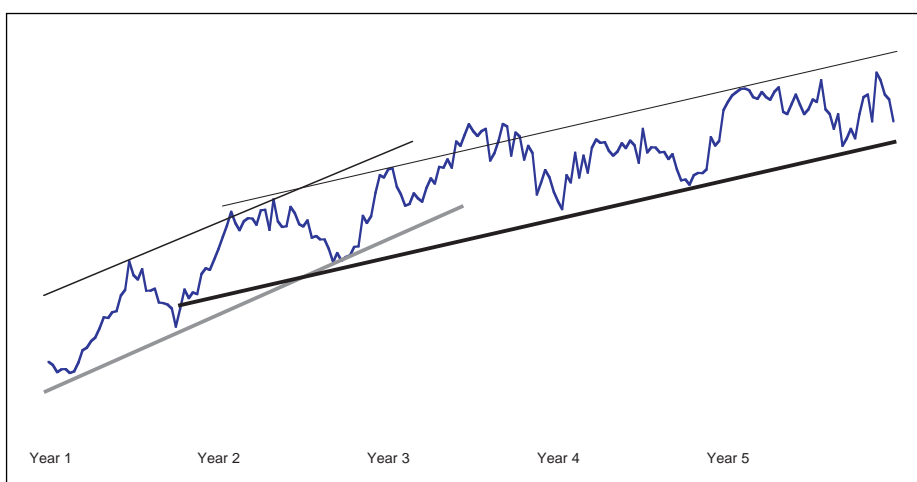


Figure 2.9 ... or here

A variation on the same theme is to suggest that whereas the trend line previously provided support for the share price, its role has now switched to acting as resistance. This is a popular concept in charting: see Figure 2.10.

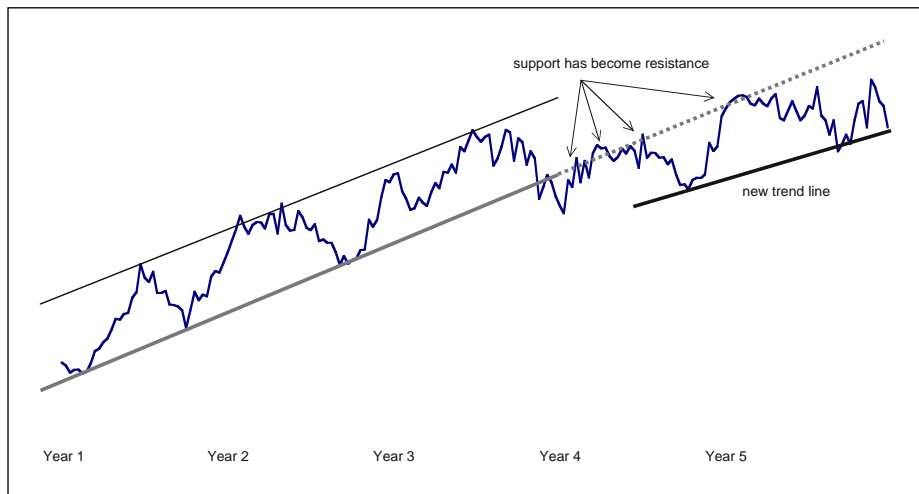


Figure 2.10 The trend line changes sides

At this point, you could be either exasperated or thrilled. There are endless ways to interpret the same chart. Some chartists are flexible and would respond to this chart with one or other of the interpretations given in Figures 2.8 to 2.10. Others might consider that the message just wasn't clear enough to make it the basis of an investment decision. However, almost all would agree that the long-term trend was still in place. Sceptics see the scope for debate about where trend lines should be drawn as a central weakness of charting. This is unfair. No profession exists without argument within it about what its general principles are and how they should be applied to specific cases. Why should technical analysis be any different?

Medium- and short-term trends may be analysed in precisely the same way as long-term trends. To get the idea, just imagine that each of the graphs shown in Figures 2.1 to 2.10 has months along the bottom instead of years. You could be analysing what happened to the five-year graph in the last four months of Year 2, say. What have been discussed as highs and lows between medium-term trends would be turned into highs and lows between short-term trends, with the same arguments about which were the right trend lines.

In the commodities and futures markets, with their unvarying usage of three or four price points each day (or period: it's not unusual for traders

here to be working with five-minute intervals along the bottom of their graphs), the difficulty of ill-fitting trend lines is considerable. With just one price point per period, the problem is limited. But if you are using high, low and closing prices, then although the close is above your uptrend line, the low might not be. See Figure 2.11.

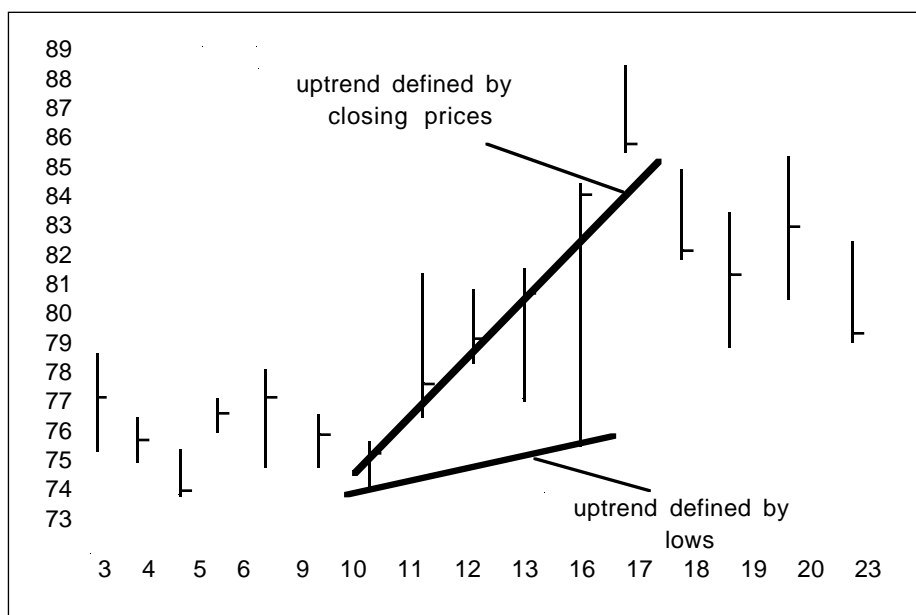


Figure 2.11 It gets worse with bar charts

Most short-term traders prefer their trend lines not to cross over any *price action* including intra-day prices (i.e., highs and lows) and would prefer the lower of the two trend lines shown. An alternative approach is to disregard any highs or lows that do not genuinely stand out. For instance, a high which warrants inclusion in a downtrend must be the highest price for ten days (five days before, and five days after the day it was recorded). If you inspect Figure 2.11 carefully, you will see that there is no price which stands out on this basis. The low on the 5th might count, depending on what happened on the two business days before the start of the graph. Similarly, the high on the 17th might count, as long as it wasn't superseded by a higher high on the next business day. A further school of thought contends that, in the short-term markets, extreme highs and lows are aberrations and should not be taken as indicative of the market's mainstream trend.

On the problem of defining trend lines, chartists fall into one of two categories. Some argue that a rule is a rule: if the chart won't yield up a decent trend line according to a precise formula, then forget it and look at another chart (for another share, another commodity). Others are pragmatic. But both would probably urge you to 'see what works for you'.

MOVING AVERAGES

Moving averages define trend lines without resort to the eye, ruler and pencil. But they don't make the job any easier. A moving average is an average of the last so many days' share prices. Each day, it is updated by dropping the earliest price used for the previous day's calculation and adding the latest price – hence it is a 'moving' average. You can use 5, 10, 200 or any other number of days.

Example

Suppose ClevaNuShops comes to the market on Monday 1 February and records the prices shown in Figure 2.12.

To work out a five-day moving average, add up the prices for the first five days and divide by five. That's 735p divided by five, which equals 147p – the average price for the week ending 5 February. This is the first five-day average price you can work out, as you don't have prices prior to the 1st. On the 9th, you can look up the closing price on the 8th and add it to the closing prices for the 2nd to the 5th. That comes to 755p. Divide by 5 again and you'll get 151p. And so on. Figure 2.13 gives five- and ten-day moving average share prices for ClevaNuShops. The principle is identical for any other period.

Moving averages smooth out share price movements. The longer the period over which the moving average is calculated, the smoother the result. You can appreciate this readily from Figure 2.14, which plots the figures given in Figure 2.13.

1st	140p	8th	160p	15th	160p	22nd	170p
2nd	145p	9th	158p	16th	165p	23rd	170p
3rd	147p	10th	155p	17th	162p	24th	162p
4th	148p	11th	157p	18th	167p	25th	160p
5th	155p	12th	159p	19th	170p	26th	155p

Figure 2.12 ClevaNuShops: closing prices

date	5-day moving average	10-day moving average
8th	147p	
9th	151p	
10th	154p	
11th	155p	
12th	157p	
15th	158p	152p
16th	158p	154p
17th	159p	156p
18th	161p	158p
19th	163p	160p
22nd	165p	161p
23rd	167p	162p
24th	168p	164p
25th	164p	164p
26th	166p	165p

Figure 2.13 ClevaNuShops: five- and ten-day moving average share prices

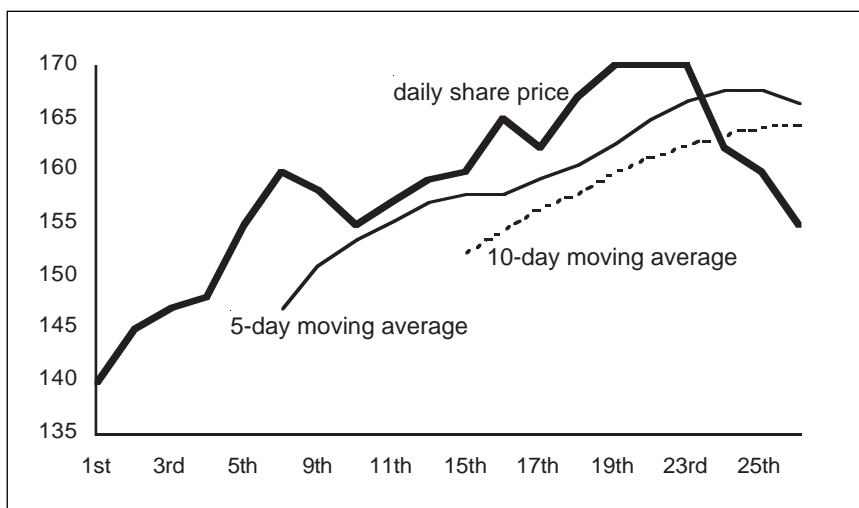


Figure 2.14 Moving averages

The five-day average doesn't have any of the highs and lows of the daily prices, and the ten-day average is smoother still. See how the daily price falls back sharply in the last three days of the month. The five-day average just catches a hint of this. The ten-day average merely levels off: it doesn't fall at all (although it will, in early March).

At first sight, it may seem that the moving average is a wonderful way of sorting out serious price movements from background noise. This will tell you what's a minor reaction, and what's a true correction! If only it were that simple.

A *buy signal* often quoted by chartists is that the moving average is just beginning to rise in response to a continuing strengthening in the daily share price. This could be an indication that a downtrend is reversing. Consider Figure 2.15, which shows ClevaNuShops' weekly closing prices and a ten-week moving average for its first year. An investor reading the share price alone for signs of a rise might have made a move in June and found himself disappointed within the month. But had he consulted the moving average, he wouldn't have bought shares until October, because only then did it move up, signalling that the *price is off the bottom*. Yes, in this case, whoever bought in June would eventually have had their rewards, and bigger ones too since they bought in at a lower price. But the chartist, don't forget, looks for his rewards at least to begin to show in the short term.

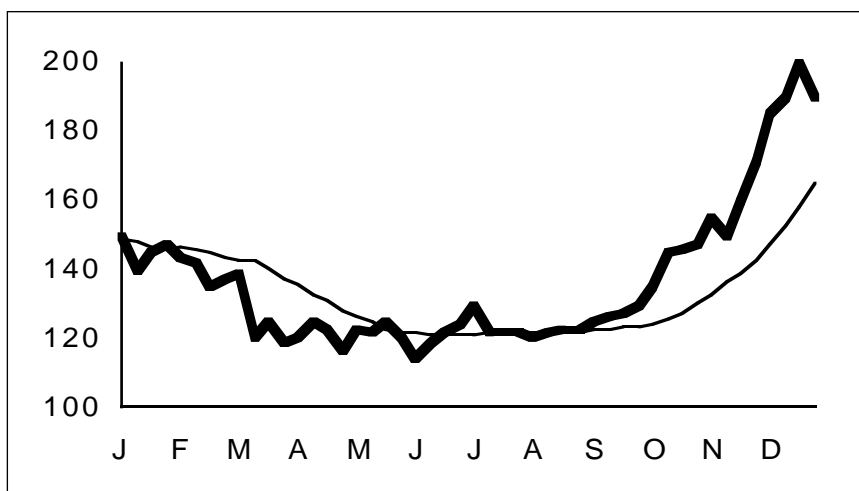


Figure 2.15 A single moving average ...

Some will want to point out that the October rally in the share price could have failed to follow through, and still the ten-week average would have given a buy signal. Figure 2.16 shows the same graph, with just the November and December figures revised. Here, the moving average gives the same buy signal, but its follower is confounded by the downturn after October. Assuming he thought the signs were sufficiently positive in mid-October, he would have bought the shares at around 147p and things would have looked good for the first fortnight. But that nasty downturn in November takes him by surprise. His stop-loss order will save him from taking a bath, but all the same it's a disappointing trade.

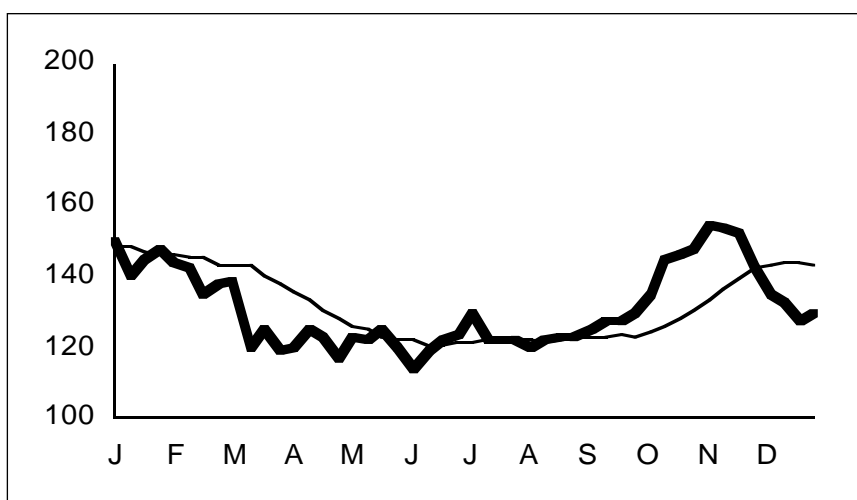


Figure 2.16 ... can disappoint ...

There are several answers to this problem, the first of which is to use two moving averages. A typical combination used in the stock market is 10 and 40 weeks. Figure 2.17 is the same graph as Figure 2.16, but this time showing a 40-week moving average too. Here, even by the end of December, the second, slower to adjust moving average has barely registered the share's recovery since August. It certainly does not give a buy signal. It's easy to appreciate how using two averages together will improve the quality of chart signals. The number of shares demonstrating sustained price rises is many fewer than those which experience temporary ones.

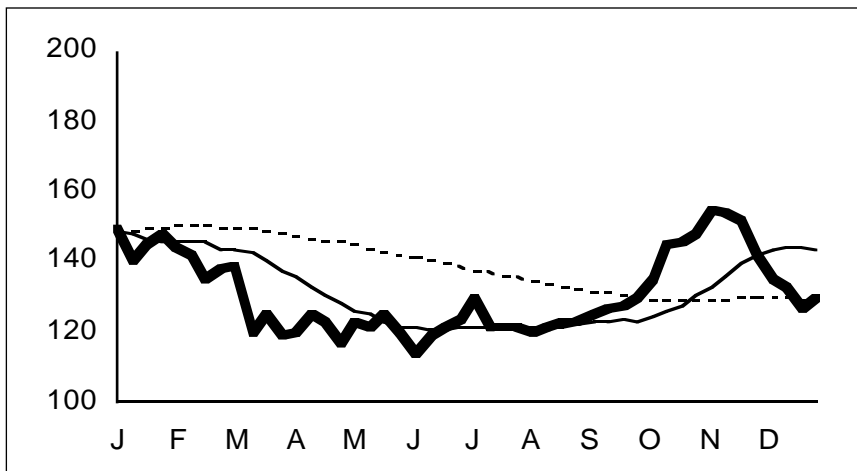


Figure 2.17 ... so let's try two

We can also see how the two averages together would have worked, assuming the autumn price rise had followed through into November and December. Figure 2.18 replicates Figure 2.15, superimposing a 40-week moving average. In this case, the 40-week average does rise and confirm the buy signal given by the 10-week average, but not conclusively until early December, by which time a lot of the price gain has already happened. Of course, there might be more to come in January and February, but on this occasion it has not worked wonderfully.

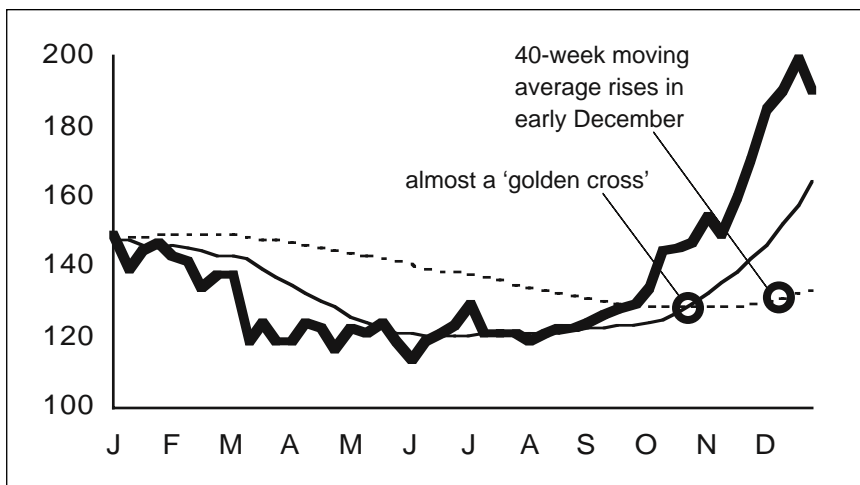


Figure 2.18 Two dance slower than one ...

One of the chartist's favourite signals is a *golden cross*, when the short average cuts up through the long average, which must itself also be moving upwards. Figure 2.18 just fails the second half of this test: the long average does not move up until later. Clearly, while the long average can help the chartist to avoid false signals, the extra wait as compared with just using a short average can cost him some of the gains he would have made when the short average acts reliably. There are many recipes for quickening it up, without sacrificing the principle. One way is to give bigger weightings to the more recent prices in the 40-week series. Compare Figure 2.19 with 2.18.

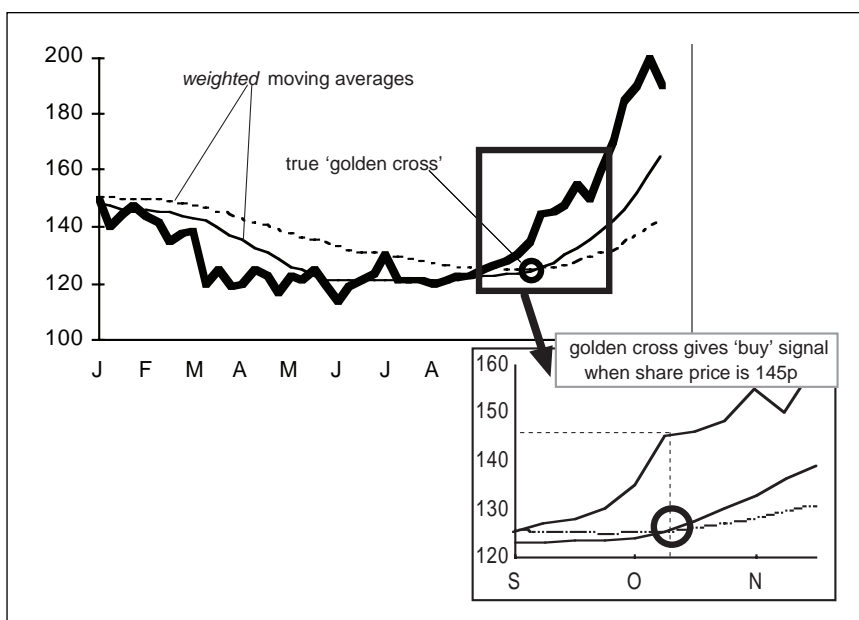


Figure 2.19 ... so you can quicken them up ...

You will see that the 40-week moving average is now more responsive to ClevaNuShops' autumn price rally. You might almost say it was a better indicator. Don't be grudging: in this case, there's no doubt about it. The crossover of the two moving averages is now a genuine golden cross as the longer one is already rising when the short one comes up through it. This gives you a firm buy signal in early October, setting you up for a handsome profit by putting you into the shares at 145p.

How was this achieved? By simple mathematics: the last 10 prices in the 40-week moving average were multiplied by 7.5, the preceding 10 by 5 and the 10 before that by 2.5. The earliest ten prices were left unchanged. After adding up the results, the total was divided by 160 instead of 40 (because 10×7.5 plus 10×5 plus 10×2.5 plus 10×1 adds up to 160). The effect of this is to make the 40-week average give greater weight to the most recent prices and less to the earlier ones.

This even works tolerably if we change the prices back again so that the autumn rally is reversed in the last two months, which is what happens in Figure 2.20. The early October golden cross signals a buy at 145p, allowing you to close out above 150p as the rally falters three weeks later: the signal gets you into the shares early enough for the trade to meet its costs. This may seem no great victory to the sceptic, but it is as valuable to the chartist to exit from loss-making situations still wearing his shirt as it is to make a profit. As Sam Bass, a great speculator, is rumoured to have replied to the question 'How do you make money?': 'Don't lose any.'

But don't get carried away. There's no magic about weighted moving averages. This one was cooked up to order to make a point. It worked here, but there's no saying it will work on the next share you are thinking of buying. It's always possible to jiggle the formula to create what would have been successful buy signals from historic charts. Real life is more challenging.

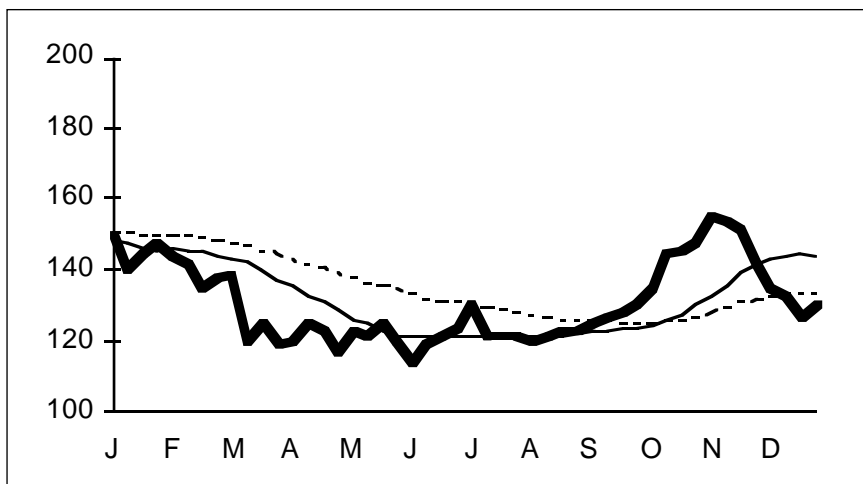


Figure 2.20 ... which may help you catch smaller movements

The general rule that two moving averages are better than one is worth remembering, but you should also remember that sometimes 4- and 10-week averages work, sometimes 5- and 40-week, and sometimes, 2- and 7-day. Brian Marber, a respected UK chartist, uses 63- and 253-day averages (three months and one year). Sometimes weighted moving averages help. In fact, you could probably demonstrate that they always did, as long as you were prepared to juggle the weighting formula – for instance, give double, triple or quintuple weighting to the latest half, quarter or tenth of the prices – for every chart you saw. Chartists use limitless variations on this theme, including the exponential moving average, which uses all previous prices. Then they go on to use an equally diverse list of secondary indicators to confirm the primary ones. All formulae work some of the time but none works all of the time. As the chartists say about trend line definitions, you have to find out what works for you. If that sounds disingenuous, don't try charting.

SCALES

As has already been said, the horizontal scale in a share price graph can be marked out in anything from centuries to seconds, as long as you have the past prices. Charts of share prices going back to the early 1800s make interesting viewing as they always go reassuringly upwards. This is only partly because chartmakers aren't generally interested in shares which are no longer around because the companies went bust. It's a fact that shares as a whole have always been an excellent investment over the very long term (see, for instance *Stocks for the Long Run*, in Further Reading). However, few of the readers of this book are doing so to develop their expertise in century-long trends, or even decade-long ones.

Five or ten years of share price history is ample to arrive at a charting conclusion. If you're interested in very short-term investments – a few months at the outside – you'll pay most attention to the very recent record.

Intra-day is the province of the professional. The very least you'll need is a thick wallet, iron discipline and a lot more knowledge than this book can provide. Most small investors who get into this area are reckoned to get out again, minus their money, within a year.

This book looks at horizontal scales which are divided into days, years or points in between.

Which brings us to vertical scales. You need to understand what a logarithmic scale is to be a chartist. A log scale puts things in proportion. For instance, if you bought ClevaNuShops' shares at 140p, held them for two years and sold at 280p (let's say the rally continued after all), you've made 140p. You did well, but so did the person you sold them to. He held them for just six months and sold at 420p. In other words, he made 140p too. Who made the most money? Neither of you – you both made the same amount. But somehow you know you did better than him.

You did: you doubled your money, for a 100 per cent return (140p profit on a 140p investment: $140 \div 140 = 1$, or 100 per cent). He made only a 50 per cent return (140p profit on a 280p investment: $140/280 = 0.5$, or 50 per cent). You did twice as well as him, although he got his return in quarter of the time, which probably puts him ahead on points. A log scale gets this over. Figure 2.21 shows all the information on a normal graph.

Now consider the same information presented on a log scale graph, where the prices are bunched closer together as they get higher (Figure 2.22). A log scale gives as much attention to the percentage change as to the absolute figures themselves. Log scales put big price movements – of say 100 per cent or more – into perspective. In Figures 2.21 and 2.22, the ClevaNuShops price rises by 270 per cent from its low point to its high. Not many shares do this in such a short period. When you're dealing with one that does, it's as well to look at it on a log scale. But, over the space of a few years, many share prices move by this order of magnitude, so long-run prices are often presented in log scale form.

In theory, trend lines and trend channels should be curved when they are applied to log scale graphs. They're straight on normal graphs, but the effect of bunching the higher numbers on a log scale is to curve anything that was previously straight.

Figures 2.23 and 2.24 depict a share that's going to be a steady performer for years ahead, although it will be best to get in early. If you inspect them closely, you'll agree that they're the same share. In Figure 2.23, a clear long-term trend channel is evident which isn't going to need any revisions for years. But look what's happened to it in Figure 2.24.

For unexplained reasons, chartists who use log scales draw straight trend lines on them. Of course, they revise them often, too.

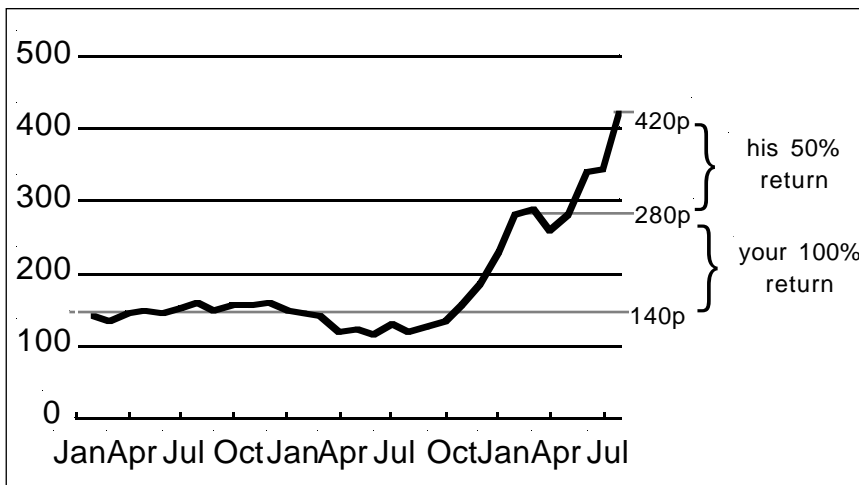


Figure 2.21 Who makes the most money?

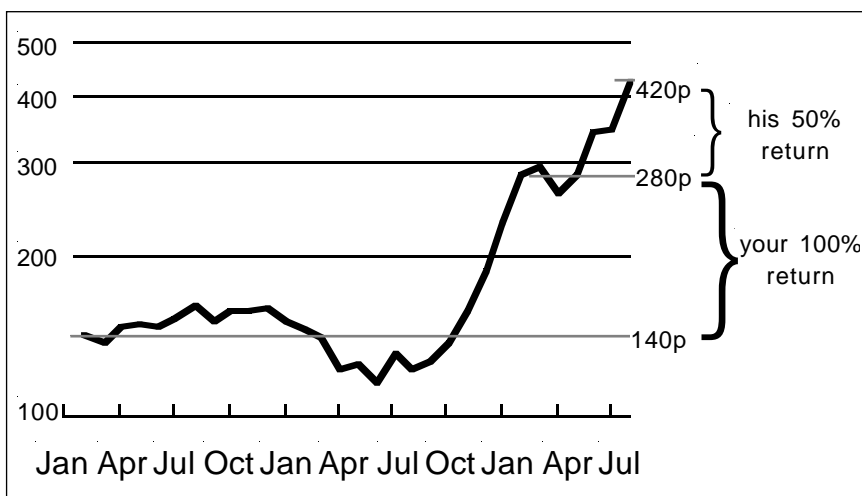


Figure 2.22 Obviously you, as the log chart shows

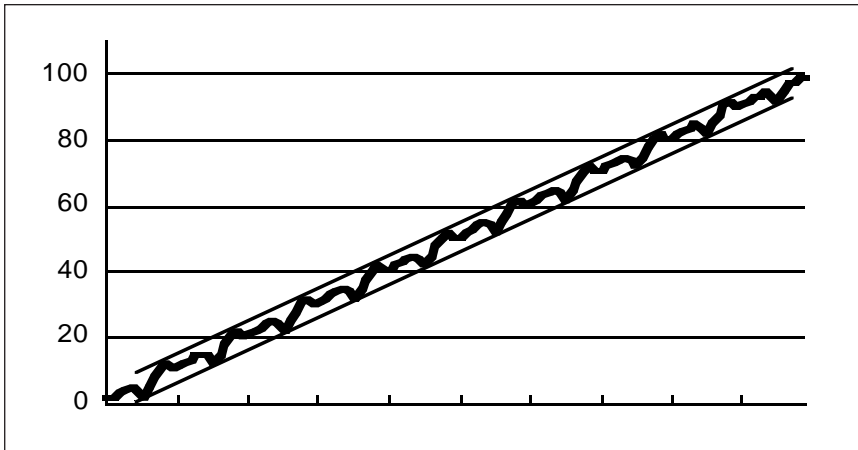


Figure 2.23 Straight lines ...

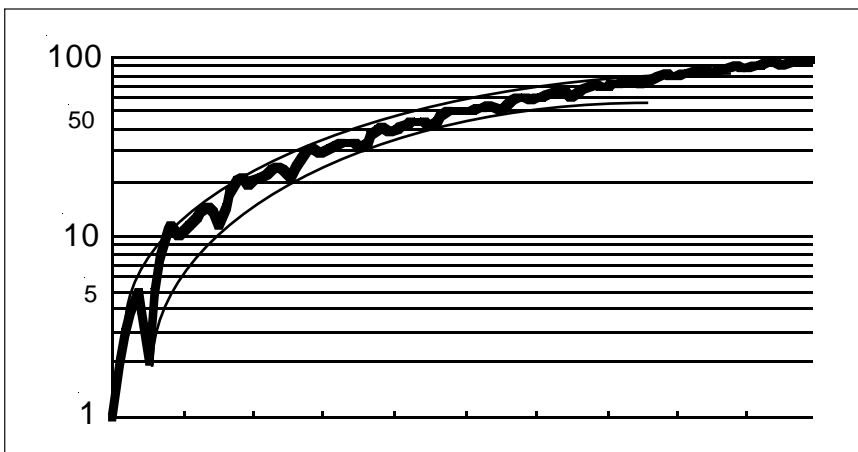


Figure 2.24 ... curve on log charts

3

The head and shoulders and friends

Patterns which say . . .

. . . 'It should start to rise'

. . . 'It should start to fall'

. . . 'It will carry on in the same direction'

and words of warning

This chapter deals with the classic share price patterns that chartists look for as primary indicators of what's going to happen next. Most investors have heard of these, even if they are ignorant about what they look like and mean.

The patterns fall into two categories. *Reversal* patterns, in theory, denote a change of trend – lows which denote the start of an uptrend, and highs which say 'that's it, folks'. If you spot one of these, you may expect that a new trend, in the opposite direction to what has gone before, will now commence. The patterns for highs are identical to those for lows, except turned on their heads. Thus, the *head and shoulders* which tops off an upwards run in the share price corresponds to the *inverse head and shoulders* which would form a bottom after a downwards movement in the share price, indicating that now at least part of the fall should be retraced.

Continuation patterns occur during a pause in a trend and indicate that it will continue in the same direction as before.

In addition to the basic *direction-pointing functions* of these patterns, most chartists suggest that close examination of them will enable an estimate to be made of how far the new or continued trend will go. Modern reversal and continuation patterns are all two-dimensional, in the sense that a shape of some sort can be drawn around them. Charles Dow and his followers in the 1920s and 1930s also identified patterns that had forecasting power, although they defined them as single dimensional lines. In *The Dow Theory*, Robert Rhea defined a line as:

a price movement extending two to three weeks or longer, during which period the price variation . . . moves within a range of approximately 5 per cent. Such a movement indicates either accumulation or distribution . . . Advances above the 'line' . . . predict higher prices; . . . conversely . . . declines below the 'line' imply . . . lower prices . . . Inferences drawn from one day's movement . . . are of but little value except when 'lines' are being drawn.

Rhea was in fact discussing the simultaneous movements of the two Dow Averages (Industrial and Transportation), but his thinking gave an early lead to the theories discussed in this chapter.

WORDS OF WARNING ON THE CLASSIC PATTERNS

- 1 *Reversal patterns* – i.e. any share price pattern that marks the end of one trend and the beginning of the next – won't in fact get you out at the top or in at the bottom. For that, you need pure luck. The reason is that you can't see any of these patterns until they're complete, and that means the share price has already reversed. You can only see these patterns in retrospect. What these patterns do accomplish, in theory at any rate, is to put you into the new trend, safe in the knowledge – or trust – that the reversal has happened and the next one should be a whole trend away.
- 2 *It helps a lot if there's something to reverse.* Don't waste time trying to detect these patterns emerging from the end of a trendless share price graph. Instead, look for a share which the market has built into: as Burton Malkiel (no chartist, he) puts it, a 'castle in the air', or one whose bombing-out has gone on for so long that the enemy has, in all likelihood, run out of bombs (while never forgetting that the bombing normally reflects problems in the company and these can, in fact, be terminal). Although this would be heresy to the pure chartist, look for an argument based on the fundamentals – profits, asset values, new management – that would support the new trend you think you've spotted on the chart. Figures 3.1 and 3.2 show reversal patterns, terminating trends with plenty of scope for reversal.
- 3 *When you're looking for these patterns, don't look too hard: they should leap out at you!* If they don't, then move on to another chart. It's a useful aspect of charting that it allows you to screen lots of shares in a short time.
- 4 *The patterns do not occur frequently.* In Chapter 9, where there are charts for most of the UK's top 20 shares for the period from October 2001 to May 2002 – that's 10 years of share price history in all – there are few definitive examples. This is why most of the day-to-day commentary put out by stock market chartists uses the terms defined in this chapter sparingly.
- 5 *When they do occur, they're rarely perfect.* Look at one carefully and ask yourself at which point you would have been able to act upon it as a buy signal. How many false starts were there? How many of the preceding squiggles in the line would have looked like buy or sell signals at the time, and turned out to be false?

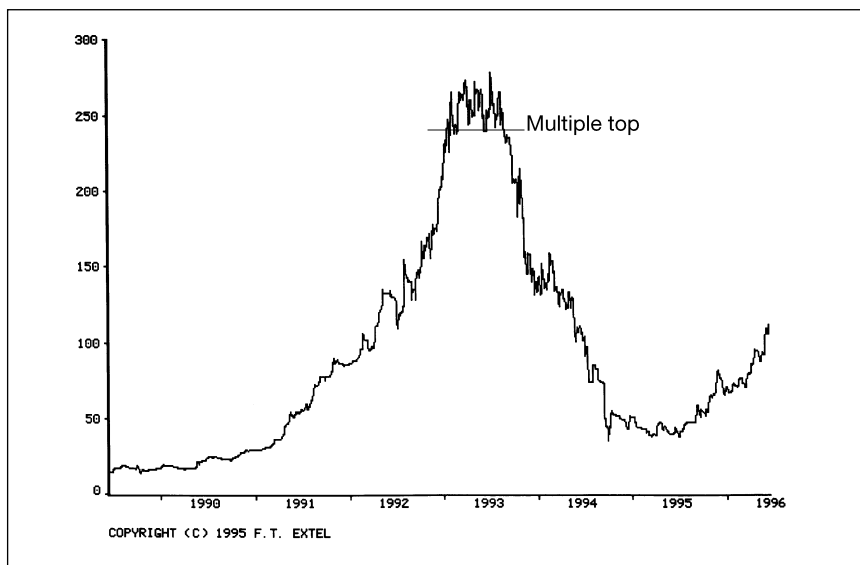


Figure 3.1 Betterware: bubble

If you had got in when the formation was complete, how much money would you have made subsequently? Enough for all the studying and waiting to be worth it? Don't kid yourself into thinking that you would have sold out at the high. On the way to that high are numerous corrections. Would you really have held on through these? If so, why wouldn't you then have held on through the high? What was it that – on the day – made it so different from all the other highs that preceded it? How much of your profit would you have given back to the market before you indeed read it as the high? Ask yourself how much you really might have made. You're unlikely to give yourself the right answers, but you should ask these questions nonetheless, because they're the ones you'll encounter when you try technical analysis in real life.

- 6 Take note that the patterns which supposedly denote reversals can occur at other times too. See Figure 3.3, which you will note is part of the graph shown in Figure 3.2. In the earlier chart, the reversal is marked by a clear head and shoulders. But look more closely at Next's amazing run down to that final definitive reversal. You'll see several other inverse head and shoulders on the way, including this one in Figure 3.3. Each one is a failed reversal signal.

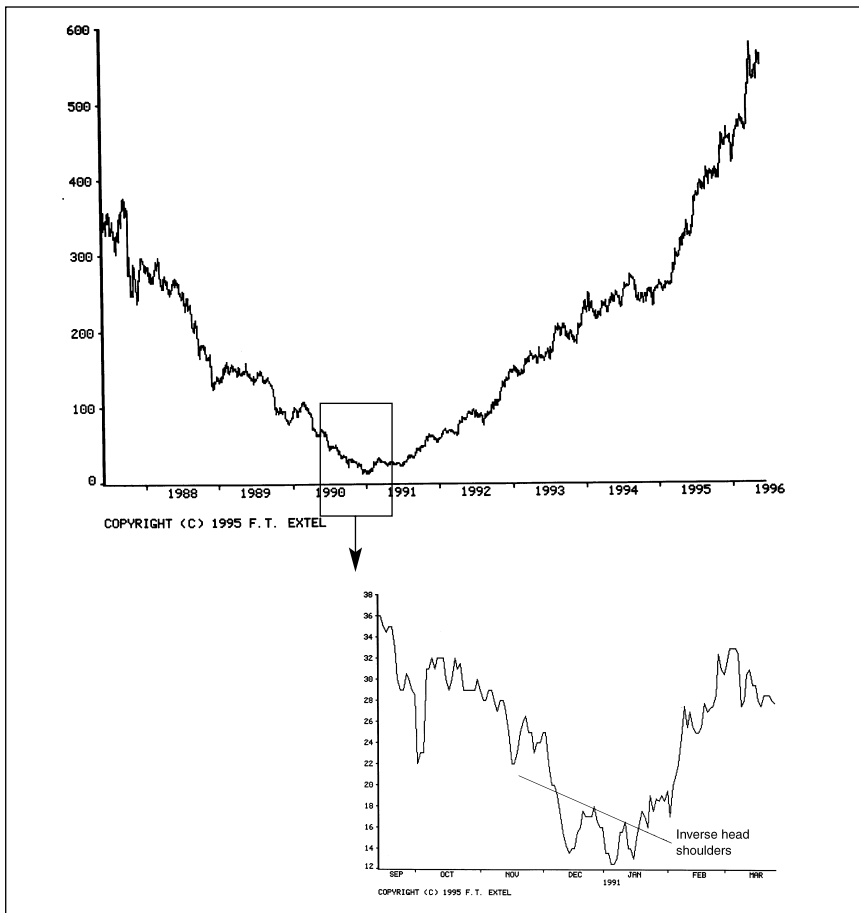


Figure 3.2 Next: phoenix

- 7 *The extent of and time taken to form the previous trend and the formation itself should be considered.* These patterns can be seen on daily, weekly and five-year charts. One that has built up over several months and can be discerned on a multi-year chart showing just weekly prices is considered to be more significant and reliable than a baby version that can be seen on a daily chart.
- 8 *Always examine carefully the value scale (the vertical one) of the graph you are considering.* Proprietary charting programs customarily work out how to present the data so as to make full use of the space available. For instance, if the share price has joggled along between 180p and 200p, the scale is likely to start at 170p and end at 210p (see Figure 3.4, middle

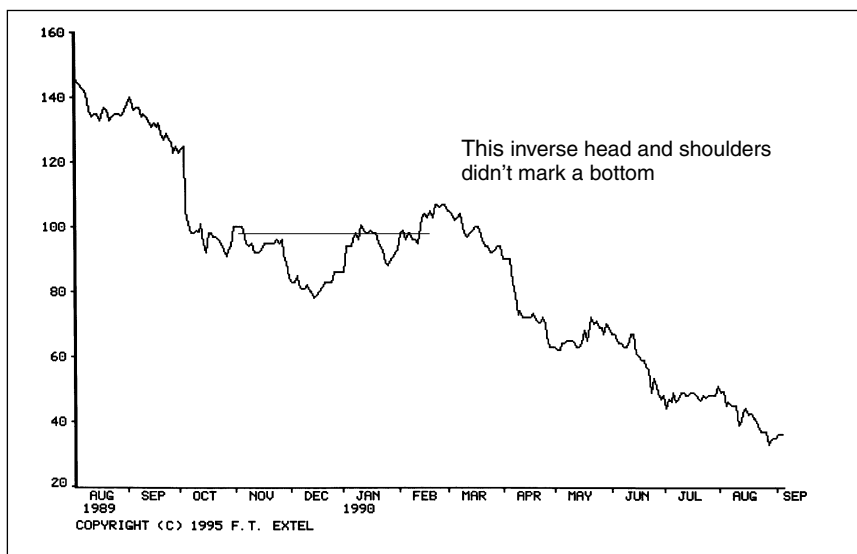


Figure 3.3 Next digs deeper

graph). This enables you to read the graph much more accurately than if the value scale went from 0p to 210p (see Figure 3.4, top graph), in which case the same line would simply be a gentle undulation running along the top. The trap you can fall into, if you don't read the scale carefully, is to assume that a price line which moves from the top to the bottom of the graph presents useful trading opportunities. In the middle graph in Figure 3.4, it would not. A move from 180p to 200p is barely 11 per cent. Take out dealing costs and your margin of error for timing on getting in and out, and you will surely agree.

Carry this thinking with you when you examine the patterns themselves. As a rule of thumb, look for reversal patterns that involve a comfortable 10 per cent change in prices – for instance, from the neckline of a head and shoulders to the top of its head. Most patterns are associated with targets as to how far the price will move after the pattern has been completed. Typically the target equates to the size of the formation itself. Thus a head and shoulders spread over a 20p span of the vertical scale should in theory be followed by a 20p fall in price. This could be a worthwhile signal if the share price is 80p – as the percentage change is 25 per cent. If that works, you will make some money out of it.

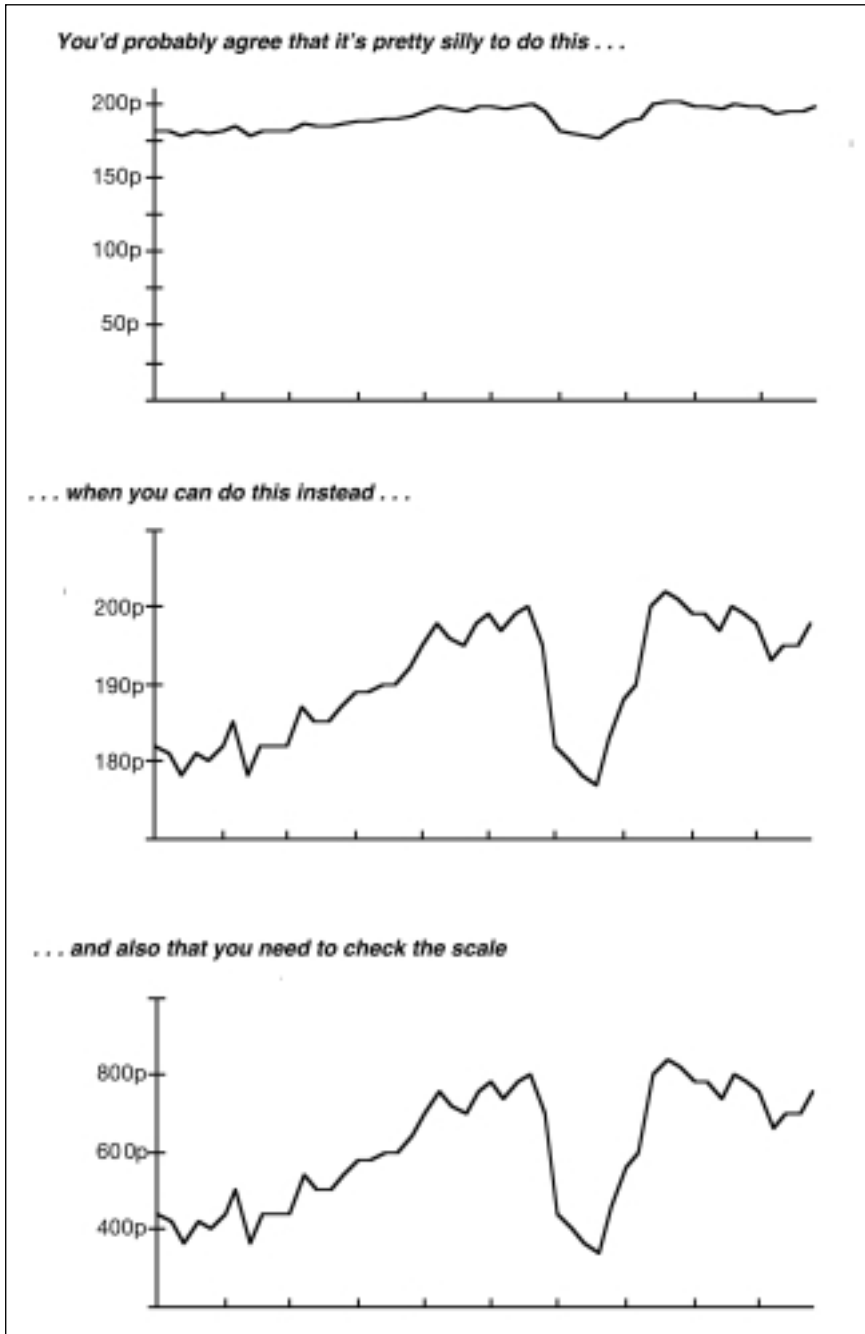


Figure 3.4 Check your vertical scale

But if the share price was 380p, then the expected 20p fall in the share price is worth only 5 per cent – not worth the risks involved.

Careful interpretation of the vertical scale is especially important when reading a share manual which gives a graph for every share. Nestling alongside a graph such as the middle one in Figure 3.4 you might find another with a totally different scale, say from 400p to 800p. The graphs could look similar, but they aren't. Work out the percentage difference between the highest price used on the scale and the lowest: 200p is 18 per cent higher than 170p; 800p is 100 per cent higher than 400p.

And the same caution, in a lower key, also applies to the timescale. Is it measured in years or weeks? What looks like a sharp movement on a graph measured in years, could in reality have taken three or four months to roll out. With the chartist typically looking for a short-term payback, what might appear to have been a golden opportunity might in practice have been just too long and drawn out to bear.

REVERSAL PATTERNS – TOPS

There's no question about it. The most effective way to make a fortune in the investment markets is to spot the change of trend: to get in at the bottom and out at the top. And no medium gets this idea over better than a chart. Whoever looked at a share price chart containing any respectable mixture of peaks and troughs and did not think, however fleetingly, about what they could have made by buying when it was bombed out and selling when it had become a castle in the air?

You don't have to be a chartist to buy this proposition. Even Warren ('We will never sell this holding') Buffett looks out for bottoms. His greatest coups, including his investments in American Express (the first one in the 1960s), the *Washington Post* and GEICO, all involved spotting the bottom, even if in the last two cases he wasn't interested in cashing in at the tops. Buffett, of course, doesn't identify a bottom by analysing share price patterns, but the chartist does.

A game less often played, but equally effective, is to sell at the top and buy back at the bottom. For reasons already described, this involves limitations which do not apply to the investor expecting a share price to rise; however, not so many that the amateur chartist can't, if he thinks he's spotted a real top, back his judgement by buying a put option.

On the next few pages is a series of figures depicting the most commonly quoted identifiable patterns which, when they form after an uptrend, are said to denote that a downtrend should follow. Customarily, books on technical analysis accompany their accounts of these famous patterns with descriptions of what's happening in the minds of investors as the patterns are carved out along the lines of: 'Investors expecting support at this level, having seen it before, are now shocked that it does not occur . . . the market argument now moves over to the bears.' We will dispense with all that. Even if accurate, such descriptions are neither here nor there: the fact is that these patterns are supposed to tell you a trend is over. The main patterns are as follows:

- *Head and shoulders* (see Figures 3.5 to 3.7): most chartists suggest that the head and shoulders pattern is (a) 'reliable', meaning that on a good fraction of occasions its occurrence is indeed followed by a fall in price, and (b) frequent.
- *Double top* (see Figure 3.8).
- *Triple top* (see Figure 3.9).
- *Saucer top* (see Figure 3.10) the saucer is inverted – it looks like a shallow hill.
- *Descending triangle* (see Figure 3.11).
- *V* (again, inverted: see Figure 3.12).

The six patterns above normally form over the course of a few weeks, quite possibly months. The three below would typically form within a day or two. They may well be part of one of the first six and if so would be seen as emphasising the message given by the larger pattern:

- *Spike* (see Figure 3.12).
- *Island top* (see Figure 3.13).
- *Key reversal* (see Figure 3.14).

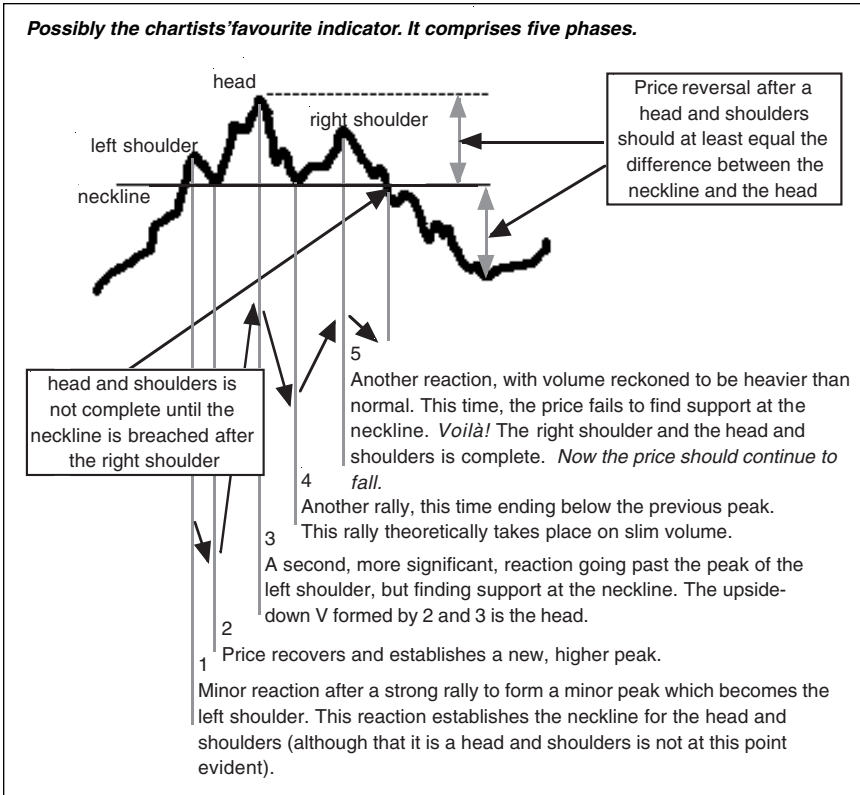


Figure 3.5 Head and shoulders

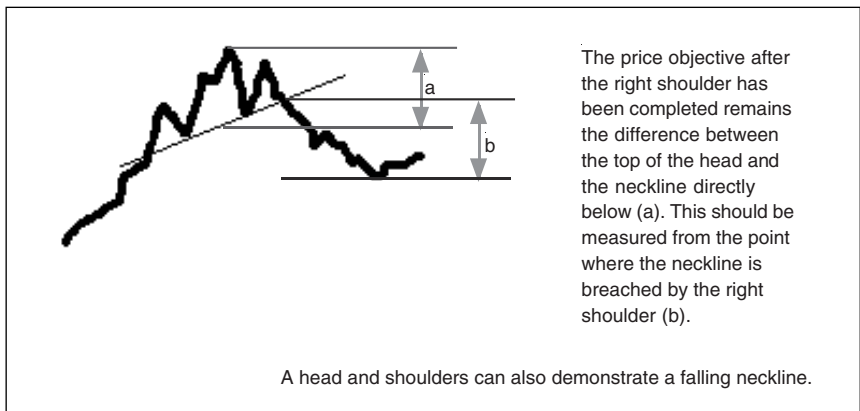


Figure 3.6 Head and shoulders with rising neckline

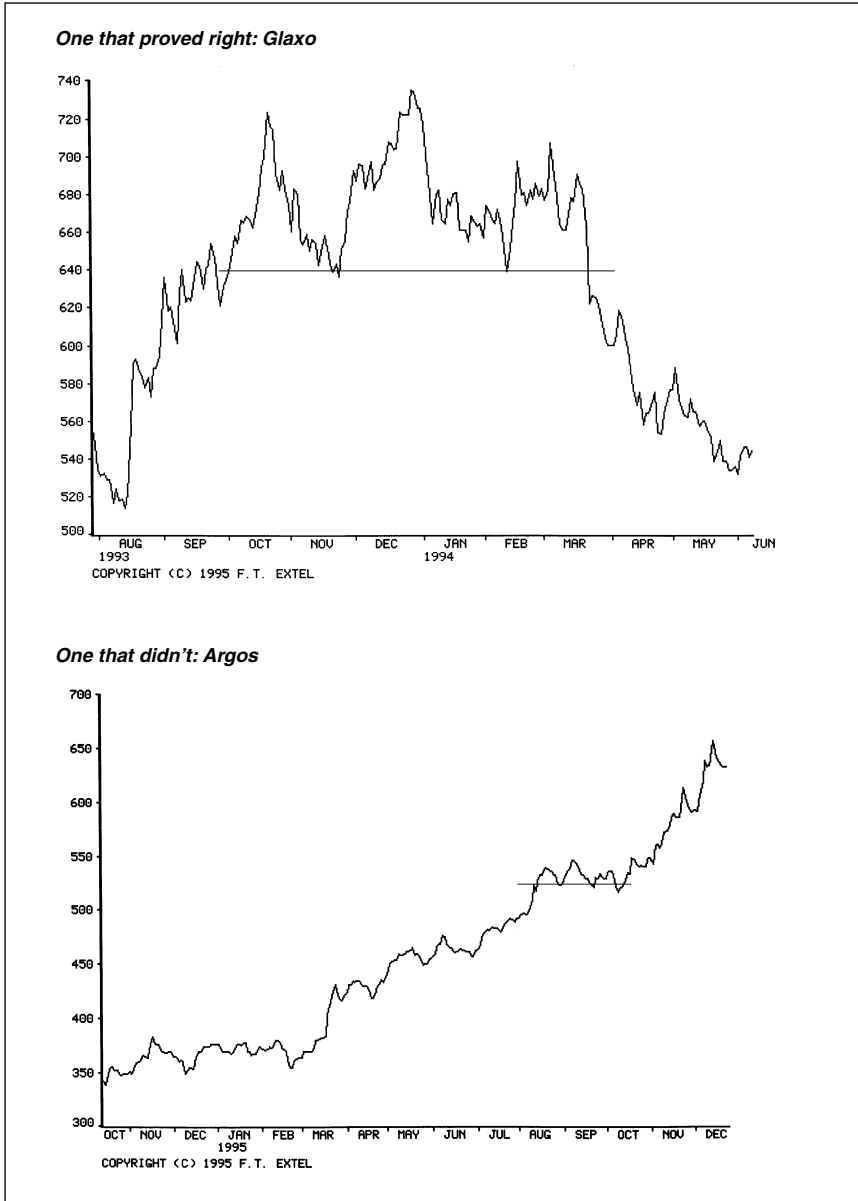


Figure 3.7 Head and shoulders in real life

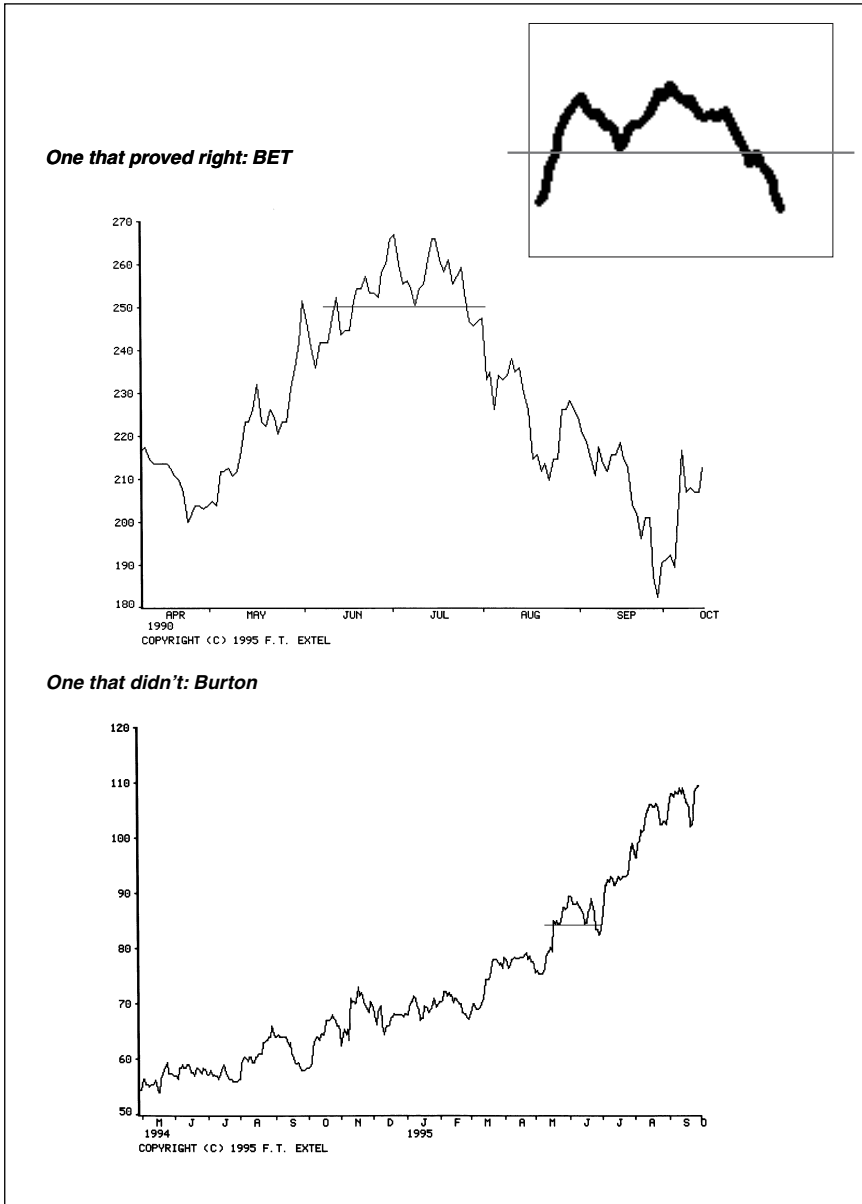


Figure 3.8 Double top

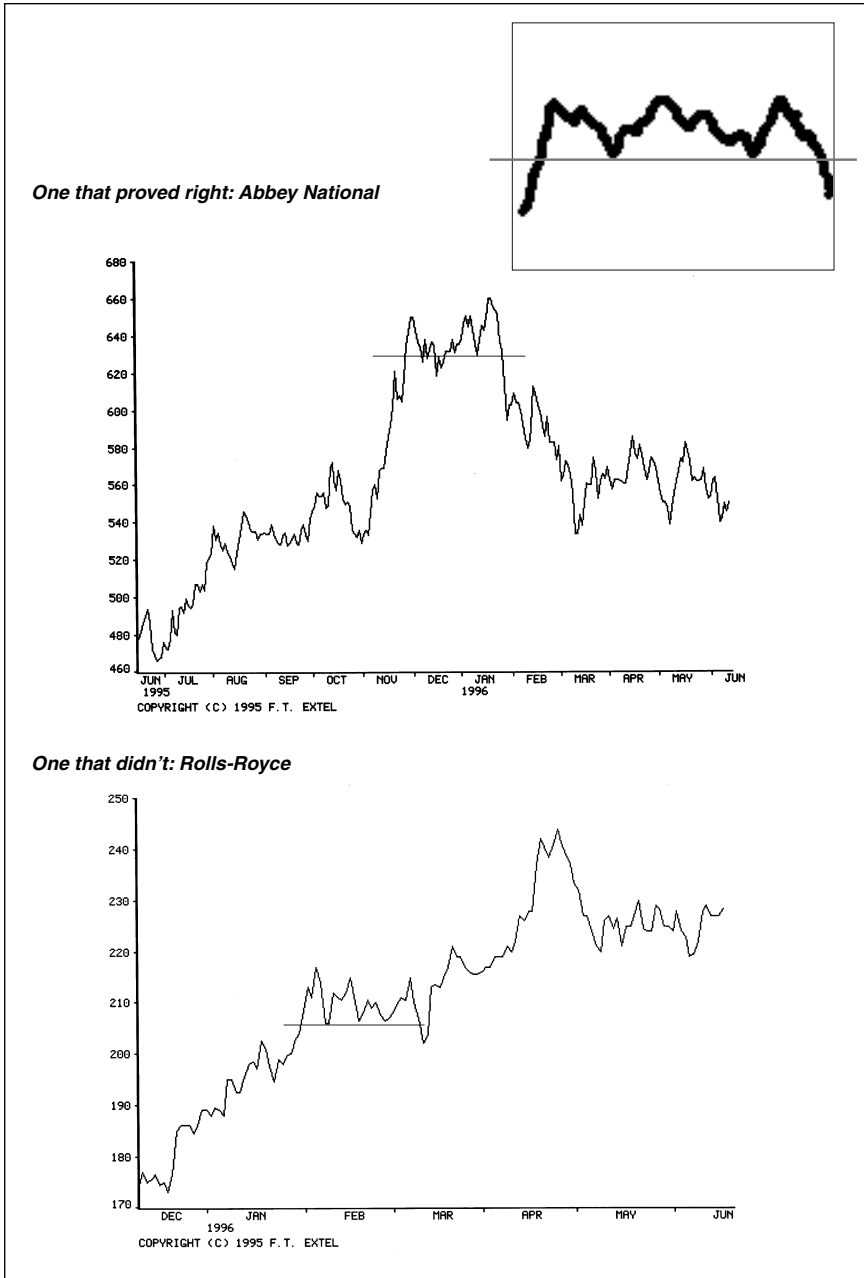


Figure 3.9 Triple top

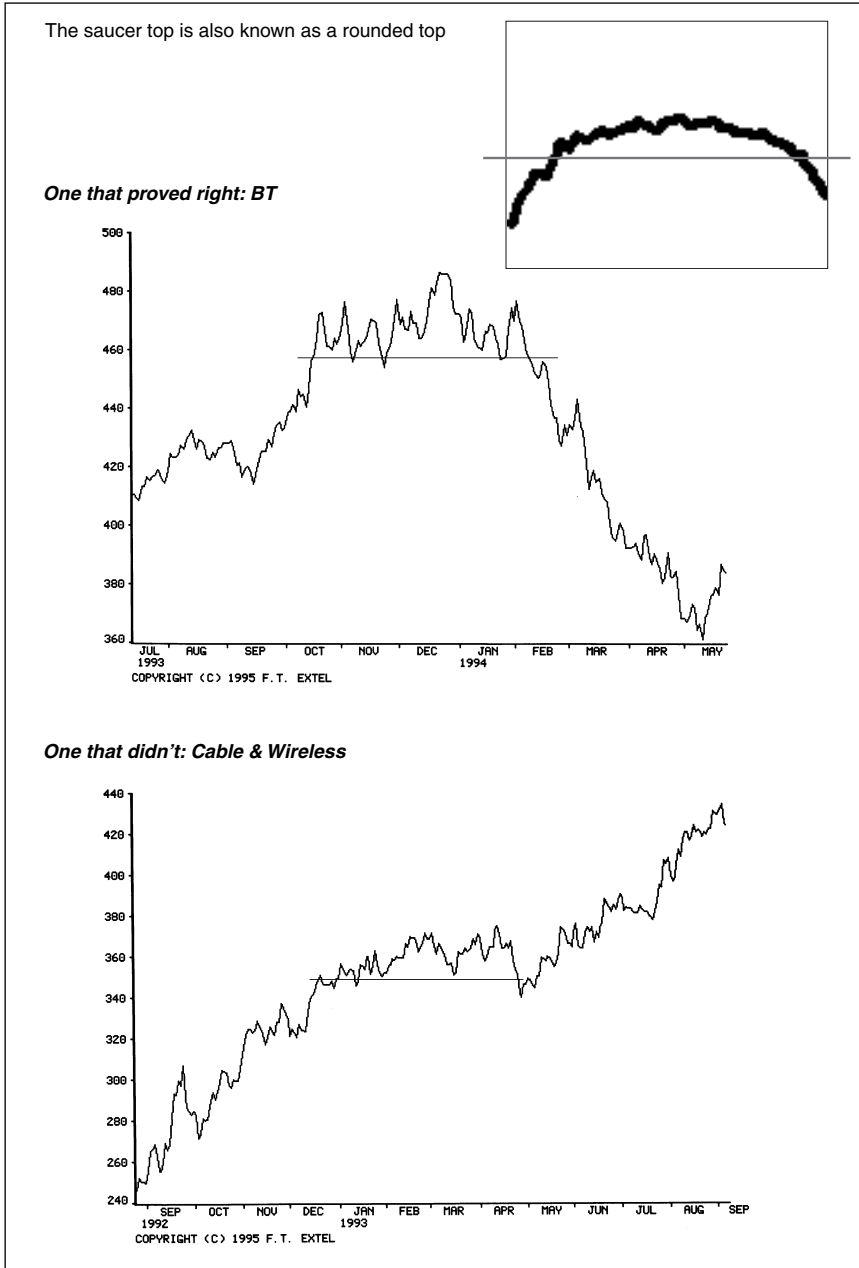


Figure 3.10 Saucer top or rounded top

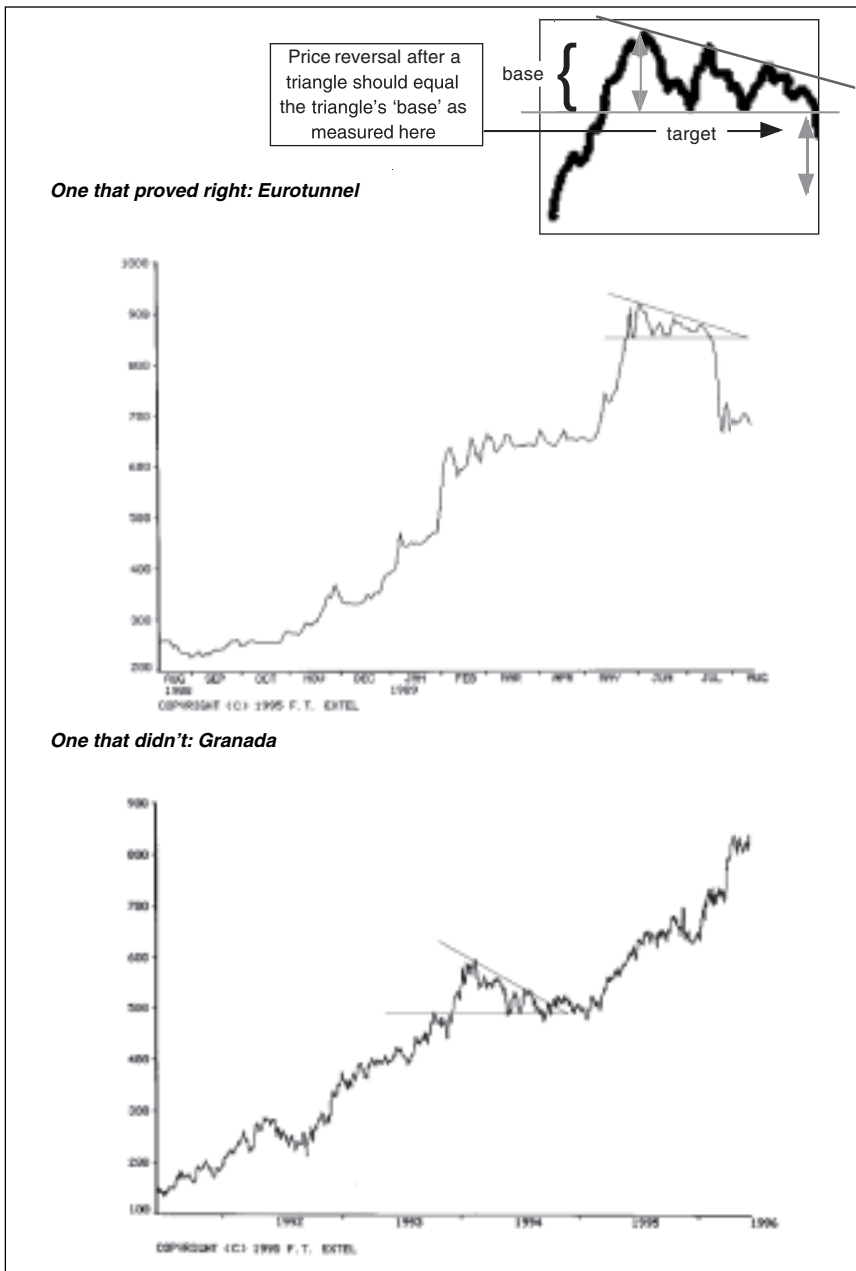


Figure 3.11 Descending triangle

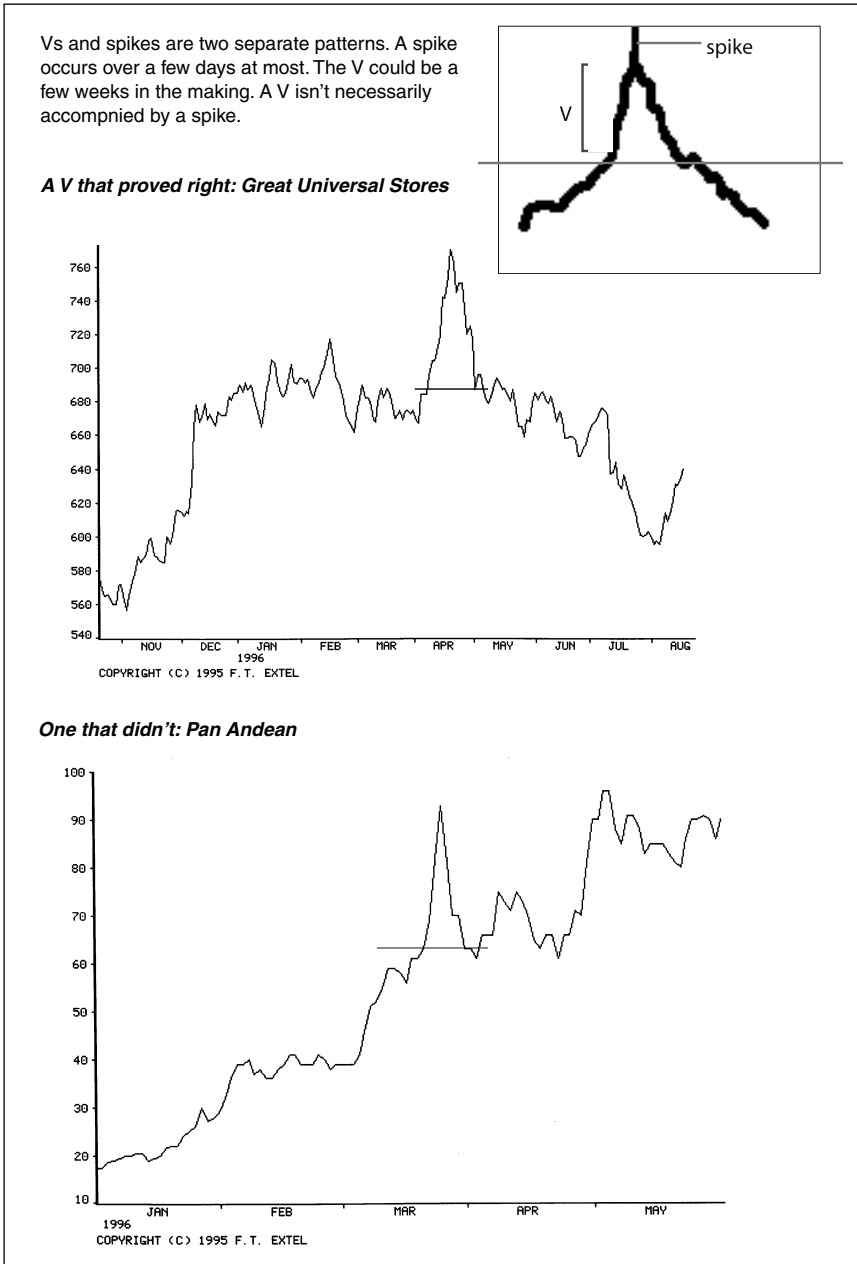
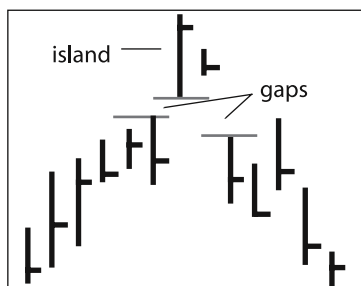
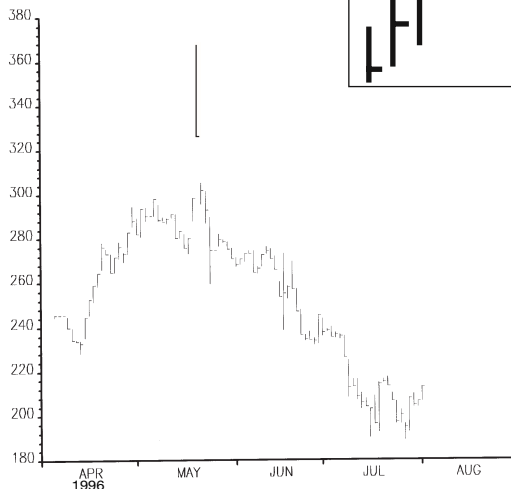


Figure 3.12 Vs and spikes

The island top pattern can be detected only on a bar chart. It involves a day or two's trading ranges being entirely above the ranges of the preceding and following days. It can be part of one of the preceding patterns and help to confirm them.



One that proved right: British Biotech



One that didn't Powergen

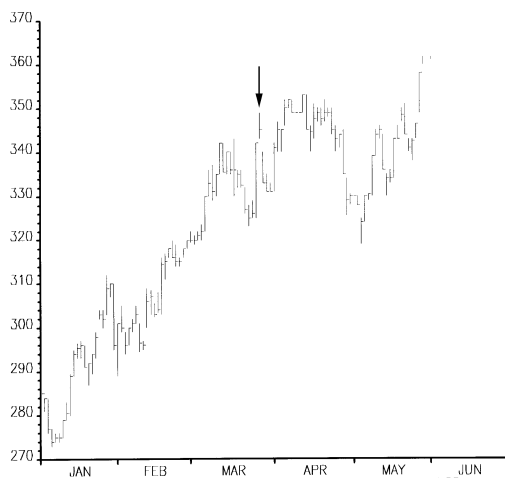
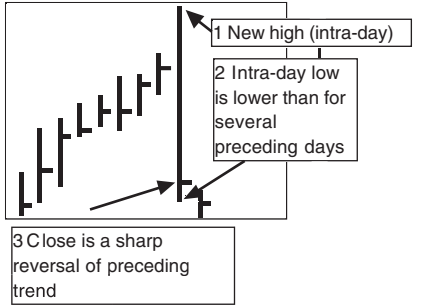
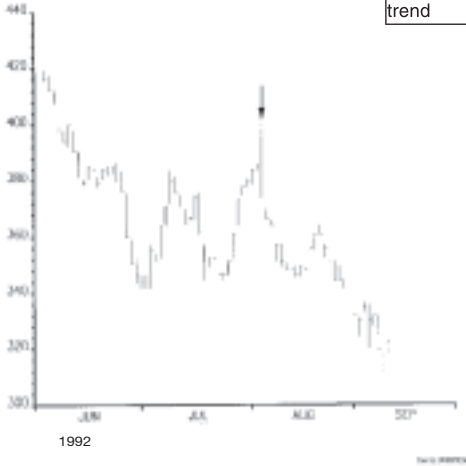


Figure 3.13 Island top

Key reversal is another bar-chart only pattern. After a 'good run' in one direction or another, the trend is sharply reversed by a wide-ranging day's trading which sees (in a bearish key reversal) (1) a new intra-day high, (2) an intra-day low which is lower than for several days past and (3) a closing price at or close to the day's low. Prices may now be expected to continue to fall away for several days



One that proved right: GKN



One that didn't: National Westminster

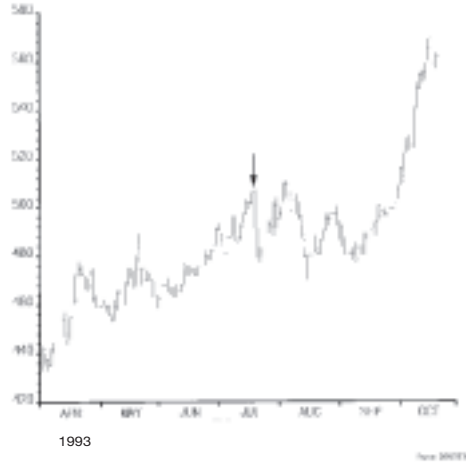


Figure 3.14 Key reversal

Many of the formations described on the preceding pages have variants, notably the *diamond* and the *multiple top* (more tops than a triple top). Several of the books listed in Further Reading will give you a more complete rundown on subspecies, although each author has favourites and blind spots.

The target price movement following a V, double or triple top or saucer is worked out in the same way as that for a head and shoulders. A neckline is drawn through the beginning and end of the formation and the price difference between the neckline and the extreme high or low measured. This result is then subtracted from the price at the right of the neckline, to arrive at the target price (see Figures 3.5. and 3.6).

The target price after a breakout from a triangle is calculated by measuring the base of the triangle. The result is subtracted from the point at which the triangular pattern is breached to give a target price at which a first serious reaction to the downtrend may be expected (see Figure 3.11).

Spikes, islands and key reversals do not lend themselves to the calculation of target prices.

All the patterns, with the exception of the V, should in theory be seen to complete themselves before trading action is taken. However, as the second half of the pattern invariably takes up some of the price movement from which the technical analyst seeks to benefit, advanced practitioners sometimes attempt to anticipate their completion, using secondary indicators, for instance, to confirm that the volume of trading in the right shoulder of a head and shoulders indeed conforms to the theoretical pattern (see Figure 3.5).

The V, which equates to a sudden and unjustified (but you only know that for sure after the event) surge of optimism about the share in question, is the one pattern for which the chartist might consider that acting before completion is generally to be encouraged. The usual account of market psychology that accompanies renditions of the V strikes me as having more than a grain of truth about it. The first, upside, half of the V (or the downside half in a V marking a bottom) is reckoned to be especially important if it occurs on high volume. In this event, so the chartists' account goes, a lot of shares have changed hands and more or less everyone who wanted to be 'in' is in. They share ownership of the company with fellow shareholders who, in this case, are all sitting on a handsome profit. Outside are very few buyers. It wouldn't be difficult for these ingredients to turn into a share price reversal.

REVERSAL PATTERNS – BOTTOMS

The bottom formations are simply the mirror images of the top formations:

- *Inverse head and shoulders* (see Figure 3.15).
- *Double bottom*.
- *Triple bottom*.
- *Saucer* (this time the saucer is the right way up).
- *Ascending triangle* (see Figure 3.16).
- *V* (right way up).
- *Spike*.
- *Island bottom*.

CONTINUATION PATTERNS

Continuation patterns are often regarded as reversals that failed to complete. If, instead of *breaking out* below the neckline, the right shoulder in a head and shoulders turns round and goes determinedly up again, then, in theory, you can expect this to point to a continuation of the trend which might have appeared to be coming to a close as the ‘almost a head and shoulders’ unfolded. Similarly, a rectangle is often considered to be a failed double- or triple-top formation. The main continuation patterns are:

- *Rectangle* (see Figure 3.17).
- *Triangle* (see Figure 3.18).

These first two are longer term formations. They would normally be expected to unfold over several weeks or a few months.

- *Pennant* (see Figure 3.19).
- *Flag* (see Figure 3.20).

Pennants and flags are shorter term formations, generally seen as short-term corrections within fast-moving markets.

- *Gaps* (see Figure 3.21).

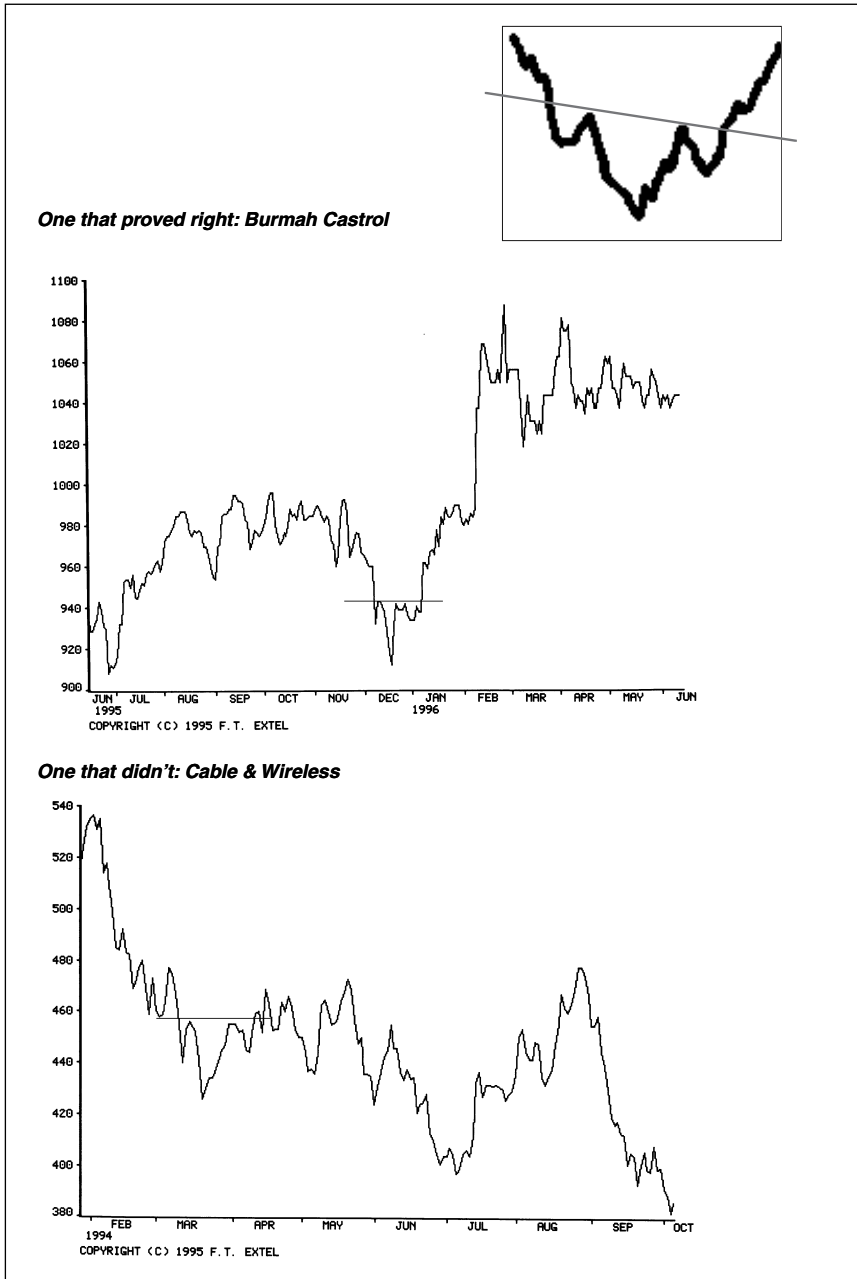


Figure 3.15 Inverse head and shoulders

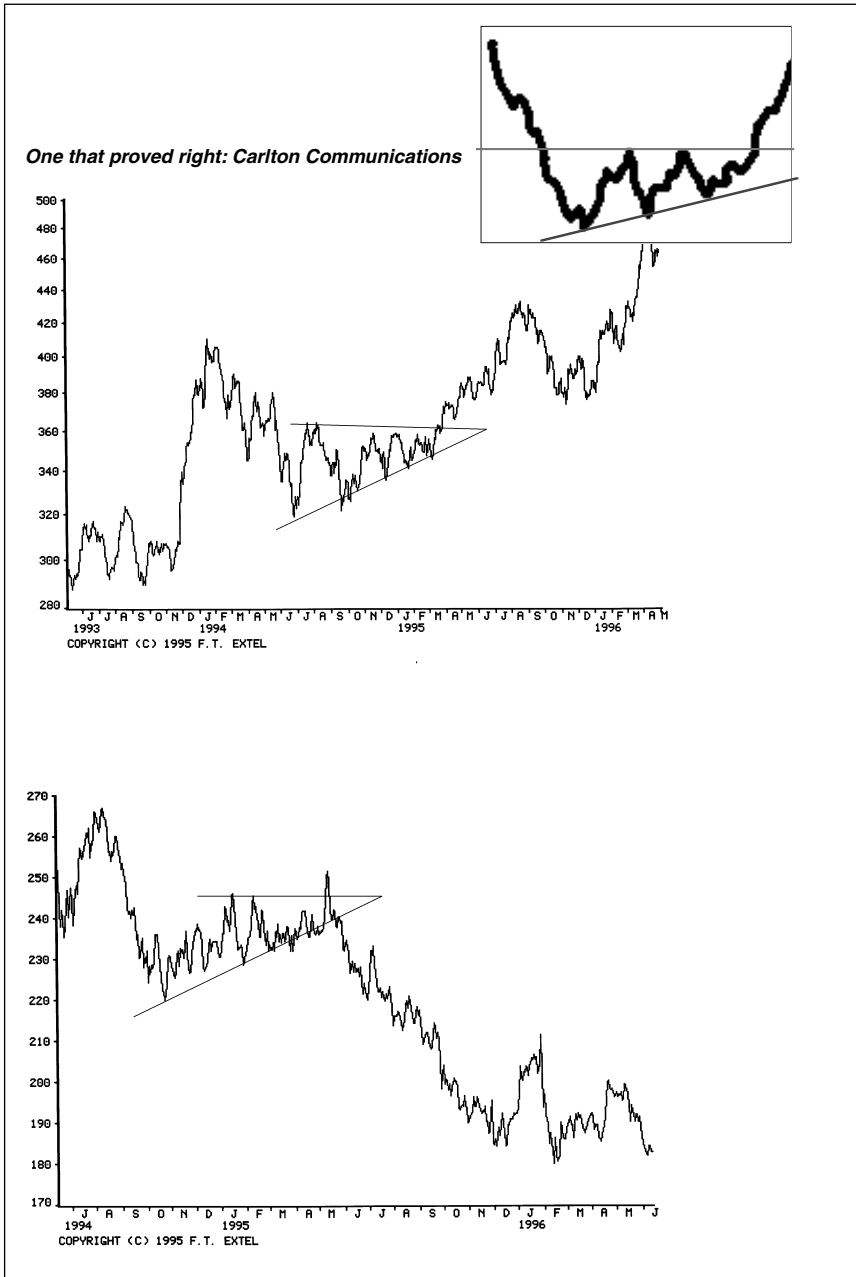


Figure 3.16 Ascending triangle

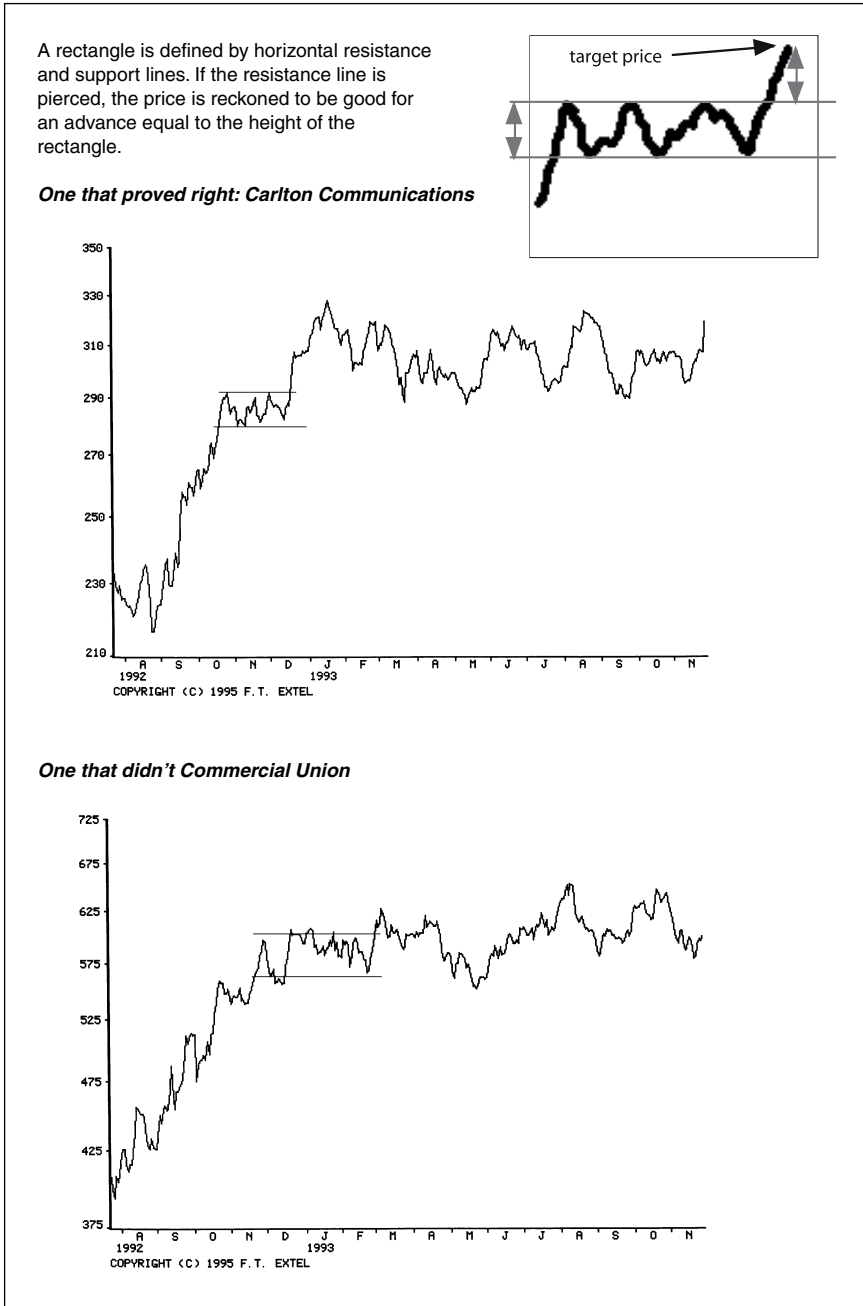
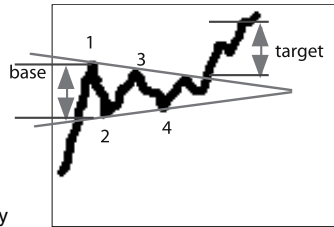
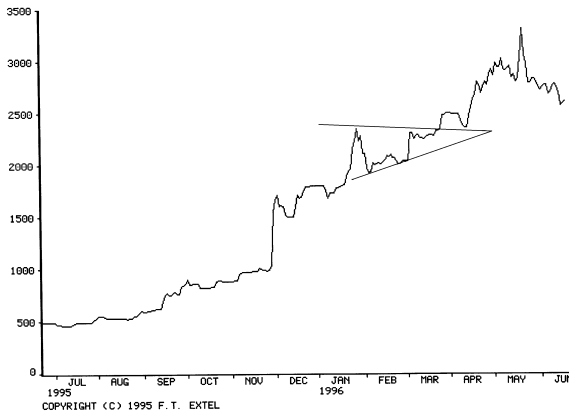


Figure 3.17 Continuation patterns: rectangle

Four points of contact, ideally over about 4–10 weeks, are reckoned to make for a reliable triangle. As with the descending triangle (Figure 3.11) the target after breakout (which should see high volume) is given by the base of the triangle. If the price goes to and fro right into the apex, there would be less expectation that the prior trend will resume. And if the breakout is on the triangle's downside rather than its upside, it may turn out to denote a reversal.



One that proved right: British Biotech



One that didn't: Granada

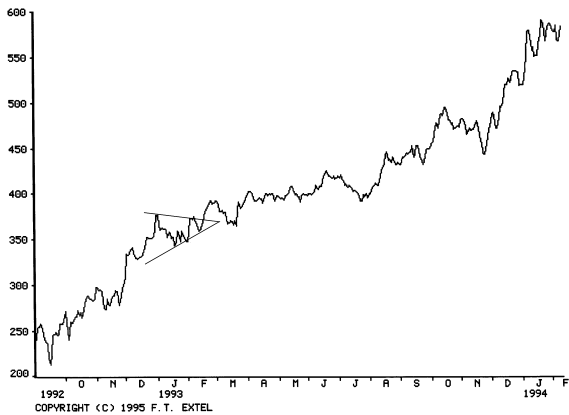
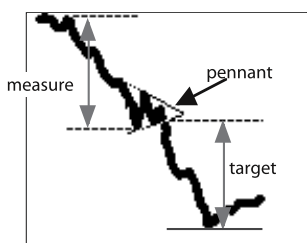
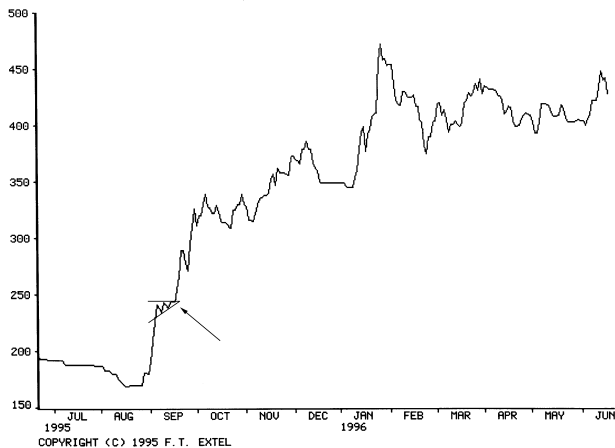


Figure 3.18 Continuation patterns: triangle

A 'pennant' is a small triangle, formed over a week or two at most, after a significant and rapid change in price. The price target following a pennant is measured in a very different way from that of its larger cousin, with the 'measure' being the price difference travelled by the preceding 'significant and rapid change in price'. This amount is projected from the breakout to arrive at the target.



One that proved right: M L Laboratories

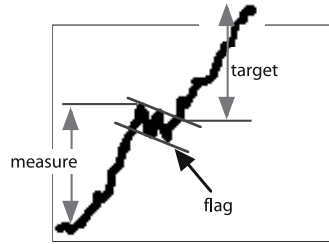


One that didn't: ICI

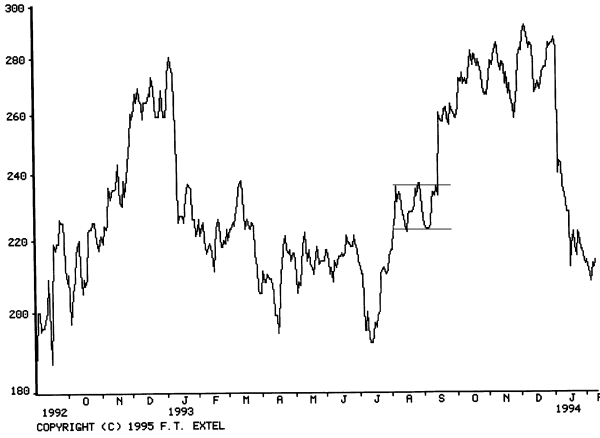


Figure 3.19 Continuation patterns: pennant

A 'flag' has the same context and meaning as a pennant and also forms in a short time span of days or weeks, not months. However, its defining lines are parallel rather than converging. The price target after a flag is calculated in the same way as for a pennant.



One that proved right: Dixons



One that didn't: Eurotunnel

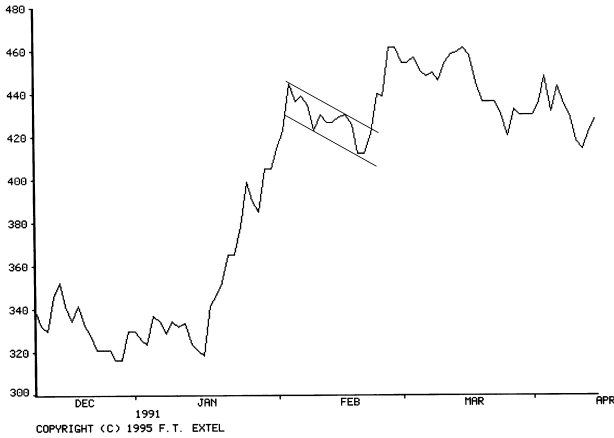
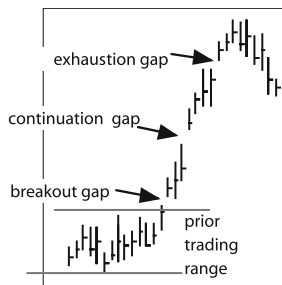
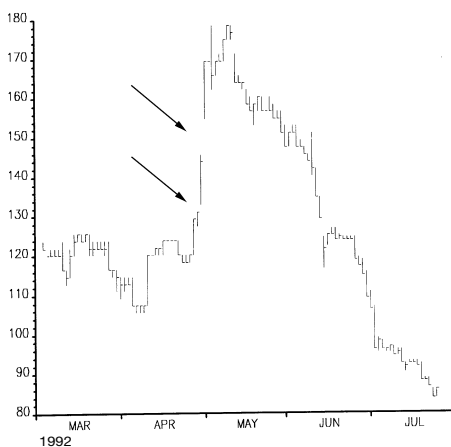


Figure 3.20 Continuation patterns: flag

A gap – only detectable in a bar chart – occurs when the whole of a day's trading takes place outside the previous day's range. One or two gaps are considered to portend continued movement in the direction of the gap, but a third or fourth may signal its end. Here, the breakout from the prior three days later by a continuation or 'runaway gap'. But the next signified too much of a good thing: it turns out to be an 'exhaustion gap', showing that the preceding rapid trend has run its course. Subsequently, the exhaustion gap (and probably the continuation gap too) are 'filled'.



One that proved right: Cordiant



One that didn't: Devro

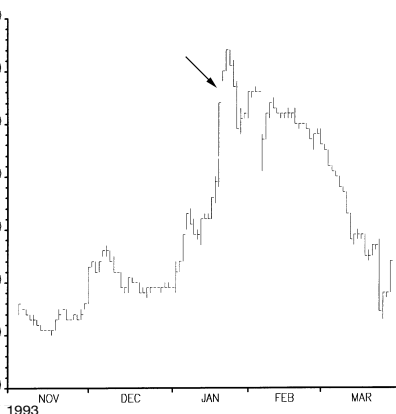


Figure 3.21 Continuation patterns: gaps

A gap occurs when a day's trading range (high and low) occurs entirely outside the previous day's, leaving a gap between the two. The first gap or two within the course of a few days, especially accompanying one of the four formations above, would be seen as a continuation signal. However, if the gapping continues then the chartist warns, 'Beware! It won't last for much longer.' Now, the gaps turn into a reversal signal.

Gaps which occur in the prices of small capitalisation, infrequently traded stocks, do not have any significance. The technical analyst will interpret continuation patterns in the wider context. For instance, what is the long-term trend within which the triangle or pennant occurs? Is there a trend to be continued? Do the rectangle and its breakout form above the resistance line of an uptrend (that would be promising), or below its support line (treat with caution).

One subspecies which needs mention is the *wedge*. All chartists talk of wedges, but the term has different meanings to different chartists. To some, wedge is a synonym for triangle. To others, a wedge is a different continuation pattern altogether. A third crowd sees the wedge as not a continuation pattern at all, but one of reversal. Irrespective of nomenclature, triangles come in various forms (see Figure 3.22):

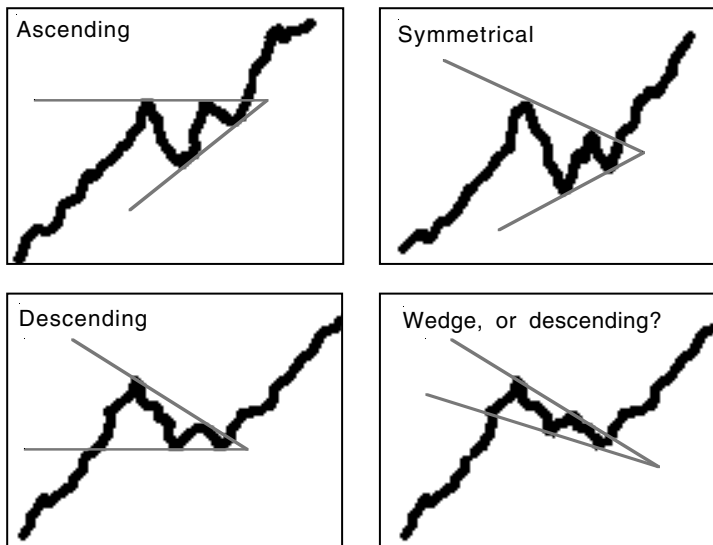


Figure 3.22 All kinds of triangles

- *Symmetrical*: pointing horizontally towards the right-hand side of the chart.
- *Ascending*: horizontal resistance, rising support.
- *Descending*: horizontal support, falling resistance.

Some chartists see each triangle shape as possessing its own special signal. In particular, descending triangles are often seen to lead on to weakness, especially when they occur in bear trends, and vice versa. Others consider shape to be of less interest than whether the breakout occurs on its top or bottom side.

4

The supporting cast

Secondary signals to support the main conclusion

Volume and relative strength

The professional's chart

Momentum

Other mathematical indicators

With highs, lows, corrections and trends being so damnably difficult to spot, chartists make use of a large supporting cast of secondary signals. These, it is hoped, will support conclusions drawn from the pattern of prices by pointing to the same conclusion from different evidence. Sometimes, it's the same evidence treated in a different way.

VOLUME

Volume is the amount of business done. If 10 million shares in ICI are traded today and only 1 million tomorrow, that could say something. If 50 million were traded the week before last and only 4 million last week, that could say even more. Chartists follow volume by incorporating a second set of bars below the primary share price graph, as in Figure 4.2.

Volume has been considered an important indicator ever since the days of Dow, who said, 'Volume goes with the trend.' He meant the main trend or correction, not minor reactions. In other words, if the share or market is in an upward trend, then volume should be relatively high on the days the market rises, and light when it is reacting or pausing. Likewise, when the trend is heading down, the market should see high volume on down days. Accordingly, a significant breakout, that is a major price move occurring within a short period such as a few days, should be supported by heavy volume. If it is not, say the chartists, it's wise to be suspicious about whether it will last.

This fits with the adage: 'Bull markets start in light volume.' The very first inklings of a bull market are minor reactions in a long-term downtrend. For months, successive movements downwards have been accompanied by heavy volume and minor bouts of optimism by light volume. What's different this time? Nothing you'd notice.

It's when the volume turns up along with an upwards breakout in price that you know, in theory at any rate, that the reversal has finally arrived. But it began, invisibly, with low volume.

RELATIVE STRENGTH OR SHARE

PRICE RELATIVE

Relative strength is a measure of how a share (or group of shares) is faring compared to the rest of the market. ICI may be down 5 per cent this month, but if the other FTSE 100 stocks are on average down 10 per cent, ICI is doing well.

Relative strength should be a familiar concept to anyone with any experience of stock market investing. Independent analyses of unit trust performance, for instance, are based on comparisons with the rest of the sector, not their absolute gains or losses. Suppose your small companies unit trust is down by 20 per cent. You might find some solace in knowing that on average other small companies trusts were down by 40 per cent. And you would be peeved to discover that they were ahead by 10 per cent.

Relative strength is calculated by choosing an index against which to compare your investment, and creating a ratio between the two. Figure 4.1 gives an example.

	1 March	1 June	Change
Share price	254p	298p	+17.3%
All Share Index	1700	1750	+ 2.9%
Indexed share price*	0.149 or 14.9	0.170 or 17.0	+14.1%

* Or relative strength: share price divided by the All Share (or another) Index. Normally, the result would be multiplied by 100.

Figure 4.1 Relative strength

Looking at a share's relative strength will tell you how much of its price movement is due to the strength of the company and how much is due to market-wide sentiment. If you like the look of a share because its share price has recently begun to strengthen, it would be as well to check that it is indeed the share that's doing well, and not simply the market as a whole. Blue-chip shares with rising relative strength are the leaders in a bull market: these are the shares that should move ahead fastest on the next leg of the uptrend. In Chapter 9 the chart for BT Group shows diverging price and relative strength.

The relative strength figure depends arbitrarily upon when it was first calculated and whether the share price is heavy (e.g. 950p) or light (42p), so no significance should be placed on whether it is 6 or 66. What is important is what happens to it subsequently. Is it rising or falling? Can you detect a trend?

Relative strength is habitually shown as a third plot on the chart. Figure 4.2 shows a typical chartist's concatenation of share price, volume (in millions of shares) and relative strength in a single presentation. It takes a bit of studying to decide which scale links to which line and crossovers (as here where the relative strength line encounters the share price bars) are inevitable from time to time (and are of no significance). The share in question has been weak since the middle of the month, but it is apparent that the market has too, for the share's relative strength is steady

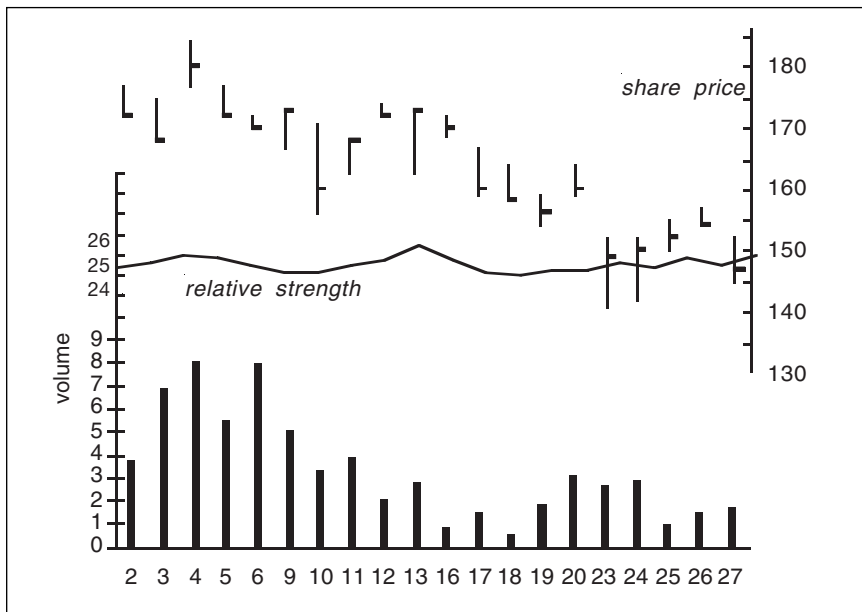


Figure 4.2 Typical chartist's layout

A minority of chartists apply trend lines to the relative strength line with much the same enthusiasm as they employ the technique on share prices. If a *top* forms in the relative strength line, it could confirm or portend the same pattern in the price itself.

BREADTH AND THE ADVANCE/DECLINE LINE

Breadth is a measure of how many shares are rising compared with how many are falling and staying unchanged in price. This might sound like the job the FTSE 100 or All Share Indices do, but breadth is different and gives a genuine second opinion.

The indices are weighted according to the market value of the companies they include. The FTSE Index will react more to a 2 per cent change in price by Glaxo, which is worth around £70 billion, than it will to a 2 per cent change in price by Schroders, a £2 billion minnow. The All Share Index is calculated in the same way.

Breadth, however, gives each company just one vote: if Glaxo's up, there's a 1 in the advance column. If Schroders is down, a 1 goes in the decline column. And a company worth just £2 million gets a vote too: breadth includes all the tiny companies that don't even make it into the All Share. On the London Stock Exchange, that's about 3,000 companies (whereas the All Share just includes about 800).

The *Financial Times* reports the three figures – 'rises, falls and same' – in its daily market statistics, on the page before the London share prices. Most of the time, these figures marry up well with what's happening to the main indices: a preponderance of risers when the index is moving ahead, and vice versa. From time to time, however, there are some curious divergences. The chartist view is that it's healthy for a rally in the indices to be confirmed by breadth.

The advance decline line combines the two main components of breadth into a single figure, by calculating the difference between the number of risers and the number of fallers. The advance decline line is subjected to the same trend analysis as any other line a chartist lays his hands on.

Breadth is primarily of concern to investors interested in the market as a whole, especially those who trade in FTSE options.

MOMENTUM

Just like a pendulum, a share price which is moving up or down has to stop, at least momentarily, before it can move in the opposite direction. Some would take this parallel further: before its momentary stop between

changes of direction, it is noted, the pendulum slows down. Ha! The slowing down is an indicator of an impending stop! And therefore of a change of direction! Technical analysts feel that share prices too are inclined to slow down before they stop and change direction. Therefore they measure how fast a price is changing, as well as the change itself.

Momentum measures the change in the share price since 5, 10 or 20 days ago (or any other period – as with moving averages, you have to find a figure that suits you, or the share you are analysing). The result can be negative or positive – in other words, it oscillates around zero. This secondary indicator is therefore known as a momentum oscillator and the table in Figure 4.3 demonstrates how it is calculated. Figures 4.4 and 4.5 depict the results when the figures are transformed into a graph.

<i>Trading day</i>	<i>Price</i>	<i>5-day oscillator</i>	<i>10-day oscillator</i>
0	40		
1	42		
2	44		
3	46		
4	48		
5	50	10	
6	52	10	
7	54	10	
8	56	10	
9	58	10	
10	60	10	20
11	62	10	20
12	63	9	19
13	63	7	17
14	63	5*	15
15	63	3	13
16	63	1	11
17	61	-2	7
18	59	-4	3
19	57	-6	-1
20	55	-8	-5

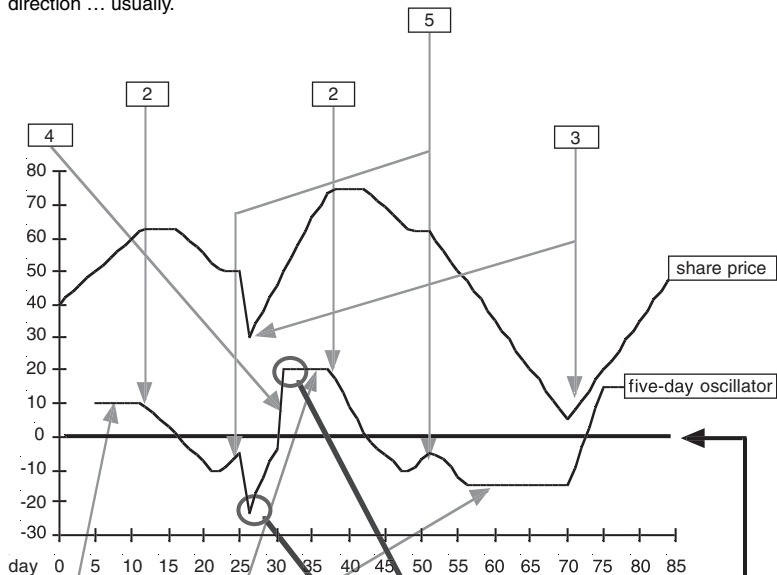
*For instance, this figure is the difference between the price on day 14 – 63p – and that five trading days earlier on day 9 – 58p.

Figure 4.3 Calculating an oscillator

Key to Figure 4.4 Momentum oscillators

- 1 Oscillator steady while share price is changing because change is same amount each day (i.e. it is not getting any faster or slower).
- 2 Oscillator gives warning of impending price fall because the price steadies before it falls. See the text. Compare with note 3.
- 3 Oscillator gives no warning of impending price rise because there is no pause between the fall and rise.
- 4 Five-day oscillator bounds back when six-day-ago price fall leaves calculation.
- 5 Share price fall pauses, so oscillator rises, anticipating possible reversal of short-term trend. See the text.

A momentum oscillator measures the difference between today's share price and the price five (or 10 or 20 ... you choose) days ago, based on the theory that share prices, like moving bodies, slow down before they change direction ... usually.



Oscillator moves around 0. Range depends on volatility of share

Oscillators are secondary indicators intended to confirm primary signals. A typical rule might be ... sell the share only when its oscillator changes direction within the outermost positive extremity of its range – here, say 18 or more, and buy on a change of direction within the outermost negative extremity – here say -20

'Sell' signal, assuming primary indicators also favour 'sell' (signal is false)
'Buy' signal, assuming primary indicators also favour 'buy' (signal is successful)

Figure 4.4 Momentum oscillators

A typical method of choosing which periodicity (i.e. whether five days, ten days, etc.) to use would be to calculate from historic figures a periodicity that would have generated reliable signals. The choice is crucial, as shown by Figure 4.5 which adds a ten-day oscillator to the graphs already presented in Figure 4.4.

The terms *over-bought* and *over-sold* are often used in conjunction with oscillators. A share whose oscillator has moved into the top of its normal range could be called over-bought, and vice versa. An alternative rendition is that when the oscillator forms a peak or V by itself, wherever it is in the range, it is indicating these conditions. And, emphasising the oscillator's secondary status, the view is sometimes taken that it is neither peaks and Vs, nor extremities, that make signals, but rather occasions when the oscillator fails to replicate the basic patterns of the share price graph.

The momentum oscillator idea brings out one of the differences in philosophy between pure fundamentalists and chartists. Any share making a significant transition in value does so on a 'two steps forward, one backward' path. The fundamentalist isn't interested in the fact that a share headed up from 100p to 200p will pause at 160p or fall back to 140p. A pure chartist, unattuned to the brighter fundamental prospects for the same share, would likely find his oscillator in or close to over-bought territory all the way up to 200p, and would in any case be unlikely to receive an over-sold, or buy signal. However, the same animal works well for heavily cyclical shares.

WELLES WILDER'S RSI

J. Welles Wilder Jr stands high in the chartists' Hall of Fame. He plugged technical analysis into the newly invented spreadsheet and came up with some enduring concepts, of which the most famous is the Relative Strength Index (RSI). This was launched (along with ADX and DMI, but we don't tackle those here) in his (1978) book, *New Concepts in Technical Trading Systems*, which memorably compared the search for 'directional movement' to chasing the end of a rainbow.

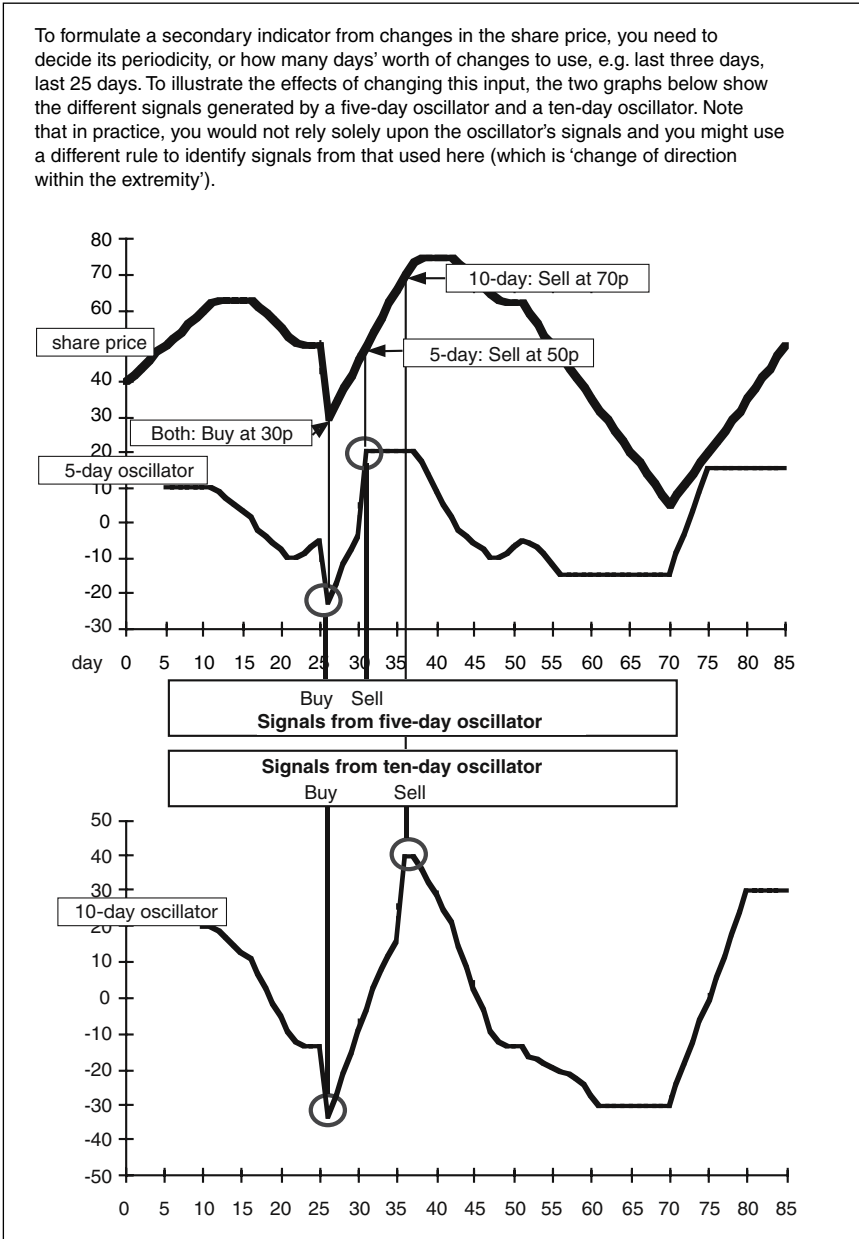


Figure 4.5 The effect of periodicity

Despite the similarity in name, Welles Wilder's RSI is absolutely nothing to do with 'relative strength' discussed on pages 78–79. RSI is a sophisticated oscillator, measuring the current strength of the share price against its own recent history. Relative strength (often known as *the share price relative*) measures the strength of the share price against the strength of other comparable shares. Some chartists term Welles Wilder's RSI, *rate of change* (or ROC) to distinguish it from relative strength.

RSI compares recent rises with recent falls and works out which tendency (rises or falls) is dominating, and by how much. It's simpler than it sounds, but nevertheless ingenious. The formulation is set out in the table in Figure 4.6, and Figure 4.7 shows how it looks on a chart.

In this example, the averages of rises and falls are calculated over the previous ten days. Welles Wilder in fact recommended using 14-day averages, but as always, this is a 'what works best?' situation. Many modern adherents of RSI use shorter periods, sometimes as little as five days.

Unlike the momentum oscillator, RSI always fits into a predetermined range of 0 to 100. This is achieved by the indexing adjustment, which is what happens in the last column in Figure 4.6. This means its extremities (the levels above and below which it is over-sold or over-bought) can be predetermined too, whereas with the oscillator you have to identify what the range is in order to judge where the extremities lie. It is pretty much an iron rule that over-bought and over-sold, when using Welles Wilder's RSI, are set at 70 and 30 respectively, which are the figures he proposed. Occasionally chartists use 80 and 20.

Trading Day	Price	Rise	Fall	10-day average of rises	10-day average of falls	Relative Strength	Relative Strength Index
						Ratio of average rises to average falls	$100 - (100 / [1 + \text{relative strength}])$
0	140						
1	142	2					
2	140		2				
3	139		1				
4	137		2				
5	139	2					
6	141	2					
7	143	2					
8	142		1				
9	144	2					
10	146	2		1.2	0.6	2	66.7
11	148	2		1.2	0.6	2	66.7
12	149	1		1.3	0.4	3.3	76.5
13	149			1.3	0.3	4.3	81.3
14	150	1		1.4	0.1	14	93.3
15	150			1.2	0.1	12	92.3
16	150			1	0.1	10	90.9
17	148		2	0.8	0.3	2.7	72.7
18	146		2	0.8	0.4	2	66.7
19	144		2	0.6	0.6	1	50

Figure 4.6 Calculating Welles Wilder's RSI

A great strength of RSI, as compared with a momentum oscillator, is that it does not react with a jerk when a previous step-change in the share price falls out of the reckoning (see Note 4 in Figure 4.4). The three most popular rules for generating trading signals from RSI are:

- reversals within over-extended territory
- RSI crossing from over-extended to neutral territory. This rule would have generated trades at the points marked *x* in Figure 4.7
- divergences or *failure swings* (Figure 4.8).

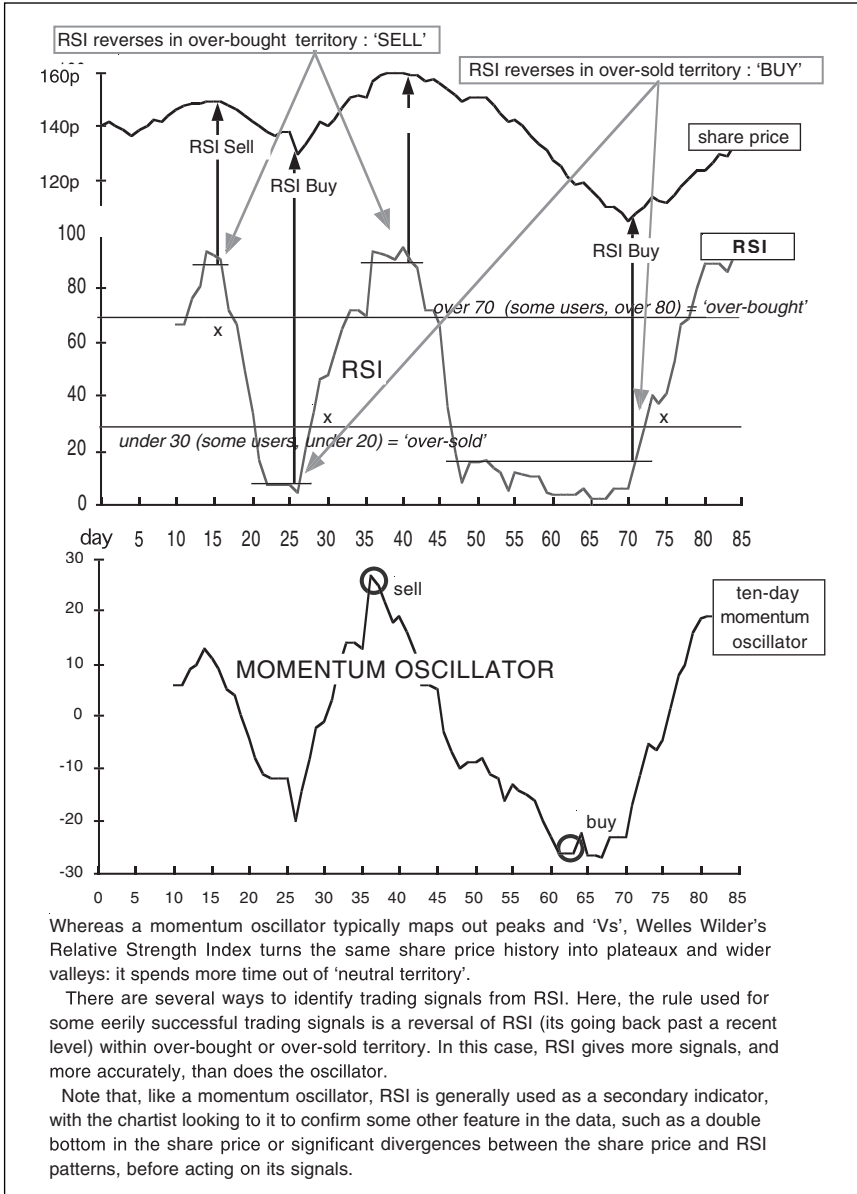


Figure 4.7 Relative strength indicator (RSI)

Just as with other indicators, RSI does not work well if a long-running up or down trend is in place. This can be seen in Figure 4.8. Welles Wilder himself suggested that it was best used in sideways trending (or *trendless*) markets.

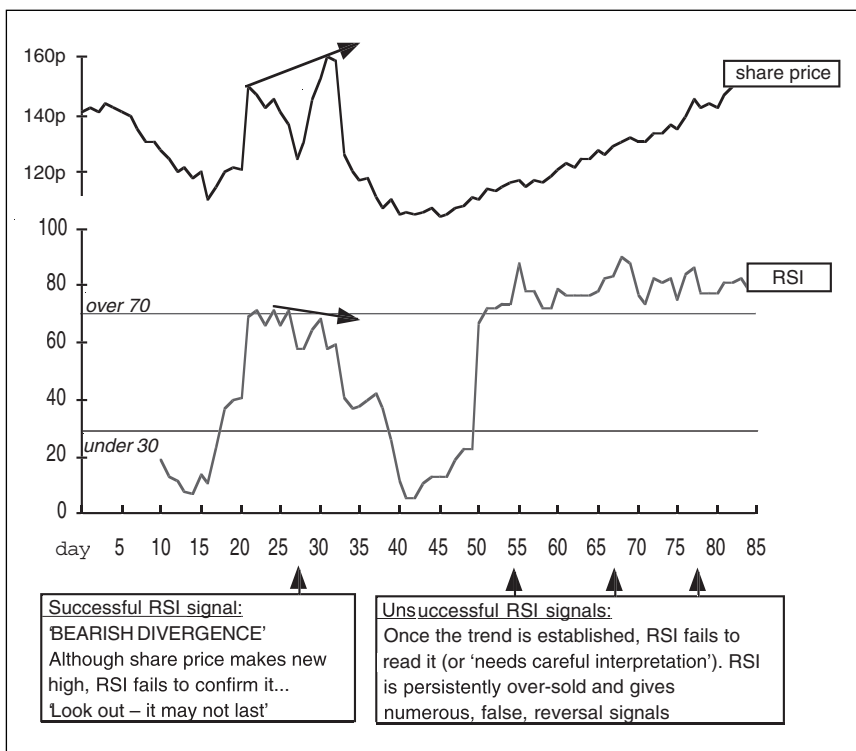


Figure 4.8 RSI (like everything else) isn't always right

STOCHASTIC

Stochastic is the most complicated of the modest selection of secondary indicators discussed here. It was devised in the 1960s and the main claimant to its authorship is Dr George Lane, a fellow-countryman of J. Welles Wilder Jr.

The theory behind stochastic is that as an upward trend begins to tire, closing prices will fall towards the bottom of the recent range of intra-day prices, whereas they will have been towards the top of that range when the trend was in full flow. In downtrends, closes are reckoned to be towards the bottom of the recent range, this pattern likewise giving way as the downtrend fades. This is another variation on the concept of momentum – that share prices slow down before they turn round.

Stochastic therefore requires daily high, low and closing prices, and the formula relates today's close to the highest high and lowest low of the last so many days. A typical periodicity is ten days, with the ten-day result being 'smoothed' by taking its three-day average, known as Fast %D. This three-day result is itself averaged, to produce Slow %D. Both Ds are indexed so as to stay within a range of 0–100. In the pre-spreadsheet 1960s, Dr Lane presumably had a mainframe at his disposal.

Trading signals are generated by crossovers by these two lines, Fast %D and Slow %D, and their own crossings of the usual over-sold and over-bought lines at 70 and 30 (or 80 and 20, occasionally 85 and 15). Figure 4.9 shows the calculations for stochastic and Figure 4.10 the graphical result.

								%K*	Fast%D	Slow%D	
1	2	3	4	5	6	7	8	9	10	11	
Trading day	High	Low	Close	10-day high	10-day low	10-day low	10-day high	Close minus 10-day low	Col. 7 divided by col. 8 times 100	3-day average of col. 9	3-day of col. 10
0	175	170	175								
1	177	168	176								
2	180	177	178								
3	182	172	180								
4	180	170	179								
5	180	167	179								
6	188	175	185								
7	188	177	186								
8	188	178	184								
9	185	177	184								
10	189	185	189	189	167	22	22	100			
11	193	186	193	193	167	26	26	100			
12	192	185	191	193	167	24	26	92.3	97.4		
13	199	188	197	199	167	30	32	93.8	95.4		
14	202	189	199	202	167	32	35	91.4	92.5	95.1	
15	202	194	199	202	167	32	35	91.4	92.2	93.4	
16	196	188	195	202	175	20	27	74.1	85.6	90.1	
17	202	194	200	202	177	23	25	92	85.8	87.9	

* As originally devised, stochastic used %K and Fast %D. This formulation is too sensitive to 'noise' and is rarely used now. It is known as *fast stochastic*, and the version explained here as *slow stochastic*.

Figure 4.9 Calculating stochastic

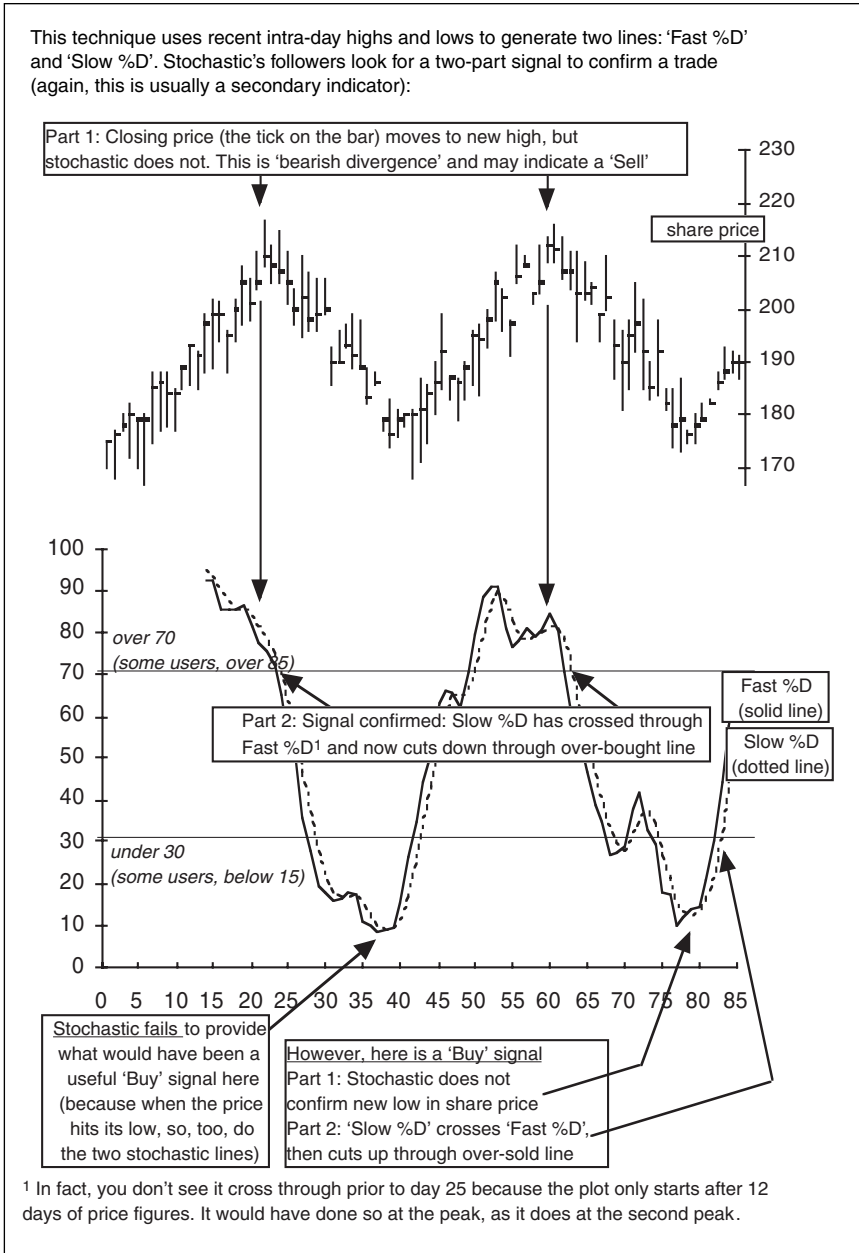


Figure 4.10 Stochastic

MOVING AVERAGE CONVERGENCE-DIVERGENCE (MACD)

MACD combines the up-and-down characteristic of an oscillator with the ability to follow a trend, so in theory should help in trending market conditions – that is, when prices are persistently on the up or down. Momentum oscillators, RSI and stochastic are all prone to giving bad signals in such circumstances.

Unlike RSI and stochastic, MACD is not tied into a range: it is to some extent capable of 'going on going up' after reaching a level at which these two must steady off or turn down.

MACD, the brainchild of yet another American, Gerald Appel, uses *exponential moving averages* (EMA) of the share price. These are weighted calculations, giving more say to recent prices than to earlier ones. Calculating an EMA is probably the trickiest piece of arithmetic in this chapter, but then the demands haven't been that high!

Two EMAs are required: one calculated over 26 days, the other over 13. The calculation requires a *smoothing constant* which sets the weighting of the current day's share price relative to the reading from earlier days. For the 13-day figure, the smoothing constant is $2/13 = 0.15$, and for 26 days, $2/26 = 0.075$. These are the two figures set out at the top of the relevant columns in Figure 4.11.

To programme a spreadsheet to calculate an EMA, see Figure 4.11. The formula in the cell for Day 1 in the 13-day EMA column (and it is repeated downwards) is:

$$=((1-(C\$3))*C4)+(C\$3*B5)$$

where:

C\$3	picks up the smoothing constant . . .	0.15
C4	refers to the preceding calculation of the average (in this case the average of one price) . . .	175
B5	takes in today's price . . .	176

However, the readings can't be used for MACD until you have the first 26 days' prices fed into the calculation. (The EMAs in columns 4 and 6 are calculated in a parallel way – read on for the relevance of Column 6.)

				MACD	Signal line
1	2	3	4	5	6
Trading day	Price	13-day exponential moving average*	26-day exponential moving average*	13-day EMA minus 26-day EMA	10-day EMA of column 5
		0.15	0.075		0.2
0	175	175	175		
1	176	175.2	175.1	0.1	0
2	178	175.6	175.3	0.3	0.1
3	180	176.2	175.6	0.6	0.2
4	179	176.7	175.9	0.8	0.3
5	179	177	176.1	0.9	0.4
6	185	178.2	176.8	1.4	0.6
7	186	179.4	177.5	1.9	0.9

* See text

Figure 4.11 Calculating MACD

If you're less technically minded, refer back to Chapter 2 in which long- and short-run moving averages were used to generate crossovers and trading signals (remember the golden cross?). This is simply a souped-up version of the same thing.

Neither of the moving averages is plotted on the chart. What is plotted is the MACD line, which is simply the difference between these two: that's what happens in column 5 in the table. Finally, the MACD line is itself subjected to an exponential moving average adjustment (column 6), in just the same way as George Lane arrived at 'Slow %D' for stochastic. The smoothing adjustment used for this is normally 0.2, for a 10-day moving average. This line is known as the *signal line* (sometimes Slow %D is given the same title). Its function is to be crossed by MACD: when this happens, there's your indicator.

For some reason, the MACD formula receives far less tweaking by its practitioners than those of other secondary indicators. This happens, of course, but there's a remarkable measure of agreement that the exponential moving averages are calculated over 26 and 13 days, and that the signal line comes from a 10-day EMA.

MACD's ability to cope with persistent trends is very evident in Figure 4.12. It's worth noting that RSI would have encountered similar problems to stochastic had it met up with that (unusual) bull run in the share price.

THERE ARE MANY MORE . . .

By no means has this been a complete guide to secondary signals. It does, however, cover most of the indicators in regular use in the UK, and also gives you a flavour of how secondary signals are constructed. Is that the right word? Perhaps one should say shaken as the process strikes me as similar to playing with a kaleidoscope. The contents are always the same: it's how you shake them and where you put the mirrors that makes for variety. And just as with a kaleidoscope, after a while you realise you could go on forever, but you're not going to see much that you haven't seen already.

US chartists, sometimes enthused by having studied physics to PhD level, turn out an engulfing stream of indicators. I suggest you track down Maximum Entropy Spectral Analysis (MESA), the True Strength Index, SD-TSI (Slope Divergence TSI Filter), and 'Up Move and Then a Pullback – Adam's Entry Technique'. Amongst others. Happy reading.

For a comprehensive (but still incomplete) discussion of secondary indicators which does not require monstrous mathematical expertise, try *Schwager on Futures: Technical Analysis*. Although set in the world of futures and options markets, its coverage would not be lost on a keen stock market chartist.

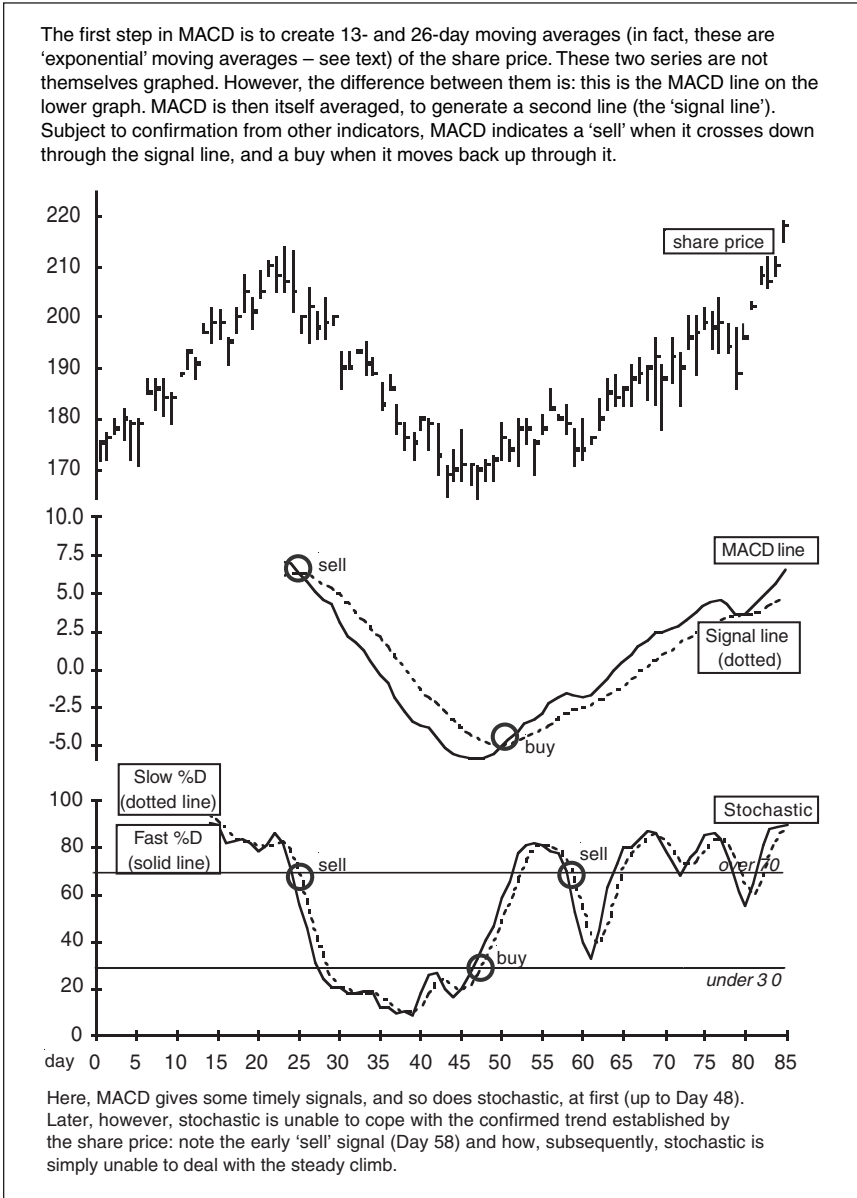


Figure 4.12 MACD copes with persistent trends

5

The technique from Japan An introduction to candlestick charting

Steve Nison reveals all

Candlestick construction

Candlepower

Candlesticks tested

Candlesticks are a Japanese method of depicting open, high, low and close prices in a more elegant and readable way than the western method of adding ticks to either side of a bar. They can be thought of as squint-free (or perhaps low-squint) versions of their western counterparts.

Although devised in the late nineteenth century, candlestick charting was virtually unknown outside Japan until Steve Nison, an employee of Daiwa Securities in New York, wrote *Japanese Candlestick Charting Techniques* in 1991. As charting books go, this has been a best-seller and a sequel duly arrived in 1994: *Beyond Candlesticks*. For stock market followers, the second book is preferable as it includes all the basics, but focuses on shares whereas the first concentrates on the futures markets.

Along with the elegance of candlesticks comes a raft of theory and an attractive new terminology. Who could resist discovering the meaning of a 'bearish engulfing formation', or a 'morning star'? A cult subject took off. Suppliers of charting software rushed to include a candlestick option in their packages.

Candlestick charting techniques echo the general Japanese fascination with the diminutive by emphasising the significance of very short-term movements in share prices. Western techniques are also alive to these, as for instance with the *key reversal* and *spike* discussed in Chapter 3. But the candlestick tool kit includes many more variations on this theme. Candlestick techniques also place more emphasis on reversal signals and less on continuation ones than western methods.

BODIES AND SHADOWS

The basic approach and terminology of candlesticks are explained in Figure 5.1. As you can see, candlesticks are functionally identical to the open-high-low-close bars with ticks. However, instead of using ticks, a

black or white 'fat bar' is superimposed on a thin one. If black, the closing price was lower than the opening price. If white, the reverse applies. Candlestick charts are much easier to read than bars with ticks.

The most obviously significant type of candlestick is that with a long body, either black or white, which denotes a major one-day price move. These are considered to set up significant support or resistance levels for the future, except when they break such earlier support or resistance levels, thereby signifying that all bets are off.

Several other individual candlestick types are given their own names, of which the main ones described in Figure 5.2. These can occur at any time and they are not always seen to be important. *They take on their names and significance only when they occur in specific circumstances, such as after a rally or decline.*

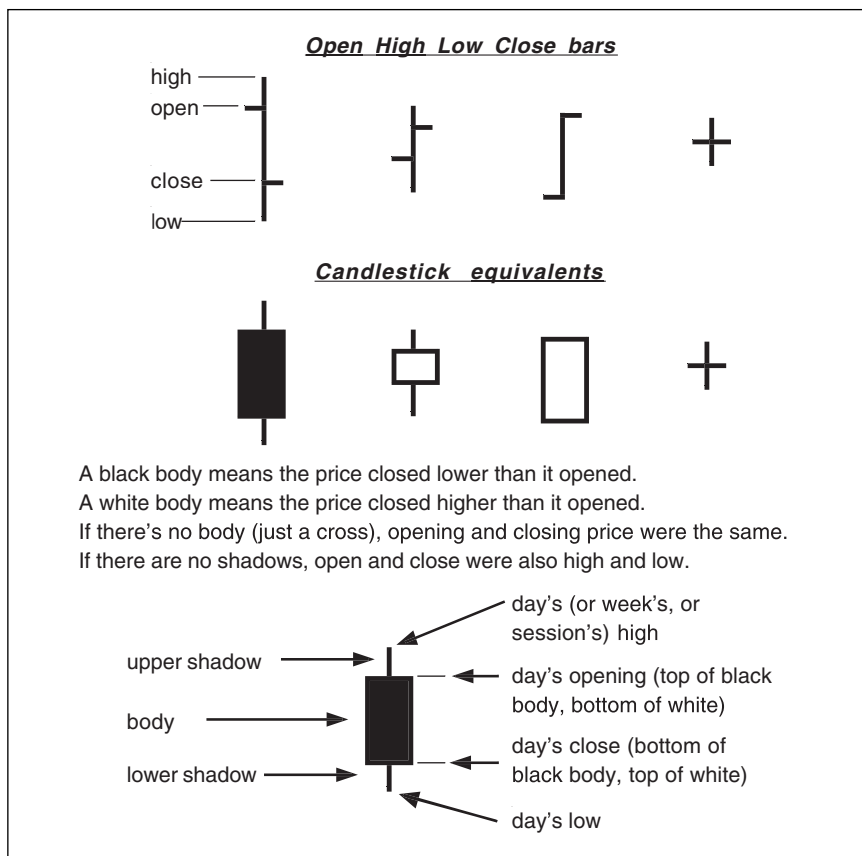


Figure 5.1 Candlestick basics

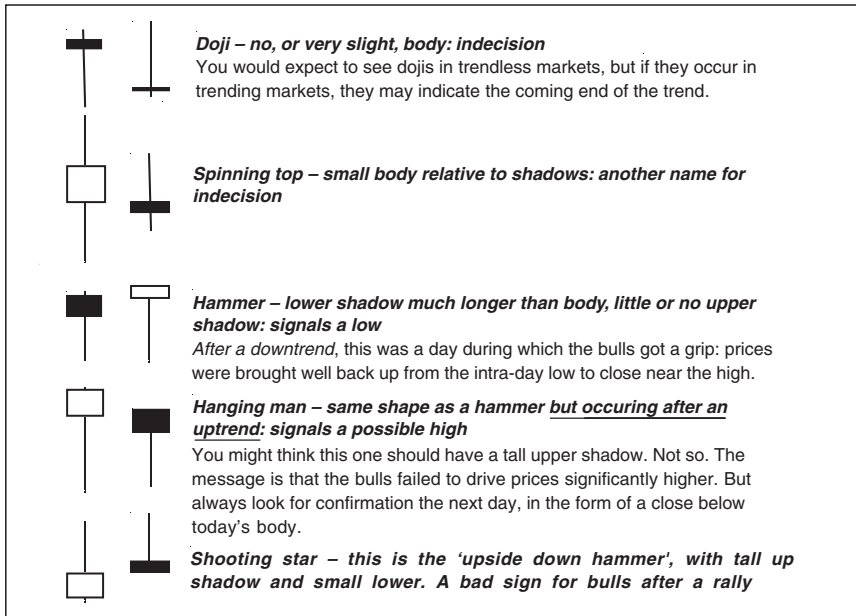


Figure 5.2 Individual candlestick names

CANDLESTICK PATTERNS

The most commonly recognised candlestick patterns are described in Figure 5.3.

This is but a cursory treatment of the subject. In his books, Mr Nison devotes pages of earnest discussion, for instance, to interpretation of 'dark cloud cover' if the second day's close is just above the halfway mark of the previous day's body, and to whether there is greater significance to the formation if the second day's opening is above the first day's high.

The general idea is that one bearish sign is rarely enough to warrant a trade, but two or three appearing together should set the trader thinking. And all thinking is done against the context of the trend. If there's no trend to reverse . . . etc. The combination which prompts a buy or sell action can be several instances of the same thing (e.g. two sets of dark cloud cover within a few days) or different signals in combination (e.g. the middle candlestick in an *evening star* formation taking the form of a doji, for an *evening doji star*). Not all of these patterns are unique to candlestick charting. The morning and evening stars, it will be noticed, are the island reversal patterns of western charting, if more elaborately defined.

All the patterns described here are short-term ones, but do not think that the technique stops short. Candlestick charting has the full complement of longer term signals too, including the Three Buddhas – the head and shoulders – and the Three River Bottom, which is the Japanese equivalent of a triple bottom.

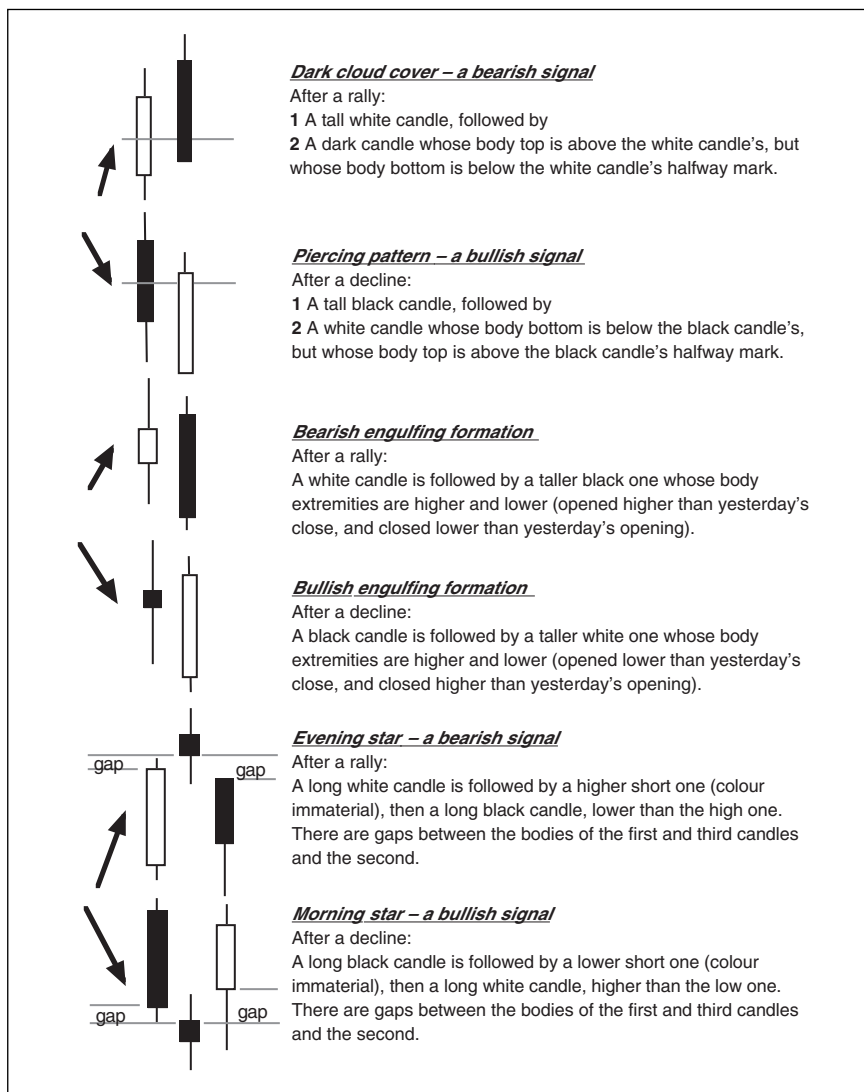


Figure 5.3 Candlestick patterns

WINDOWS

In candlestick terminology, the gaps discussed in Chapter 3 are known as windows. Windows are termed *rising* or *falling* according to whether they occur in uptrends or downtrends, and are considered to set up support and resistance levels for the future. Mr Nison quotes a Japanese market saying: 'The reaction will go until the window', meaning that a small countertrend will tend to finish at the price level set by a window in the main trend. Just as with western analysis, three windows (this is judged a pattern in itself) is considered to be a sign that the trend which opened them is ready to turn round. Whereas exhaustion gaps are subsequently 'filled' when the price returns to the level at which the gap occurred, windows are described as being 'closed'.

JACK SCHWAGER'S TESTS

In *Schwager on Futures: Technical Analysis*, the author rounds up a chapter on candlestick charting (a chapter guest-written by Mr Nison), with an account of some tests he ran on the technique. Noting that candlestick signals tend to be much more compact than western ones in that many of them take place over one to three days, he suggests they may lend themselves to less subjective interpretation than the classic western patterns. He therefore programmed a computer to look for and trade upon ten candlestick signals, including the doji, the engulfing patterns and the hammer. The testing was carried out on five years of back prices from ten futures markets such as sugar and Eurodollars.

The results were described as unencouraging: in fact they were disastrous. For instance, by trading on the basis of a single hanging man or hammer, losses were recorded in seven of the ten markets tested, with an overall loss of \$17,000 of the opening capital of \$60,000 exposed. This was a very simplistic, in fact unfair, test. If candlestick charting provided a free lunch, Mr Nison would have eaten it, instead of writing about the technique. It should however serve as a warning to the uninitiated.

The charts in Chapter 9 use candlesticks and provide some commentary on how this technique has worked in the context of the UK's top shares in the months prior to writing. These charts throw up many examples of the individual candlesticks and patterns described here, often marking highs and lows, though less reliably at significant highs and lows (highs terminating, or lows preceding, clearly worthwhile price moves).

6

Is the price moving? Really moving?

Point and figure charts

The basic idea

How to do it

Trends, signals and price targets

Point and figure charting is in many ways the antithesis of candlestick charting. For the candlestick chartist, every little ripple of the share price could have a message. How wide was the range on the day? How did today's closing relate to yesterday's? And the candlestick chartist has a predominantly short-term view. How much money might we make today? Tomorrow? Two weeks can be a long time to the candlestick chartist.

Point and figure chartists aren't interested in short-term fluctuations. If the price moves less than a predetermined amount – typically 1 per cent – they don't even record it. And point and figure chartists are inclined to look for long-term gains. They can hail as a success a price prediction that takes years to come true. Other chartists do this too, but it's more typical of the point and figure technique.

Most investors have come across point and figure charts, but few understand them. The reason is that point and figure charts do not have a 'sensible' horizontal scale. Everyone has come across a conventional chart that they have difficulty understanding. It takes a bit of effort, for instance, to figure out what a stochastics chart is trying to convey. But at least the problem is in the line itself, not the scales.

With point and figure charts, even the scales are against you. These charts defy a first, uninformed inspection. The first sideways inch on a point and figure chart could signify a month; the next, a year.

Point and figure charting, which was devised in the USA in the last century when speculators used it to record prices from 'the tape' in share-pushing bucket shops, is a heroic effort to sort the wheat from the chaff. The chaff is the *market noise* – minor day-to-day ripples in the share price which are neither here nor there in the view of point and figure chartists. They distill *price action* into two essential questions:

- 1 *Is the price moving?* And that means 'Is it moving seriously?' – it's not enough for a 150p share to move by a penny. The point and figure chartist wants to see it move by, say, 2p or 3p. If the price today doesn't move by the point and figure chartist's selected quantum, he simply

ignores it. Today's modest share price movement does not get entered on his chart unless and until it becomes part of his quantum.

- 2 *Is it going up or down?*

HOW TO COMPILE A POINT AND FIGURE CHART

To translate this concept into a charting method, two questions must be answered:

- 1 *What constitutes a move forward?* If the price is established in a trend, either up or down, how big a move represents real progress? For a 150p share this could be, say, 2p. For 40p share it would probably be 1p.
- 2 *What constitutes a change of direction?* This is normally a bigger amount than the answer to question 1. The 150p share which has advanced from 120p and now moves on to 152p would seem to be continuing its trend. But what if it moved to 148p? Is that a change of trend? The point and figure chartist says it isn't, not by itself. Moving back 4p could easily be chaff. He wants to see it move back more seriously, say, to 144p.

Let's assume we're dealing with a 150p share and have settled on 2p as the *move-forward measure*. The chartist calls this *the box*. And we'll adopt 6p as the *change of trend measure*. This is *the reversal*. To the chartist, this is a *three-box reversal* method – the most widely used system.

The table in Figure 6.1 gives share prices for MistryNuShops, which floated on the Stock Exchange on 1 August at 140p. Against each day's price are high and low *reference points*, which you could also think of as opposing sets of goal posts. These are the levels to which the share price has to move to register either a continuation of the trend or its reversal. When the price hits a reference point, an entry is made on the chart and the reference points are revised. If the share price is moving upwards, the reference points are 2p above the last reference point reached and 6p below it. If the share price reverses so far as to hit its low reference point, the goal posts are moved. Now the direction is downwards, so the new low reference point is 2p below the last reference point registered by the share price. The new high reference point is 6p above the same figure. The reference points are always 8p apart. Further explanation would be less useful to you than simply working through the table.

Box size: 2p. Reversal: 3 boxes								
		Today's reference points			Revised reference points for tomorrow			
	Price	High	Low	Comments	Entry on chart	High	Low	
Aug	1	140						
	2	142	142	134	Up 2: start with an X	X at 142 as price has moved up one box	144	136
	3	140	144	136	Down 2: needs to go down 6	Nothing		
	4	139	144	136	Still above low ref			
	5	137	144	136				
	8	139	144	136				
	9	141	144	136				
	10	143	144	136				
	11	142	144	136				
	12	144	144	136	Hits high ref	Add an X above existing X	146	138
	15	148	146	138	Hits high ref	And again	148	140
	16	148	148	140	Hits high ref	And again	150	142
	17	149	150	142				
	18	149	150	142				
	19	150	150	142	Hits high ref	And again	152	144
	22	150	152	144				
	23	150	152	144				
	24	148	152	144				
	25	146	152	144				
	26	144	152	144	Hits low ref	Move over a column, down a row,* fill with 0s to 144	150	142
	29	142	150	142	Hits low ref	Add a 0 below existing 0s	148	140
	30	140	148	140	Hits low ref	And again	146	138
	31	138	146	138	Hits low ref	And again	144	136
Sep	1	137	144	136				
	2	138	144	136				
	5	138	144	136				
	6	130	144	136	Goes through low ref	Add 0s down to 130	136	128
	7	134	136	128				
	8	138	136	128	Goes through high ref	Move over a column, up a row,* fill with Xs to 138	140	132
	9	142	140	132	Goes through high ref	Add Xs to 142	144	136

12	141	144	136				
13	143	144	136				
14	147	144	136	Goes through high ref	Add Xs to 146	148	140
15	151	148	140	Goes through high ref	Add Xs to 150	152	144
16	152	152	144				
19	151	152	144				
20	157	152	144	Goes through high ref	Add Xs to 156	158	150
21	159	158	150	And so on.		160	152

* This is the convention

Figure 6.1 Compiling a point and figure chart for MistryNuShops

Aug		Sep		Oct		Nov	
1	140	1	137	1	156	1	111
2	142	2	138	2	154	2	108
3	140	5	138	3	152	5	105
4	139	6	130	4	150	6	108
5	137	7	134	5	151	7	111
8	139	8	138	8	151	8	114
9	141	9	142	9	151	9	113
10	143	12	141	10	148	12	112
11	142	13	143	11	145	13	115
12	144	14	147	12	142	14	118
15	146	15	151	15	143	15	121
16	148	16	152	16	140	16	124
17	149	19	151	17	137	19	123.5
18	149	20	157	18	134	20	127
19	150	21	159	19	131	21	130
22	150	22	160	22	128	22	129.5
23	150	23	160	23	125	23	132.5
24	148	26	160	24	122	26	135.5
25	146	27	159	25	119		
26	144	28	159	26	119.5		
29	142	29	157	29	116.5		
30	140	30	158	30	113.5		
31	138			31	110		

Figure 6.2 MistryNuShops share prices

There's a complete set of prices for MistryNuShops running to late November in Figure 6.2, and Figure 6.3 provides a complete chart. To give subsequent readers of the chart some idea of timing, it is customary when making the first entry of the month, to substitute the initial letter of the month for the X or O. Sometimes, these are placed above and below the columns, instead. Figure 6.4 is a conventional chart for the same share prices.

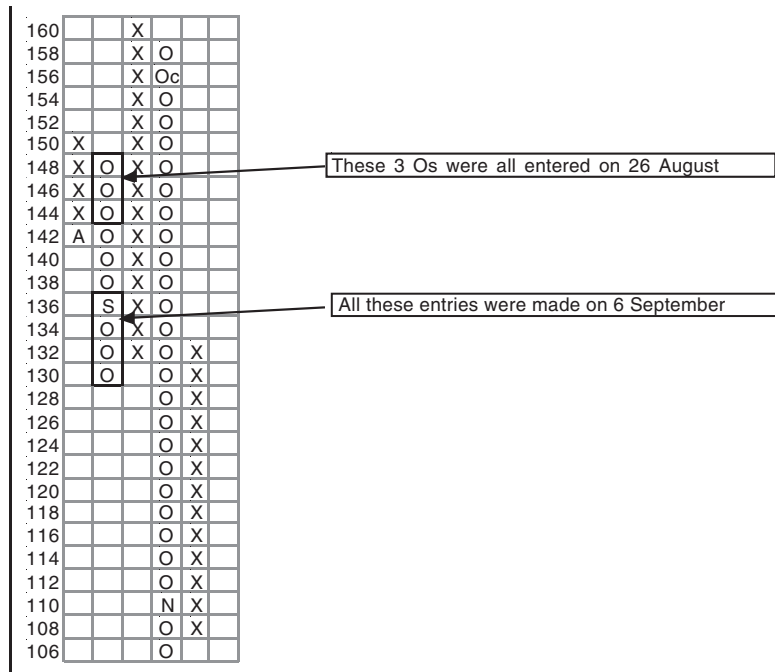


Figure 6.3 Point and figure chart for MistryNuShops

The effect of the point and figure method is to compress the five main trends in the conventional chart into five simple columns of Os and Xs. The wrinkles within the broad trends have disappeared, even that not so minor one at the start. The highs and lows all translate into point and figure (but not with total accuracy: some of them are likely to be just short of one box 'out'). In fact the highs and lows are all you're looking at; it would even be possible to take out the Os and Xs. They're left in for tradition's sake, but when you think about it this differentiation adds nothing. All you need is an arrow on the end of the last column to show

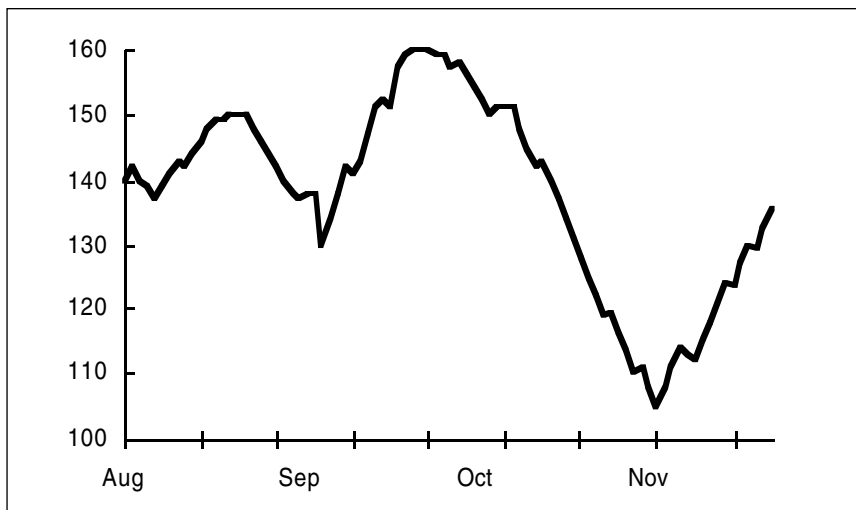


Figure 6.4 Normal price chart for MistryNuShops

which way the price is moving currently. In fact, on the Japanese version of these charts, known as *kagi*, a single line snakes up and down the page.

Assuming you are now comfortable with how point and figure charts are compiled, there are three other points you should know. First, you don't have to use a reversal amount which is larger than the box. Some currency traders, looking at minute-by-minute movements in prices, move to a new column on every change of direction. Second, professional point and figure chartists often use daily high and low prices, not closing prices. This raises the problem of whether to use the high or low on a wide-ranging day, but there are conventions. Third, box sizes have to be adjusted when price extremes are encountered. If MistryNuShops sank below 100p, the chartist might start using a 1p box, and if below 20p, a 0.5p box. Likewise, at 500p, a switch to 5p boxes might be warranted. In each case, the reversal factor would be maintained (e.g. at 1.5p, below 20p). These changes of scale, which are not frequent, are normally allowed to flow into each other as if nothing else had happened.

TREND LINES AND TRADING SIGNALS

Trend lines can be drawn on point and figure charts just as they are on conventional charts, and they are breached in just the same way too. Also, the classic formations, head and shoulders and so on, can be plainly observed. Figure 6.5 gives examples of trend lines and trading signals in point and figure format. However, some practitioners recommend that trend lines should always be drawn at fixed, predetermined angles: respectively at 45 degrees for lines progressing upwards, such as support and resistance in an uptrend, and at 135 degrees for lines progressing downwards. This approach is summarised in Figure 6.6.

US point and figure specialist, Thomas Dorsey (see Further Reading) advocates using the point and figure method to track all conceivable series and is a champion of the NYSE Bullish Percent Index which was devised in the 1950s by Chartcraft, a venerable US chart publisher. This is a measure of the proportion of NYSE stocks showing new point and figure buy signals (those stocks running X columns which have newly risen above the previous X column). This measure is itself tracked on a point and figure chart.

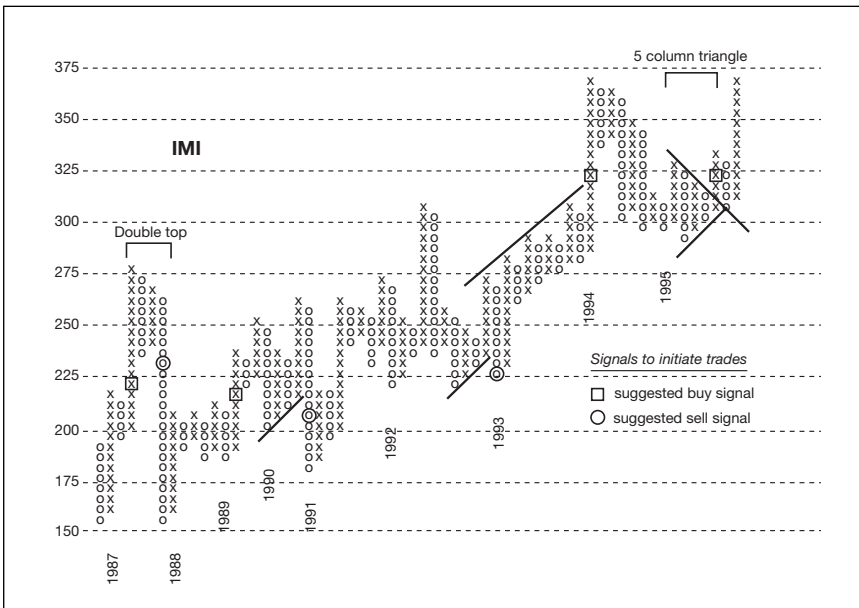
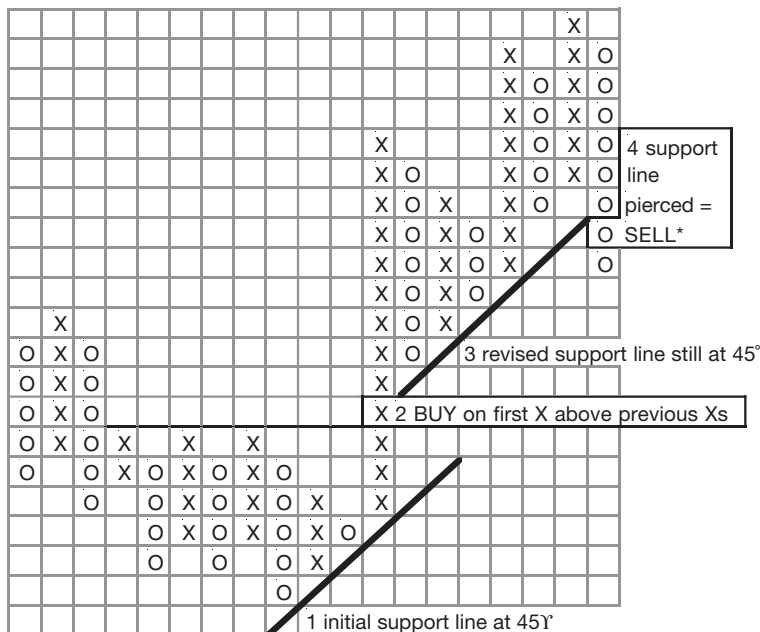


Figure 6.5 Point and figure trades

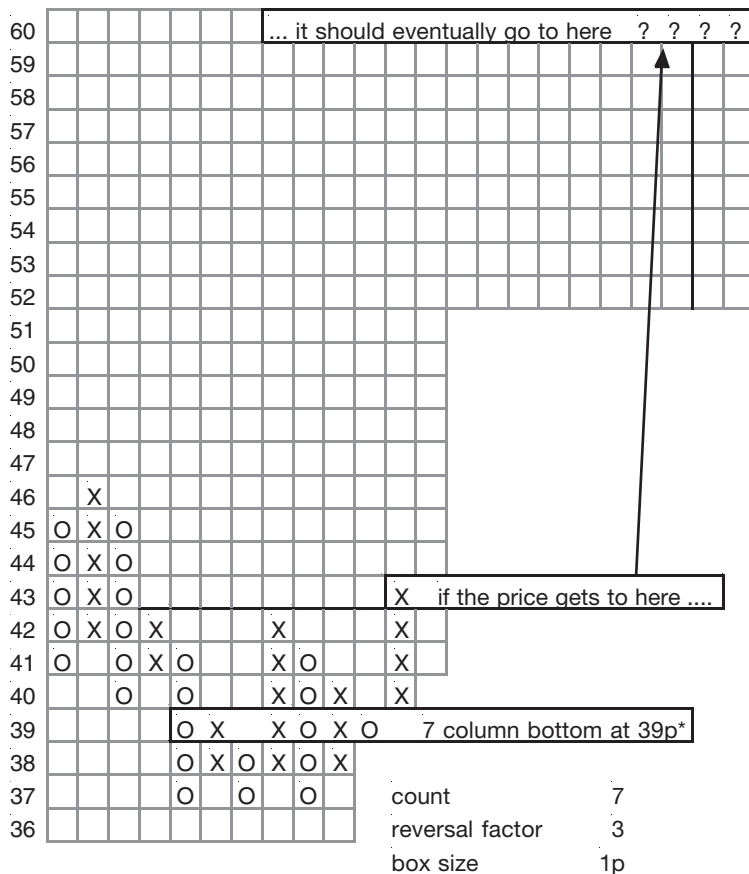


*This signal would involve *initiating* a position (or 'going short'). The buyer at point 2 would probably have taken at least some profits already.

Figure 6.6 Fixed angle trend lines

THE COUNT

Point and figure chartists use an unusual method of targeting future price movements, known as *the count*. The basic idea is that in a bottom or a top, each reversal on the chart represents an argument that will come to be settled later by an almighty bust-up. Twenty arguments are deemed likely to fuel a bigger bust-up than ten. The reversals are simply counted from the number of columns which the bottom or top took up (see Figure 6.7). Another technique counts the boxes vertically to derive a price target. This is equally adventurous.



$7 \times 3 \times 1p = 21p$
 add to count row 39p
 = projected price 60p

* Count the number of columns spanned by the bottom.

Figure 6.7 Point and figure horizontal count

7

A quick guide to the chartist gospels

Rabbit explosion in Pisa

Elliott waved them on

Prechter waved goodbye

Gann's strange ideas

Coppock fades in the 1980s

Some colourful names and even more colourful theories are regularly quoted by technical analysts. The recent past has usually been foretold by someone now in their grave. The trouble is, it's always someone different. In fact, few modern practitioners subscribe rigidly to any of the theories outlined here.

The recurring theme is that of the cycle – that ups will be followed by downs will be followed by ups – just like the tide, the moon and the seasons. These great theorists would allow that natural cycles are more susceptible to forecasting than the stock market, but not so much more.

FIBONACCI

Leonardo Fibonacci lived in Pisa around the time its tower was built. A mathematician, he is credited with promoting the decimal numbering system. He didn't get his name on that one, but succeeded with *Fibonacci Numbers*, a series which you probably covered briefly at school before forgetting it. In fact Fibonacci was not the original discoverer of the numbers. They had earlier been recognised by the Greeks and Egyptians – the design of the pyramids is said to demonstrate familiarity with this series of numbers.

Fibonacci stumbled across his numbers when trying to project how a rabbit population would grow from a single pair. After assuming (among other things) that all levels of descendants would be born in pairs, he arrived at the magic Fibonacci series set out in the last column of Figure 7.1. It doesn't stop at 144: it goes on forever. Apart from being a lip-smacking version of compound interest, it has several interesting properties:

- Each number after the first is the total of the previous two (so 34 for Month 9 equals 13 from Month 7 plus 21 from Month 8, etc.)
- The ratio of each number (after the first few) to the next one is 0.618, or – the same thing – of each number to its predecessor, 1.618.
- The ratios for alternate numbers (after the first few) are 0.382 and 2.618.

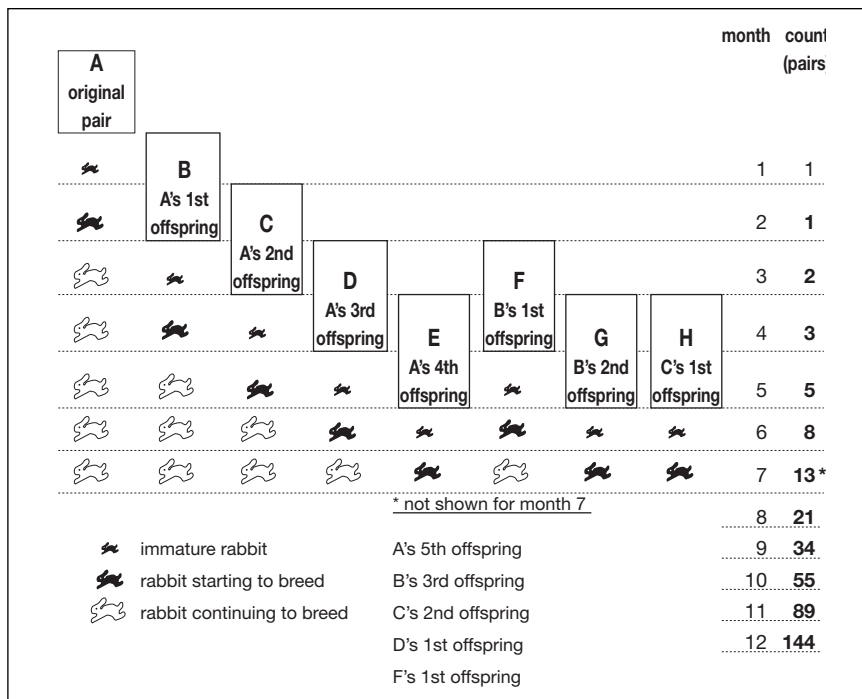


Figure 7.1 Fibonacci's rabbits

There is no record of Fibonacci having put his numbers to use for investment purposes. However, he did notice that his series cropped up outside rabbit demographics (where it doesn't apply at all, if you sweep away Fibonacci's assumptions). Many of nature's finest creations are apparently designed along the lines of Fibonacci Numbers, including spiral galaxies, musical tones and the Venus de Milo's vital statistics. Some people therefore consider them imbued with cosmic significance. One such was Ralph Elliott.

ELLIOTT WAVE THEORY

Ralph Elliott was an American accountant who, during an illness in the late 1920s, set to work to examine many decades worth of stock price charts. He did so in exacting detail: down to half-hour price movements.

Elliott decided he had spotted several regular patterns from his work, and that these patterns were knitted together by Fibonacci Numbers. This

potent concoction, which he termed *Nature's Math*, surfaced in 1934. At the time Wall Street, which had in 1933 shown the first serious recovery from the Crash, was experiencing a downturn, feared by some to herald a return to misery. Elliott informed investors that the downturn was a mild bull market *corrective wave*, due to turn round at any time and make way for the next *cardinal wave*. Cardinal waves head in the direction of the trend, and the trend was up. As to where the market was going in 1934, he was right. It recovered a 20 per cent downturn by the year end and went on to double within 30 months.

Mystified but impressed stockbrokers learned that these two waves belonged to a pattern of eight, and the eight were a cycle which had been driving the stock market for a century or more. The basic idea of Elliott Wave Theory is shown in Figure 7.2.

Where did Fibonacci come into it? In three ways. First, the basic pattern of $5 + 3 = 8$ uses Fibonacci Numbers. As does the 21 up, 13 down – and a total of 34 – make-up of the next degree. Next, the vertical extent of waves related to Fibonacci's Numbers, with the ratios 1.618 and 0.618 and others explaining how far each advance or retracement extends. Finally, time spans between turning points were often Fibonacci Numbers. In Elliott's book, *Nature's Law: The Secret of the Universe*, published in 1945, he cited the list of significant highs and lows in the Dow Indexes shown in Figure 7.3.

Elliott pointed out that all the time spans (which he had somewhat selectively chosen) were constituents of Fibonacci's series, some twice over! He was not troubled by the fact that Nature's Law counted in both months and years, whichever suited. Rather, he suggested, the law worked through crowd psychology and the crowd did count in both. In an upwave, he argued, bulls progressively get the upper hand, eventually taking an asset price to an unsustainable peak. The inevitable fall in prices forces out optimists and puts the bears in charge.

Despite this encouragement from then current events, Elliott did not suggest that his analysis enabled precise forecasting. Sometimes the pattern missed a sequence or extended one. In fact, he formulated a *Rule of Alternation*: if the market failed to match the wave sequence once, it would shortly do so again. However, he was pretty sure that the third wave (running between Points 2 and 3 in Figure 7.2), if you could spot it, was almost always the best. It lasted the longest and moved the furthest. If you could spot it. The problem, he acknowledged, was that since smaller waves exist within larger ones, 11 times over, wave identification was an art, not a science.

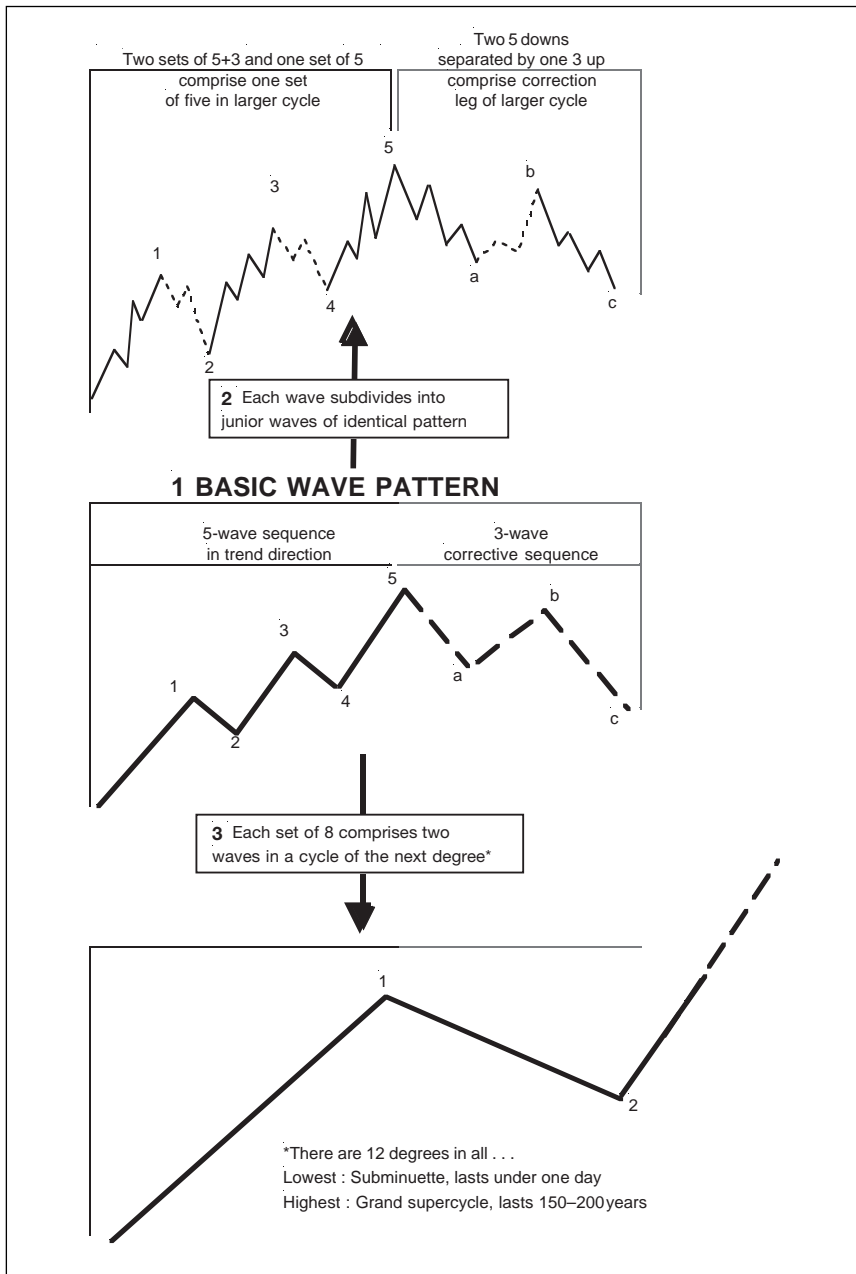


Figure 7.2 Elliott Waves

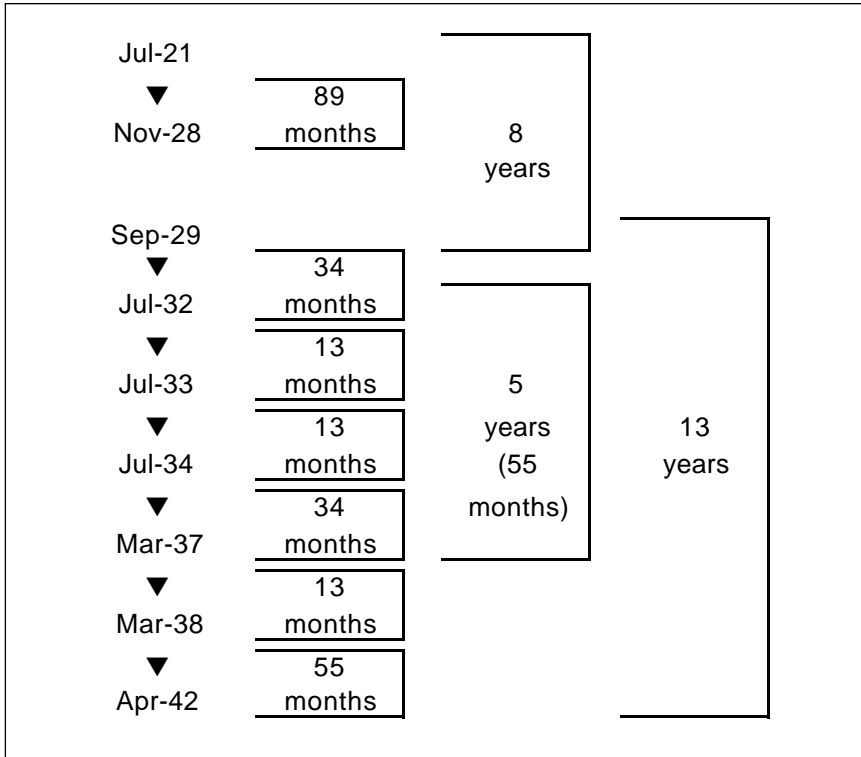


Figure 7.3 Elliott Waves on Wall Street

After Elliott’s death in 1948, his works fell into relative obscurity, a passage assisted by a long-lasting bull market on Wall Street. There was barely a need to call the turning points. But in the 1960s cognoscenti revived interest in Elliott Wave Theory by picking out more Fibonacci Numbers. A low in 1970 was correctly forecast on the basis that preceding lows had occurred 21, 13, 8 and 5 years previously. And had there not been a low 55 years before that of 1962? There had.

Enter Robert Prechter, Yale graduate, ex-rock drummer and technical analyst at Merrill Lynch. Prechter relaunched Elliott by co-writing an interpretation of Nature’s Law, in 1978. All the Dow’s trends to date, it turned out, could be accurately assigned to Wave Theory, with a corrective fourth wave which had started in 1965 about to complete and an upwards heading *impulse* wave (the re-christened cardinal) due to follow. This would end, he forecast, in the late 1980s, to complete the upwards phase

of one of Elliott's *supercycles* (one degree beneath the grand supercycle), which had kicked off in 1932.

Prechter left Merrill Lynch to launch an investment newsletter and manage money on his own account and throughout the early 1980s called the market with great accuracy. In 1984, he beat all records by scoring a four-month gain of 440 per cent in his managed fund. Prechter appeared to have turned Elliott's art into his own science, until 1987. Prechter foresaw a correction in the October, but expected it to be modest. He had targeted his impulse wave to terminate at 3,686 in 1988. When October 1987 turned out to be a less than modest reversal, he assigned it 'end of Wave 5' status. Long-term investors, who had been advised – when the Dow stood at 2,600 – to hang on through the October correction, were now advised to get out at 2,000 and to be ready to get back in again in the early 1990s at around 400 (which would neatly have returned the Dow to its 1929 peak).

Such is life. The Dow sped back to its 1987 peak and, with one pause for breath, carried on upwards. Around the time Prechter suggested it should be 400, it was heading to 4,000. Prechter still pumps out a newsletter, but it no longer attracts the coverage he received in the 1980s.

In the futures and options markets, 'Elliotticians' spot his waves on time spans measured in all units of time from minutes upwards, and in instruments from orange juice futures to interest rates. He would surely have been surprised, as he insisted his waves only occurred in generalised fields such as stock market indices.

The stock market too continues to attract Elliott-inspired analysis, also applied to individual stocks as well as the indices. Elliott has probably achieved a modest immortality. His five-up, three-down patterns crop up remorselessly, though rarely predictably (as he warned) and the issue of whether this is a great third wave, and from where a 62 or 38 per cent correction should be measured, are such entertaining topics that they may well last market commentators for all time.

GANN

Unlike Elliott, his contemporary W.D. Gann was a keen market trader. Whether he was genuinely successful is debated but that hasn't prevented his books *How to Make Profits Trading in Commodities* and *Truth of the Stock*

Tape from gaining a following. What Gann did share with Elliott was a belief that the universe kept faith with Fibonacci, when it wasn't keeping faith with Gann.

Perhaps his most popular bequest to the charting community was the proposition that there is generally a round figure relationship between price and time: for instance, two units of price (say 2p) for every unit of time (say per day), or 1p to 2 days, or 3 to 2 or 1 to 1 (it's best to cover as many eventualities as you can get away with) and so on. These formulae were turned into *fanlines* which supposedly give guidance as to where support and resistance will be encountered (see Figure 7.4).

Fanlines are meant to be drawn from significant lows or highs, especially all-time lows and highs – and in profusion. Figure 7.4 is restrained in using only five fanlines: a charting programme worth its salt will slot in nine or more with a click of the mouse.

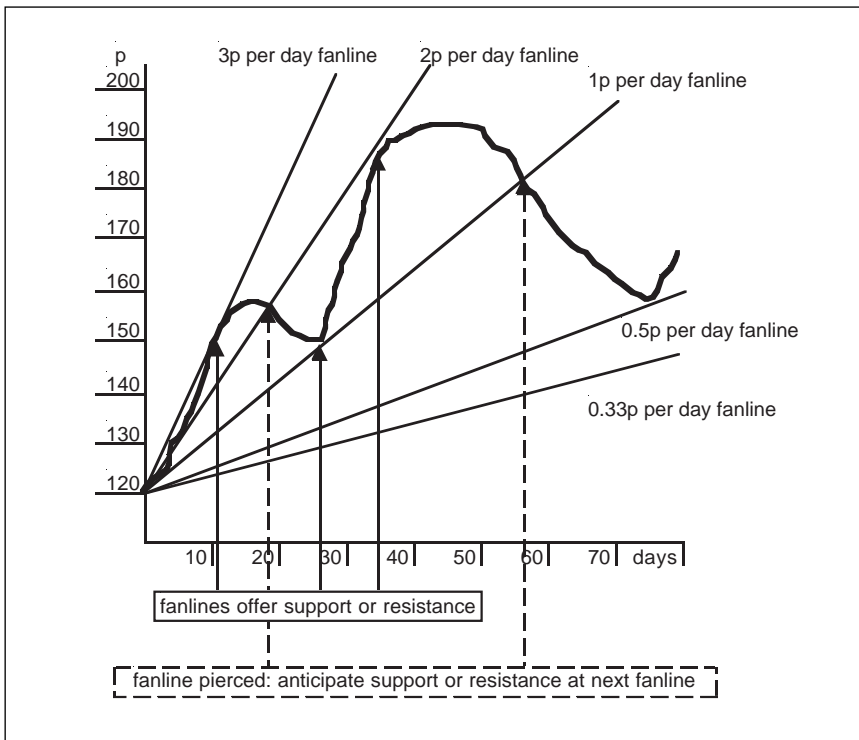


Figure 7.4 Gann's fanlines

Gann also came up with the cardinal square, an alternative means of predicting which prices would prove significant in future by offering support or resistance (the square does not tell you which). This is set out in Figure 7.5.

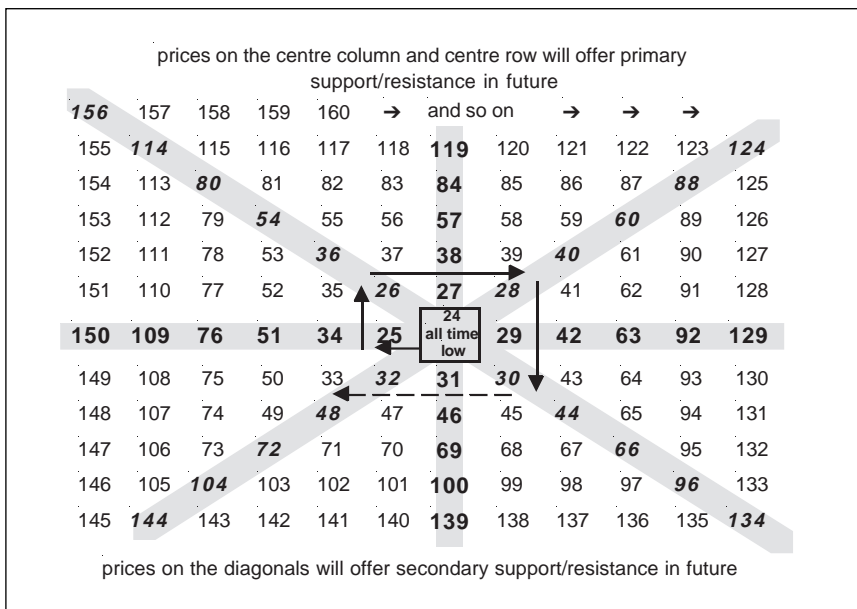


Figure 7.5 Gann's cardinal square

There's more to Gann than these two concepts, but the rest is in a similar vein. Together with his ideas on significant anniversaries (such as one year) and multiple-of-an-eighth retracements and advances, he had virtually every point on the chart tabbed. Like Elliott, Gann achieved a comeback from the grave during the 1980s, but does not attract the same level of serious discussion.

COPPOCK

I am grateful to Robert Ansted of the *Investors Chronicle*, an expert on Coppock, for much of the following.

'Crowds do too much too soon,' said Edwin S.C. Coppock in a 1962 essay, 'The Madness of Crowds'. This described some research he had been doing on behalf of his Texas investment advisory firm, Trendex

Research Group. He went on:

They overdo. When they get an urge to speculate, their concerted demand forces prices up at a rate far greater than the growth of the company into which they are buying. Likewise, when they liquidate holdings or make short sales during a panicky decline, they ignore basic economic facts. They overdo because they are motivated by emotion rather than reason.

This all sounds right on the mark to anybody who has experienced one or two stock market cycles. Coppock wanted to turn these observations into 'a practical technique to aid long-term investors who wish to minimise risk'. Believing that a key driver in crowd psychology was how recently it had experienced a serious hit on its wallet, he turned to his local church and asked its officials how long the average person needs to grieve following a bereavement or other traumatic event: 11 to 14 months was the answer.

Coppock then formulated a memorable indicator. On a rolling basis, he calculated percentages for how much the Dow Jones Average had moved over the previous 14-month and 11-month periods. These two figures were added together and turned into a ten-month weighted moving average. The result was a momentum oscillator (see Figure 4.3, p. 81) to which he attached a simple rule: *Buy when it moves up whilst below zero.* 'The curve has been highly satisfactory as a profit maker,' said Coppock. A modest claim for a Texan.

Coppock was neither the first nor the last to formulate a momentum oscillator, but his inspiration of setting its periodicity according to how long bereavement depresses the emotions produced impressive results. The curve had identified the beginning or near-beginning of all four major surges in the Dow Index from 1948 to 1962. He arrived at a formula which picks up major lows but is not so sensitive that it called for action on what turned out to have been a minor reactions to the prevailing trend.

And when do you sell? You don't, at least not in the original Coppock scheme of things. He was an advisor to US institutional investors, who always had strong cashflows coming in from the public. His purpose was to help them time the investment of those cashflows by avoiding tops and amassing cash until the crowd was bent on another speculative surge. He didn't envisage that they would ever need to sell 'the market'. He did however note that the curve had acted as a warning of major market tops.

In 1963 Harold Wincott, editor of the *Investors Chronicle* in the UK, came across Coppock's work and applied it to the UK market, using figures going back to 1940. In those days, without readily accessible computers, a short cut was made, of using a single rolling 12-month average rather than the 11-month and 14-month figures which Coppock had devised. Wincott found the

results of his analysis highly satisfactory and the *Investors Chronicle* has published its 'IC/Coppock indicators' ever since. (They appear once a month in a table at the back of the magazine. Indices are provided for a dozen major stock markets.) Inevitably, Coppock's original trading rule was extended by treating a turndown when the index was above zero as a sell signal. Further, a subsidiary buy signal was identified – when the Coppock Index turns up while still above zero. The *Investors Chronicle* terms these signals *unofficial*.

In the 1970s, the IC/Coppock indicator caught the UK market's highs and lows with great accuracy. The signals were rare – the whole decade saw just three buys (all *official*) and four sells – but most were gilt-edged. In particular, it called a perfect sell and buy at the top and bottom of the calamitous collapse from 1972 to 1975, which saw the index fall by over 70 per cent. However, since then the record has been mixed. It is set out in Figure 7.6.

The 1980s were queer territory for IC/Coppock. The indicator stayed above zero from 1977 to 1989, and therefore gave not a single official signal in that time. This demonstrates the severe limitations of Coppock's original formulation. No investor could have afforded a signal which kept him out of the great 1980s' global bull market.

If the indicator was to be used at all then, the unofficial signals had to be considered. But these have had a poor record since 1983. First and least on several occasions these arrived in *whipping sequences*, with succeeding months delivering first one injunction, then the opposite one – not at all what Coppock had in mind. More seriously, the sell signals in 1983, 1985, 1986 and 1987 – after the October crash – were just plain wrong. The record in the 1990s has been rather better, or rather less bad. Signals in the 1990s have been associated with market setbacks, but the timing has not been tight enough. Since October 1989, three IC/Coppock buy signals (those of December 1989, January 1992 and November 1992) have arrived too late to put investors back into the market in time to put them ahead of where they would have been if they had simply ignored the sells and held their portfolios. The ill effects of these signals have more than outweighed the benefits of the two good sell signals.

The problem is that the market often recovers following a setback in very sharp spurts, which either largely or more than make up for the preceding reaction. These are very evident in Figure 7.6 where strong gains may be seen in the month or two running up to each of the last three IC/Coppock buy signals. In 1992, the market moved ahead by 15 per cent in just three months before the indicator gave a green light to buy. In the 1990s investors seem to need less grieving than 20 years ago. So why not shorten the formula? No doubt some have. But when will conditions swing around again?

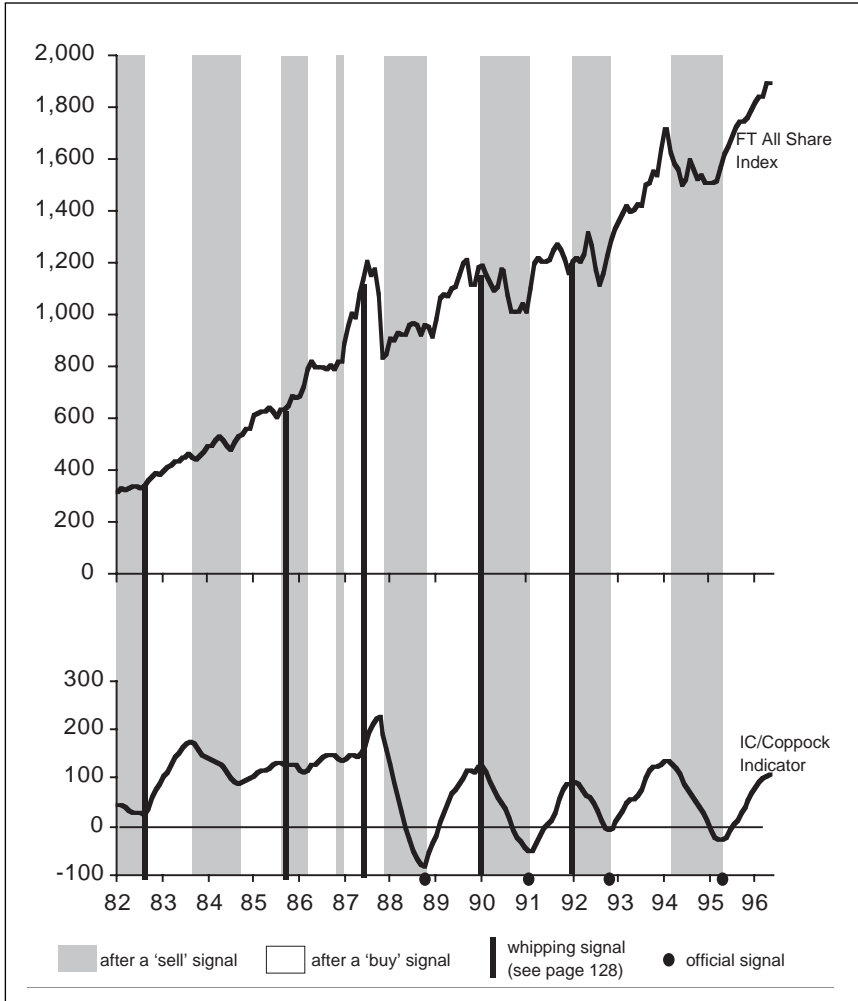


Figure 7.6 Coppock calls the All Share

In fact, the original Coppock *buy signals only* approach should not be discarded. It is clear from Figure 7.6 that although the signals have tended to be late, they have on every occasion (and this even applies to the unofficial buy signals except for that which occurred in 1986) been followed by a vigorous market for a minimum of four months before the next reaction began to take shape. The buy signal could therefore be taken as marking conditions in which it would pay to take an aggressive approach to investing, for instance, by gearing up a portfolio (i.e. buying shares with borrowed money) and buying call options, if that is the investor's style.

Figure 7.7 sets out in detail all the IC/Coppock signals from 1982 to 1996 and compares the effects of following these (with sells held to mean a switch into cash) with the strategy of simply buying the Index in 1982 and holding it through all ups and downs. Even though no interest has been allocated to the Coppock strategy when it is holding cash, it is clear that buy and hold leaves IC/Coppock standing.

		<i>Results from a starting capital of £100 in July 1982</i>					
'Official signal'	Date	Signal	FT-A All-Share Index (FTAS)	FTAS change by next signal	Signal good or bad ¹	Slavish IC/Coppock ² £	Buy and hold £
	7/82	buy	330	+2%	good	102	102
	8/82	sell	336	+6%	bad	102	108
	9/82	buy	357	+26%	good	128	136
	9/83	sell	449	+19%	bad	128	162
	10/84	buy	533	+19%	good	152	192
	9/85	sell	633	+8%	bad	152	208
	11/85	buy	684	-1%	bad	150	205
	12/85	sell	674	+17%	bad	150	239
	3/86	buy	787	+0%	-	150	239
	10/86	sell	788	+12%	bad	150	267
	1/87	buy	879	+12%	good	169	300
	4/87	sell	989	+8%	bad	169	326
	5/87	buy	1073	-23%	bad	131	251
	11/87	sell	828	+15%	bad	131	288
*	11/88	buy	949	+17%	good	153	337
	10/89	sell	1111	+6%	bad	153	357
	12/89	buy	1175	-2%	bad	149	348
	2/90	sell	1147	-4%	good	149	332
*	2/91	buy	1095	+6%	good	157	351
	12/91	sell	1156	+4%	bad	157	365
	1/92	buy	1203	+1%	good	159	370
	2/92	sell	1219	+5%	bad	159	390
*	11/92	buy	1284	+26%	good	201	492
	3/94	sell	1620	-3%	bad	201	475
*	4/95	buy	1566	+21%	good (so far)	243	574
	5/96		1890				

1 Based on performance between this signal and the next one
2 See text

Figure 7.7 Coppock compared with 'buy and hold' since 1982

Coppock also devised a short-term indicator which is said to have worked well in the USA, but not in the UK. He was working on a UK adaptation of this when he died in the mid-1980s.

Update for the 2002 edition

Oh dear! Coppock blotted his copybook. After years of waiting, the IC/Coppock indicator gave an official buy signal in March 2002 (Figure 7.8) when the All Share Index stood at 2,544. It had been six years since

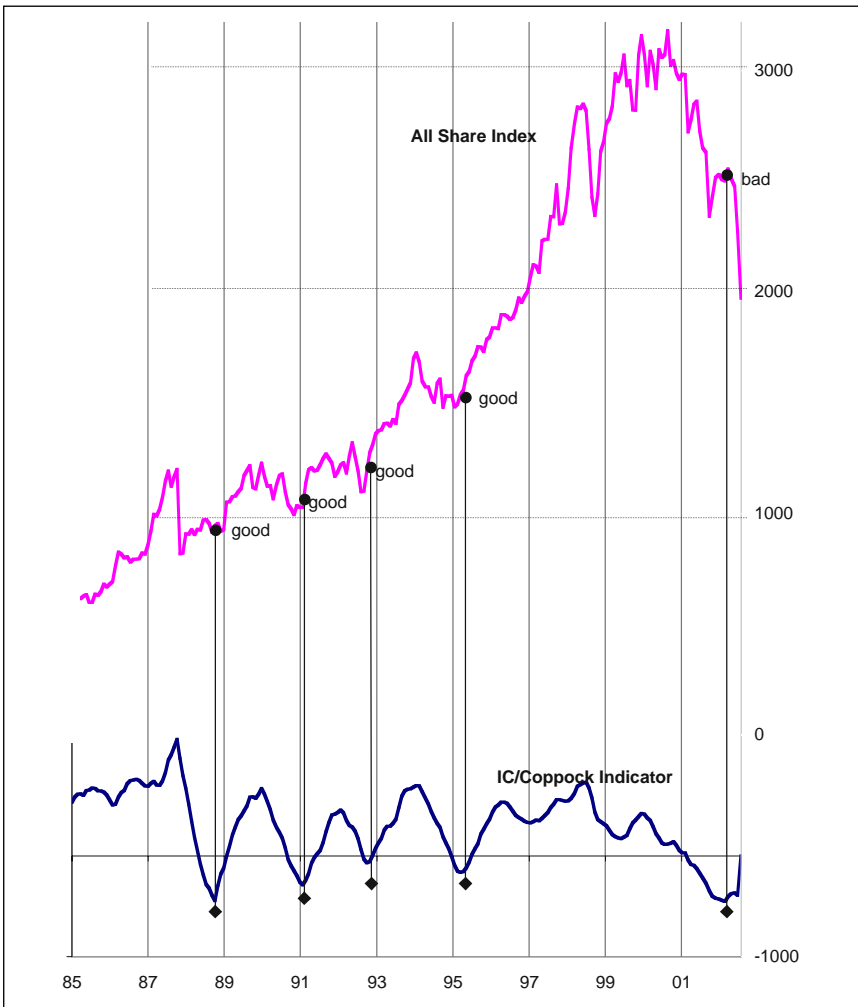


Figure 7.8 Official IC/Coppock buy signals since 1985

the previous one and this was only the fifth such signal since 1977. But unlike its predecessors it did not prove timely. Four months after the signal, the All Share touched 1,900, at which point anyone who followed the buy signal was 25 per cent poorer. It looks as though the mighty millennial bubble was more than Coppock could cope with. Maybe, when you have been hurt *that* badly, you need longer to grieve.

Writing in the summer of 2002, it is too early to conclude whether this Coppock signal is a disappointment or a disaster. But even if it does eventually redeem itself, the damage to Coppock will be lasting. The indicator never put you into the market at the bottom, but it had never previously put you in *before* the bottom.

OTHER CYCLISTS

Along with Dow, whose ideas were introduced in earlier chapters, Fibonacci, Elliott and Gann are the three biggest names in the charting pantheon. Coppock gets less attention than he deserves. Other residents include many proponents of the economic cycle: the idea that either investor psychology or economic lags, or both, predetermine, with one degree of accuracy or another, the ups and downs of the economy.

In the late nineteenth century, Clement Juglar proposed a 10- to 12-year economic cycle. In 1923, a Professor Kitchin put his name on a 40-month stock market cycle. Both are still quoted to this day. Some claim that Kitchin had simply uncovered a system which the Rothschilds had been using secretly and profitably to forecast interest rates since the 1820s.

In Russia, Nikolai Kondratieff published *The Long Waves in Economic Life* in 1925, an analysis of the history of capitalist economies since 1780. This postulated a 48- to 60-year cycle (neatly spanning Fibonacci's 55). As Stalin wanted to hear that capitalism was engaged in a process more terminal than a cycle, Kondratieff disappeared. However, another economist, Joseph Schumpeter, resurrected and revalidated the Kondratieff Cycle.

Keen technical analysts do not regard these cycles as mutually exclusive. In the manner of Elliott, they are inclined to see them as cycles of different degrees, and some make a pastime of superimposing the cycles upon each other to see when they all peak or bottom simultaneously. That would make a serious buy or sell signal. No one has owned up to getting rich by using this technique.

8

Whoever made money from charting?

Blowing off the roof

Trader Vic beats Soros

How Trout goes fishing

Kroll cashes up

Bolton's desert island request

It seems clear that under scientific scrutiny chart reading must share a pedestal with alchemy. There has been a remarkable uniformity in the conclusions of studies done on all forms of technical analysis . . . [its] methods cannot be used to make useful investment strategies.

Burton G. Malkiel, *A Random Walk Down Wall Street*

It is not knowable from what a stock did last month or last year how it will do next month or next year. Brokers' pronouncements on this subject are tea-leaf reading; fakery.

John Train, *Money Masters of our Time*

So says the opposition, which may well be 90 per cent right. Perhaps 95 per cent. But not 100 per cent. It would have been possible (although hard work) to identify six straight charting success stories to cover in this chapter. More representatively, a streak of failure runs through it too.

JESSE LIVERMORE

By reason of conditions known to the whole world the stock I was most bullish on in those critical days of early 1915 was Bethlehem Steel. I was morally certain it was going way up, but in order to make sure that I would win on my very first play, as I must, I decided to wait until it crossed par.

I think I have told you that whenever a stock crosses 100 or 200 or 300 for the first time, it nearly always keeps going up for 30 to 50 points – and after 300 faster than after 100 or 200. One of my first big coups was in Anaconda, which I bought when it crossed 200 and sold a day later at 260. My practice of buying a stock just after it crossed par dated back to my early bucket shop days. It is an old trading principle.

You can imagine how keen I was to get back to trading on my old scale. I was so eager to begin that I could not think of anything else; but I held myself in leash. I saw Bethlehem Steel climb, every day, higher and higher, as I was sure it would, and yet there I was checking my impulse to run over to Williamson & Brown's office and buy 500 shares. I knew I simply had to make my initial operation as nearly a cinch as was humanly possible.

Every point that stock went up meant 500 dollars I had not made. The first ten points advance meant that I would have been able to pyramid, and instead of 500 shares I might now be carrying 1,000 shares that would be earning me 1,000 dollars a point. But I sat tight and instead of listening to my loud-mouthed hopes or to my clamorous beliefs I heeded only the level voice of my experience and the counsel of common sense. Once I got a decent stake together I could afford to take chances. But without a stake, taking chances, even slight chances, was a luxury utterly beyond my reach. Six weeks of patience – but, in the end, a victory for common sense over greed and hope!

I really began to waver and sweat blood when the stock got up to 90. Think of what I had not made by not buying, when I was so bullish. Well, when it got to 98 I said to myself, 'Bethlehem is going clean through 100, and when it does the roof is going to blow clean off!' The tape said the same thing more than plainly. In fact, it used a megaphone. I tell you, I saw 100 on the tape when the ticker was only printing 98. And I knew that wasn't the voice of my hope or the sight of my desire, but the assertion of my tape-reading instinct. So I said to myself, 'I can't wait until it gets through 100. I have to get it now. It is as good as gone through par.'

I rushed to Williamson & Brown's office and put in an order to buy 500 shares of Bethlehem Steel. The market was then 98. I got 500 shares at 98 to 99. After that she shot right up, and closed that night, I think, at 114 or 115. I bought 500 shares more.

The next day Bethlehem Steel was 145 and I had my stake. But I earned it. Those six weeks of waiting for the right moment were the most strenuous and wearing six weeks I ever put in. But it paid me.

This is surely one of the most compelling passages in all the literature about investing. It comes from *Reminiscences of a Stock Operator* by Edwin Lefèvre. Every serious chartist has read this book. In fact the 'I' was not Lefèvre but Jesse Livermore.

Livermore was not a chartist as such. He knows the recent price histories of what he invests in without resorting to a chart, and he does not generally pay a lot of attention to previous support and resistance levels. All he is interested in is the trend of the moment: whether it is up or down, and as an occasional background matter, why the trend should be what it is. This too he knows without painstaking study. This is not to say that his knowledge was slight. Quite the contrary, he was always well-informed, but he appears to have soaked up this knowledge about the fundamentals almost without trying. His day was dominated by thinking about where the current trend was, not by research into which factors might take it elsewhere next week. On charts, he says:

I should say that a chart helps those who can read it or rather who can assimilate what they read. The average chart reader, however, is apt to become obsessed with the notion that the dips and peaks and primary and secondary movements are all there is to stock speculation. If he pushes his confidence to its logical limit he is bound to go broke.

There is a quadruple measure of irony in this. Even though Livermore clearly had an amazing handle on the extra that needed to be known above and beyond the chart, it didn't save him from that very fate.

During his time as a speculator on Wall Street from the turn of the century into the 1930s, Livermore made and lost four substantial fortunes. In fact, the reason why Bethlehem Steel purchase has to be right first time is that in the previous chapter Livermore is put into bankruptcy owing a million dollars. Livermore himself took up the pen, publishing *How to Trade in Stocks* in 1940. He needed to. He was broke again. Later that year, he committed suicide.

Despite this sad end and the message it holds for all chartists – that what comes can readily go – Livermore is considered one of the wisest people ever to turn charting, or something close to it, into a career.

VICTOR SPERANDEO

You have probably never heard of him, but Victor Sperandeo earned an annual average return which was double that achieved by George Soros's Quantum Fund in the 18 years to 1990, which was the first year he lost money. In *Trader Vic – Methods of a Wall Street Master*, Sperandeo quantifies his profits as \$10 million up to 1987. The disparity in their fame (and fortunes) is explained by the fact that Soros has been incredibly successful in recruiting other investors into his fund, and earning a fee for managing their money. Sperandeo's capital was around \$2 million; Soros's around \$2 billion.

Another disparity between the two lies in their performances during the 1987 crash. Soros (who dismisses charting) is reckoned to have made a loss of 25 per cent in October 1987, principally by buying before the plunge was complete. Sperandeo, who one month earlier had been quoted in the leading US financial weekly *Barron's* as fearing a crash, sold the market short after it opened 200 points down on 19 October. He made \$250,000 on the day.

Sperandeo is not a pure chartist. He says his style integrates 'knowledge of the odds' – he claims to be an excellent card player – 'the markets and their instruments, technical analysis, statistical probability, economics, politics and human psychology'. His book, and its successor (*Trader Vic II – Principles of Professional Speculation*) indeed demonstrates considerable learning in all these areas.

Nonetheless, technical analysis is a cornerstone of Sperandeo's style. And the type of transactions he carried out, which often required minute-by-minute analysis of prices to keep abreast of intra-day trends, were just what an idealised chartist would do, even if there was a different kind of thinking behind them than in pure technical analysis.

Sperandeo's technical analysis is founded firmly on Dow's theory. Not the bastardised version which he says the theory became after it fell into incompetent hands following the 1930s, but the pure strain set down by its original exponents (of whom Dow was only one). Sperandeo devotes a complete chapter of his first book to explaining Dow Theory with extensive quotations from Robert Rhea, author of *The Dow Theory*, published in 1932. The rest of the technical component of Sperandeo's style comprises momentum oscillators, moving averages ('I never buy a stock when prices are below the moving average'), and relative strength – not the Welles Wilder version – which he uses as secondary indicators.

MONROE TROUT

Monroe Trout was a Harvard graduate who worked for a famous hedge fund manager, Victor Niederhoffer. (Much later, Niederhoffer closed his fund after a disastrous run of investments.) In 1986 at the age of 24, Trout set up his own hedge fund, Trout Trading Company.

He was one of the interviewees in Jack Schwager's book, *The New Market Wizards*, published in 1992. At the time, taking his personal trading records straddling the launch of Trout Trading, Trout had achieved an annual average return over five years of 67 per cent, combined with a stunningly low level of risk.

He didn't keep it up but he did well enough. Trout retired in May 2002 at the age of 40, quoting an average return for the hedge fund over 14 years of 21.5 per cent with no down years. At the time he retired, Trout Trading claimed total funds under management of \$3 billion.

As with everybody else in this chapter, there's a lot more to Trout's success than technical analysis. However, in the Schwager interview he reveals several pure charting tactics. In an echo of the Livermore story above, he argues for the appeal of round numbers, which he calls the 'magnet effect'.

Like Sperandeo, Trout considers moving averages a useful tool. As to Fibonacci, Gann's fanlines, Welles Wilder's RSI and stochastic, he says, 'I haven't found anything there.'

Trout decries the typical amateur trader whose research is what their broker tells them or what they read in the weekend press and who 'think you can make 100 per cent a year . . . That's ridiculous'.

Schwager's introduction to the book gives a tangential message. Despite dominating the market in tomes on technical analysis (see Further Reading) and holding a senior job with a prominent New York securities firm, Schwager is basically a writer not a doer, or at any rate was at the time he wrote the two *Wizard* books. He describes how, encouraged in part by interviewing the Wizards, he resumes the trading activity that he had earlier given up because of his lack of success. Several months later, as his profits neared breakeven, the resumption is terminated. Schwager had another unsuccessful try at money management in the mid-1990s.

STANLEY KROLL

Like his hero Jesse Livermore, Stanley Kroll was unable to sustain his success. Kroll started in the investment business as a commodity broker in 1960 with Merrill Lynch, carrying out trades placed by retail customers. Over 13 years he had 1,000 customers of whom 1,000 lost money.

By the early 1970s, Kroll had switched from being a broker to running money for himself and a few friends. In three years he turned his own \$18,000 into over \$1 million, and quadrupled the money he managed for others. Kroll recounts his investment philosophy in *The Professional Commodity Trader*. It is full of trends, corrections and likely retracements. Unlike Trout, whose typical holding time for a speculation was under a week, Kroll ran his biggest positions for months. This may be something to do with the fact that his successes happened 20 years ago, although in theory the same should be possible now. He recommended the broadest and most liquid markets because they demonstrate the most identifiable

trends. Wheat was a favourite: at one point he owned the equivalent of a 25-mile-long trainload of grain, which earned him and his partners \$1.3 million: worthwhile at any time, and more so in 1974 dollars.

Kroll kept a postcard on his desk bearing a quotation from *Reminiscences of a Stock Operator*: 'Money is made by sitting, not trading.' His approach was always to have under review the charts for several commodities, and wait for one of them to develop an obvious trend. He had no time for point and figure charts, preferring line charts. He did not use moving averages.

After the grain coup, Kroll wound up his business and retired, even emigrating to Switzerland. Bored, he returned and failed to rediscover his earlier success.

ANTHONY BOLTON

Many readers who recognise this name will be surprised to see it here. Anthony Bolton is a fund manager at the UK arm of Fidelity Investments, an American company which is probably the world's leading provider of mutual funds and unit trusts. Fidelity's reputation is based in large measure on an army of in-house analysts, who support its fund managers by maintaining close contact with the companies in which Fidelity invests. They run a relentless programme of interviewing company managements. This style sets it apart from many of its rivals, who instead start off from an *asset allocation* framework. Asset allocation, normally worked out by a committee, provides an overlay by which the investment fund tries to ensure it doesn't miss out on broad trends: 'We want 10 per cent of the fund in Japan. In the UK segment, we want 8 per cent in pharmaceuticals . . . we should be underweight in utilities', and so on. Fidelity's preference for the straightforward hunt for under-valued companies – whatever their sector – is known as a *stock-picking* approach.

Many regard Anthony Bolton as the stock picker par excellence. He runs Fidelity's £2 billion UK Special Situations fund. Since he took it over in 1979, the fund has achieved an average annual return, from inception to date, of over 20 per cent. Until 2002 Bolton also ran a large European fund which was extremely successful as well.

Although stock picking and fundamental analysis are two sides of the same coin, Bolton says, 'If I were on a desert island and allowed just one investment tool, it would be the chart.' Bolton is not a technician in the

sense used in this book (of one who relies wholly or principally on charting signals), but he sees the technical approach as a central component in his success. Early familiarity helped. At the small investment house where his career started:

The fund managers were supported by three specialists: an economist, a chartist and a fundamental analyst so I grew up blending charts and fundamentals. I know others who have little time for charts. Perhaps they weren't part of their formative environment, but for me charts have always been an important tool.

When considering whether to invest – or disinvest – in a share, Bolton looks to the chart to confirm a view he has arrived at from studying the fundamentals. If it doesn't, he will go back to them for another look. This is especially true when he is considering larger companies:

It's easier to know all the fundamentals about a small company: there's less to know. Here, I might use the chart to time an entry. However with a large stock, there can be so many fundamentals affecting its performance that you can miss one that's crucial. But they're always there in the chart, because it reflects everything everybody knows about it. I'm unlikely to invest in a large stock if that means going against the trend I see in its chart.

The fundamentals can tell me something is good value, but I also like to know that others can see that too, or aren't taking the opposite view. A share doesn't perform unless a weight of money gets behind it. The chart tells you whether it is getting into position.

The main trend and changes in it are what Bolton is looking for. He has little time for the *classic patterns* covered in Chapter 3, nor does he regard any of the battery of mathematical indicators of Chapter 4 as individually significant. For him, a key weathervane is relative strength, in the sense of the share's performance relative to the market. This, and broad chart-derived impressions that turning points have arrived and/or new trends have commenced, is what he takes out of charts. Consigned to a desert island with just technical analysis to go by, Bolton would be trying to invest on the basis of trends alone, and these would be the runes he would read to catch them.

Despite his views on the mathematical indicators, he subscribes to a proprietary charting service, QAS, which uses a number of techniques redolent of the mathematical approaches described in Chapter 4. These are knitted into a single line to illustrate the price prospects of a share. It runs off the resulting graph for every share in Bolton's portfolios once a

month. Bolton gives this a lot of attention, valuing not only the technical insight it provides, but also the fact that it puts onto the same footing shares in different sectors and different national markets and with different financial reporting policies. Trying, often vainly, to standardise for these factors is a major frustration for fundamental analysts. Just prior to our conversation, a QAS chart had been the deciding factor in his decision to sell a large holding, a decision which his in-house analyst, working from the fundamentals, had argued against. Sure enough the share in question lost ground in the succeeding months.

Bolton does not have a detailed appreciation of the individual components that are knitted together into the QAS chart. Like many much purer chartists, he is happy to use what he finds to be a good indicator without feeling the need to understand the recipe.

Using terminology which echoes core charting creed, Anthony Bolton says:

At the end of the day, regardless of the fundamentals, the stock isn't going to turn until the last seller has sold. For me, listening to the fundamentals is vital, but they can change, or start to change, well before the people who are amidst them appreciate that they have done so. In my experience a chart, which is the bottom line of all investors' perceptions of an investment, is a good way of double-checking the fundamentals. Charts don't always give me the right conclusion but on average, I believe they put me ahead for this bit of the investment picture. They are an indispensable part of my framework.

CRISPIN ODEY

Crispin Odey cut his teeth as an equity fund manager at Barings in the 1980s. In 1992, he left to set up a hedge fund which had a blisteringly successful first 12 months at the end of which he found himself running over \$1 billion. Then his performance went into reverse, quickly followed by his popularity amongst his clients. Two years into his solo performance, the finale seemed to be just round the corner. Instead, Odey rediscovered his form and by 2002 could claim an average annual return over the ten years since starting the fund of 17.1 per cent, compared with a return in the benchmark index of 6.9 per cent. He also claims much lower volatility than the benchmark: 'The biggest reversal in our European Hedge Fund at any point over the last three years was 3.5 per cent, and we soon recovered that. This is during a period

in which the market is off 30 per cent.' By 2002, total funds under management at Odey Asset Management had climbed back to \$1 billion.

Odey is in absolutely no doubt that charting has been a vital ingredient in this impressive comeback. 'I was a straight stockpicker when I left Barings. Now I see that I was operating with just one eye. Charting gives you perspective – a second opinion. These days, I wouldn't make a major investment unless the chart supported it. For instance, BSKyB's fundamentals have looked very attractive to me for the last two years. In the early days I would have bought a big position and sat on it. But the chart has never supported my bullishness. So I have restricted myself to brief in-and-out trades when the chart showed a correction was on the cards.'

Odey's baptism into charting is well recorded. His first tremendous year was due in part to a huge bet on 'War Loan', an obscure government bond issue, of which Odey's fund at one point owned 35 per cent, thanks to his optimistic assessment of its potential to respond to the improving outlook for inflation. But after War Loan had risen by 40 per cent – which, based on Odey's reading of the fundamentals, was merely the first course – it went remorselessly back to its starting point, 'and by then I had lost nine tenths of my clients'. At this juncture War Loan turned around again and now delivered a 100 per cent advance, which was more or less what one Brian Marber had advised Odey would happen during the preceding downleg – *but only after the downleg*. The 100 per cent was too late to bring the clients back. But it marked a point not too soon for Odey to seek further charting input from Marber.

Marber is a well-known chartist who in the 1970s was year after year rated the City's top technical analyst by the Extel poll of fund managers. In the 1990s, he branched out from analysing stock markets to analysing currencies, setting up a one-man firm which built a big reputation and a valuable client list. However, by the time Marber was delivering Odey advice about War Loan, he was also winding down his business as retirement beckoned. Nevertheless, he agreed to the proposal that he should become Odey's two days a week in-house chartist.

Says Crispin Odey: 'Having Brian is like having a golf pro. He's seen it all before, and knows what works. We insist that everyone here has at least reviewed the chart and formulated an opinion before making a decision about an investment. What Brian does is give them a sounding board against which to test that view.'

Odey says he's not prescriptive about charting styles. The charting measures upon which he personally puts most weight are volatility and

'classic Dow theory – higher highs and all that'. But his colleague Hugh Hendry is apparently a dab hand at interpreting Japanese candlestick charts. 'The only style we don't have here is Fibonacci. They're always redrawing their charts – it drives you bonkers.'

Although Odey became a charting enthusiast, in 1999 he found himself very sceptical about what is likely to turn out to have been the biggest and clearest charting message broadcast in his lifetime. 'As the tech bubble got into gear, tech stocks performed breakout after breakout, and I couldn't understand why because I just couldn't see any logic behind it. In the end I handed over a big portion of money to Hugh and he did very well using all the techniques that I refused to have anything to do with. That was very helpful in educating me that you should follow the charts.' The charts also tipped Hendry out of the bubble fairly neatly. He and Odey both say that whereas there are multiple methods for arriving at a decision to buy, there is usually only one way to arrive at a sell decision, which is that the chart turns against you.

Odey goes on to argue that at other times you should follow the fundamentals and ignore the charts. He doesn't get very far in explaining how to know, at any particular time, which technique should be in the ascendant. He does, however, explain a dramatic effect of his conversion to charting. Back in 1994, during his do or die embrace with War Loan, he used to turn over his fund about once every four years. If you multiply that turnover rate by 90, you will get to his current turnover rate of once every two weeks.

Postscript

I asked Marber why, with a reputation such as his and 40 years experience, he wasn't a habitué of *The Sunday Times* Rich List. He replied as follows:

'I did run some money once. I made 30 per cent in three months then lost it. I made it back, then lost it a second time. I never tried again. My rationalisation of this contains two elements. One: I cannot get sufficiently comfortable with losing money. It just makes me feel such a burk. All the great traders have a psychological accommodation of losses that is beyond me. The second thing is maybe another angle of the first thing. I am very disciplined. I only see black and white. But good traders have a feel for the greys. To make big money, you need discipline, but you need to imbue it with a touch of fantasy.'

CONCLUSION

Independently documented successes of successful long-term results from technical analysis are hard to come by. In fact, the only reliable large-scale source is the writing of Jack Schwager and it is clear that several of his 'wizards' do not sustain the success that causes him to write about them. Although most successful technical analysts back up their use of technical tools with an appreciation of the fundamentals, it would be unreasonable to say that disqualifies them from the category. Like stars in any sphere, they demonstrate 110 per cent commitment to their occupation, to which each also brings a unique and indefinable flair.

Successful technical analysts operate to a set of trading rules. There are long lists and short lists. Sperandeo's has 19 rules, including 'Stick to the rules'. These lists always read as if they were an obvious recipe for success and would be easy to follow, which they clearly are not. Different people's lists are in part contradictory. However, they all contain four common themes. Two of these about cutting losers and staying with winners are known to everybody. The third addresses risk, which typically means never allocating more than 5 per cent of available capital to a single deal. Larry Hite, a US trader who found great success in the 1980s, says he never exposes more than 1 per cent of his equity to any individual trade (but he didn't start that way!). Technical analysis is a numbers game. The fourth is 'Know yourself'.

9

A modest grapple with real life

A look at some real charts

20 charts to study

What the professionals said

A non-random finding

Chartists have written many books on charting. Normally these are, quite reasonably given their authors' points of view, stuffed with charts showing live occurrences of the patterns they describe. All carefully selected. Most books also show an example or two (sometimes more, see Jack Schwager's *Technical Analysis*) of failed patterns. But inevitably the emphasis is on patterns that gave good signals.

This chapter is coming from the opposite direction. The idea was to take an arbitrary but reasonably broad and representative selection of share price charts and to search through them for charting signals. How many 'good' (i.e. profitable) signals would you find in, ten years of such share price charts? And how many bad ones? How often do you get a clear signal? How often a fuzzy one?

NOT A SCIENTIFIC TEST

This chapter includes share price charts for each of the UK's 20 largest companies from October 2001 to May 2002. That's as arbitrary, broad and representative as it was practical to get within these covers. It is not a scientific test of charting. In fact, it amounts to an anecdote. A thorough examination would, in my view, have to look at several hundred years' worth of share price charts (i.e. 10 to 15 years' worth for many dozens of companies). All the same, this is a good starting point. These are the shares that many of the readers of this book will be looking at to exercise their charting skills. You're not going to launch upon a multi-year, multi-share study; you're going to be doing it in real time. What follows is what you're going to be doing. This is meant to be an earnest, if modest, grapple with technical analysis in real life.

I have absolutely no doubt that many professional chartists will find many of the interpretations I have arrived at unsatisfactory. I also have no doubt that they would find each other's interpretations unsatisfactory. The point is that there are no definitive interpretations. If there were, there wouldn't be a stock market – the chartists would own everything.

A SPRINKLING OF EXPERT VIEWS

In fact, in addition to providing my own analysis, I also looked at what a number of professional chartists had said about the shares in question during the period covered. I do not claim to have studied everything they said, so my apologies to them if, unknown to me, they changed some of the views that I have recorded here after publishing the circulars I have seen. Some of their recommendations were rivetingly accurate. Others were bad. Sometimes their stop-losses served them well. Sometimes they robbed them of a prize they appear to have foreseen, by taking out the trade (i.e. forcing a position to be sold) on what turned out to be a short-lived pullback. I do not know whether these chartists were net up or net down on their recommendations during the period. The sources in question are as follows:

- *Investment Research of Cambridge* is a historic brand in UK charting. In the 1950s its founder, Alec Ellinger, wrote a good book about charting, *The Art of Investment*, which was recently republished. IRC was taken over by Brown Shipley, from which it still pumps out a full-scale charting service focusing on coverage of the FTSE-100 for institutions.
- *Sharecast.com* is an investment community website owned by stockbrokers, Durlacher. It is one of the distribution channels for the research of Durlacher's technical analysis team.
- *MorganTech* is the corresponding team at the giant investment bank, JP Morgan Chase. It has a global view and its output is aimed at institutional investors. The Morgan tech team has a very pure charting style, dedicated to share price relatives.

- *Chartanalysts* is a division of Stockcube, a small independent equity research company based on the merger of the investment newsletter, *FullerMoney*, and the long-established US charting firm, Chartcraft. Chartanalysts specialises in point and figure charts. Other divisions of the company use conventional line charts.
- *Chart Breakout* is an independent tipsheet, which blends technical and fundamental analysis.
- *John Urbaneck* gave up his job in March 2000 to become a day trader, and documented his experiences in a weekly column in the *Sunday Times*. You should be able to track this very valuable chronicle down on the *Sunday Times* website.

I should also credit here *Trendsetter Software* whose Personal Analysts software I used to create many of the secondary charts. I use an Apple computer, which means I am unable to use most of the market-leading home charting packages, since they only work on PCs. However, Trendsetter software is very good and is expressly designed for Apple computers. Trendsetter's website is www.trendsoft.com.

A SYMPATHETIC HEARING

I have tried to give technical analysis a sympathetic hearing in this chapter. In fact, I may well have been too sympathetic. Of course I had in front of me the outcome of every pattern or proto-pattern I was looking at. There is no doubt that this makes the examination of past charts for past patterns a misleading exercise. The human eye prefers order to chaos. If you've spent a few months studying charts of top formations preceding price declines, you're going to examine the prices preceding a price decline for top formations. Somehow, top formations preceding price rises will tend to be less prominent. In fact, they may transmute into continuation formations. *You should try not to fall into this trap.*

HOW TO USE THIS CHAPTER

Each graph is shown twice: once on a right-hand page with no comment, then again over the page with my mark-ups and comments. This is the chapter where you can try your own hand. Look at the graphs on the right-hand pages before turning over. In fact, put your hand over the right-hand half of each of these graphs and move it rightwards slowly, stopping regularly. Ask yourself, as you do this, what you think is coming next, based on what you can see in the graph to date. Can you see a double top? What happens to the volume as the neckline is severed? Would you expect the price to fall away next? Does it? Has the share made a breakout above its trend? A significant one? So would you expect it to move on upwards? Does it?

I am sure you will see some legitimate patterns that I haven't spotted. And yours may well be the 'correct' interpretation, if you think there is one.

The graphs use candlesticks to show the main price action. However, I have not limited myself to a candlestick analysis. Indeed, I haven't limited myself to any particular type of analysis. Some of the charts are discussed in terms of candlestick signals, others in terms of the conventional western patterns. Some, in both. I looked at each chart carefully and recorded what seemed to me to be its most prominent features, whatever language they were written in.

RANDOMNESS IS RESTRICTED

One conclusion of this exercise was my surprise at how often there was something to say about the charts. Given that the selection of the shares covered was arbitrary (true, they're not an arbitrary selection in that they are the largest quoted companies, but that doesn't mean they have a tendency to dance out chartists' patterns), I expected to find next to nothing to say about many of the graphs. In fact very few fell into this category. On reflection, I believe this is because, despite the fact that day-to-day share price movements may be random (that's what I mostly believe), this randomness is restricted. On each day, share prices can only

do one of three things: they can go up, down, or stay unchanged. Take several days in succession and there are still a relatively small number of things the prices can do (go up and down like yo-yo, go up then down, down then up, go up and up, down and down . . . etc.). Moreover, prices tend not to move by very large amounts over short spaces of time. Sometimes they do, of course (see the Vodafone graph), but on the whole tomorrow's close is likely to be within, say, 5 per cent of today's close. Further, a reaction next week or next month can only take the share price to one of three places: above, below, or at the same level as last week's reaction. It will also be in one of these three positions relative to last month's reaction. And to last year's all time high. And so on.

So, although prices may move randomly, they tend to do so on a restricted basis. Now, relative to the number of things a share price can do, the chartists have got plenty of patterns at their disposal. If a share is going to recover from a low, it might hit that low once, twice or three or more times. The chartists have got all of these tabbed. If a share is going to pause in a certain price area after a rally, it can stay there for a short time or a long time. It can bounce up and down between two fairly well fixed prices, or it can wiggle into a diminishing range. Or in a widening range. For short and diminishing, read *pennant*. For long and widening, read *broadening formation*. For between two fairly well-defined prices, read *rectangle*. Of course, it can also do none of these things. It can *spike*. It can carry out a *key day reversal*. It can *gap*. It can even do something for which the chartists haven't got a name. But a lot of the time it will be doing something for which they have, because they've got lots of names.

GET A SYSTEM AND LOOK TWICE

In a number of the charts, I explore the trades that might have been carried out by a chartist working with these charts in real time. Some are profitable; others, not. I did not carry out any of these trades and I do not say they were the 'right' trades to do in the circumstances. They are simply an effort to elucidate the practicalities of charting, including a fear of giving up a profit already made, and the inevitable loss of profits made through hanging on too long. That's why few of the trades, if any, result in the theoretical maximum

profit being earned. Like the patterns I have identified, I am sure some of these suggested trades have the benefit of hindsight. It's inevitable. There is no thorough-going 'system' driving either the entry or exit from any of these trades. I am not a chartist and I don't have a system. All the suggested trading actions are (or would have been) seat of the pants decisions. Some days, I was wearing worn-out jeans. On one or two sunny days, I wore shorts. Don't look for consistency in these trades. However, if you are going to trade on charts, for heaven's sake get yourself a consistent system.

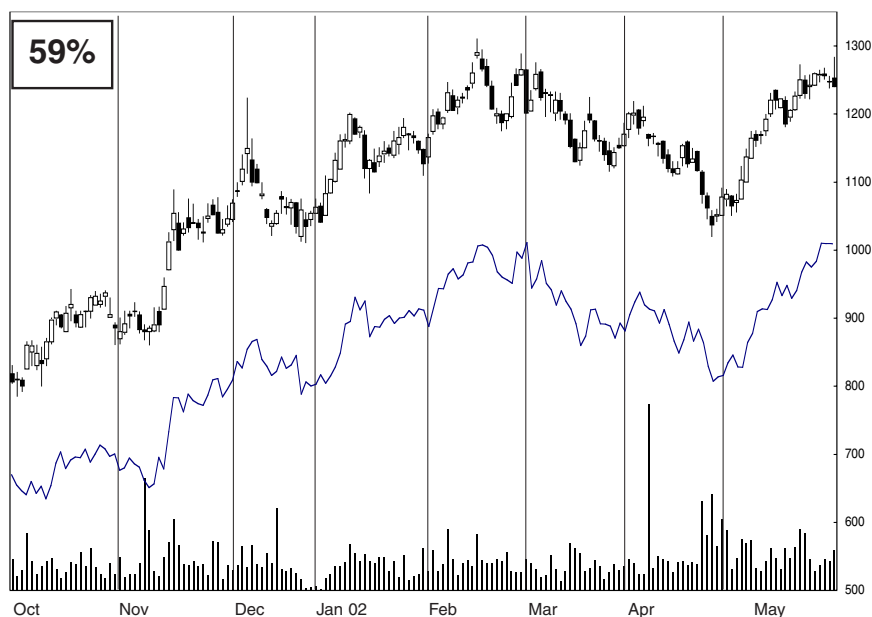
Two final observations before launching into the charts. First, I saw different things in these charts the second time I looked at them. And often, different things again, the third time. Sometimes, a pattern that looked compelling one week faded away when I came back to the charts again. This wasn't just the learning curve. Remember – there is no definitive interpretation. Or at least there is very rarely a definitive interpretation when looking at past outcomes. What subsequently happened, halfway across your chart, rationalises what went before. And in real time, when you're forecasting what's coming next, there really is never a definitive interpretation.

Lastly, I remind you again of what I said in Chapter 3: always examine both the vertical and horizontal scales. I have seen alternative printouts of many of these charts. I have seen them with closing prices only, and over longer periods with fewer price points (say weekly prices over two years). I have seen them scrunched up into two-inch wide charts and stretched out into screen-wide charts. It's disturbing how different the same information can look. Daily bar charts, such as the candlesticks used here, show all the price action. That can make or unmake a head and shoulders, or any other formation. What looks to the eye under quick examination like an amazing trend that's all set for a top can look like nothing of the sort if you change the horizontal or vertical scale. If you're going to explore charting more deeply, I urge you to (a) use daily bar charts; (b) always examine a chart from a second viewpoint by wrinkling one or both of the horizontal and vertical scales. Check out that what you think you see close up doesn't disappear when you give it some perspective.

Remember – each graph is shown twice: once on a right hand page with no comment, then again over the page with my mark-ups and comments.

I suggest you keep a good magnifying glass handy when reading this chapter.

Key to Chapter 9 figures



The percentage figure in large type shows by how much the highest price on the chart exceeds the lowest price. This should help you interpret the significance of the price movements. It is only shown on marked-up charts.

The top line is the price history, using Japanese candlesticks. These show open, high, low and closing prices and also whether the close was above the opening (white candlestick) or below it (black). Japanese candlestick charting is discussed in Chapter 5. The scale for the candlesticks is on the right axis.

The middle line shows the relative strength of the shares compared with the FTSE-100 Index. Relative strength is discussed in Chapter 3. There is no scale for this line. If the share price is rising faster than the index, the line rises and vice versa. Often this line will seem merely to mimic the line above and therefore to add nothing to your understanding. However, on those few occasions when this is *not* the case, it may be deeply significant. Have a look at Figure 9.3.

The lower bars show the number of shares traded during the day (or *volume*). Occasionally, massive volumes are recorded, perhaps 50 to 80 times the average. This is not untoward and simply denotes that a large shareholder has succeeded in selling a large shareholding in one hit rather than by the usual method of selling it in many small parcels over a long course of time. Again, there is no scale for this item: what is important is not the actual volume but the relative volume.

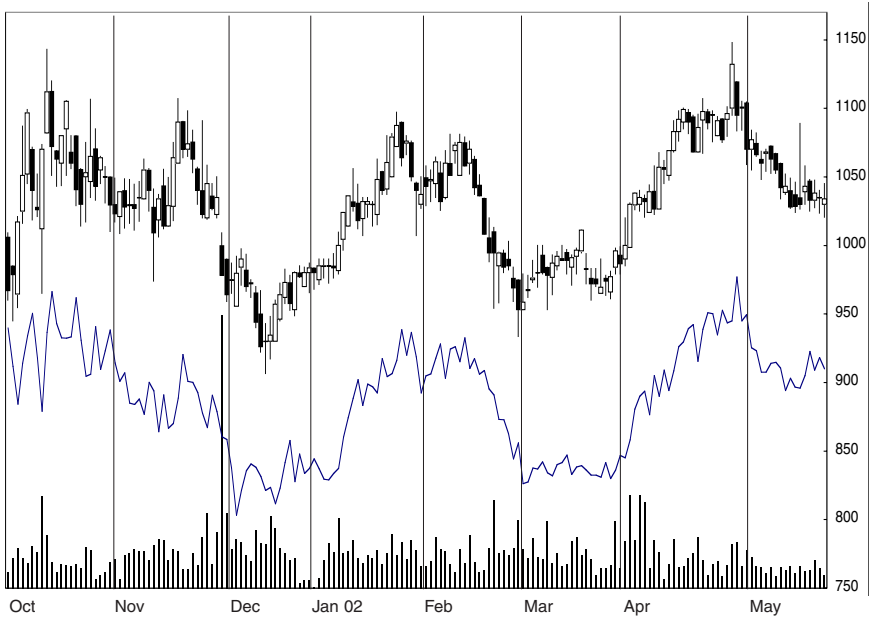


Figure 9.1a Abbey National

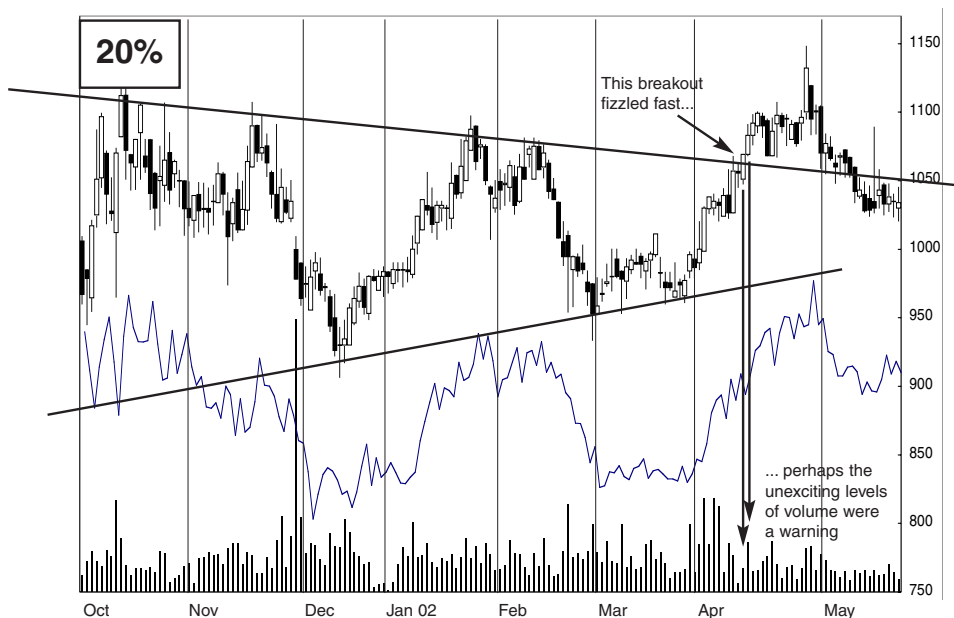


Figure 9.2b Abbey National (ANL)

This chart shows seven points of definition of this triangle, but there is an eighth on the bottom side on 12 September. So, if I had been following this share, I might have been quite anticipatory about the breakout in April 2002. But I don't think I would have made any money out of it. After you have got into the share at say 1070p, there are no decisive indicators, so you are left having to interpret the noise as best you can, and the noise in mid-April was pretty discouraging. If that hadn't shaken me out, I would have run into that magnificent up day three days before the end of the month – which also gaps from the preceding day – and anticipated great things. Yet within three days my trade would have turned into a loser, and would quite likely have been closed down by a stop-loss in May.

My June 2002 analysis: the rising lows, which date back to early 2000, are mildly encouraging, but I don't see any features compelling enough to warrant any kind of position in the share.

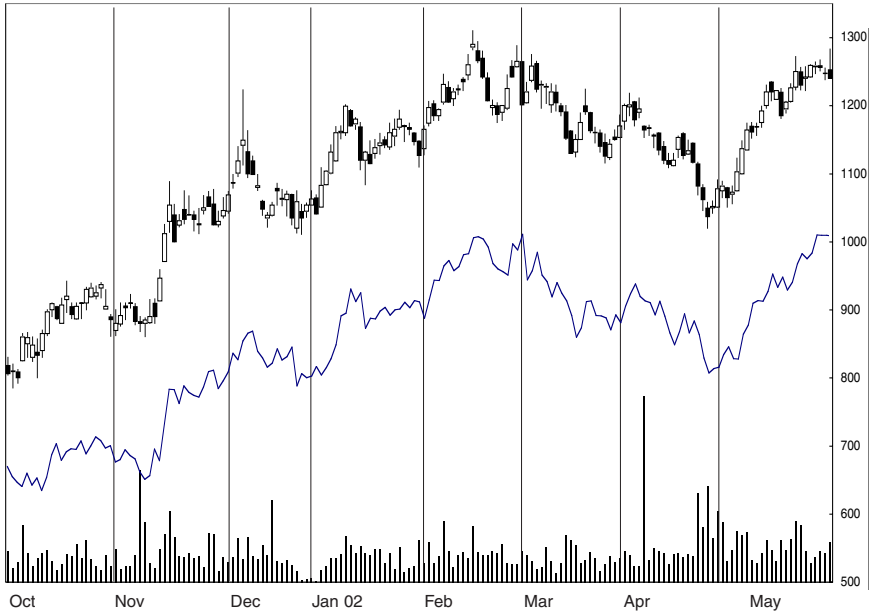


Figure 9.2a Anglo American

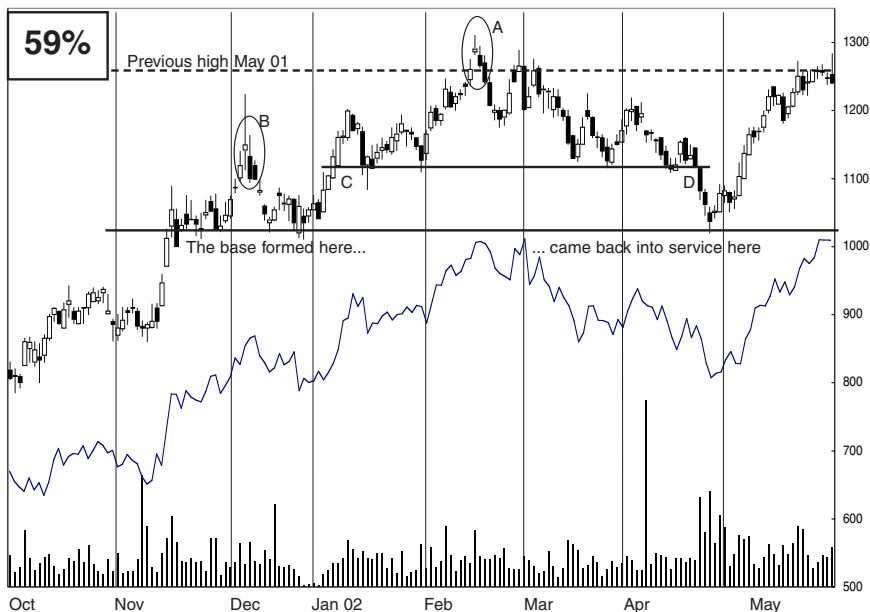


Figure 9.2b Anglo American (AAL)

With a low to high span of 59 per cent, Anglo American is the fastest rising share in this chapter, and indeed, during this period was reaching career highs (on the arguable basis that its career started with its London flotation in 1999). Although I see no features of burning significance here, there are a few aspects worthy of note, such as how the pre-Christmas base provided a floor when the shares were on the slide in April 2002. It is also intriguing how little conviction is shown at A when the shares break through their previous high. Perhaps this was an indication that the next phase was going to be disappointing. But in looking at an uptrend initiated at 700p following the World Trade Center bombing, what we should be looking for are top patterns, indicating that the trend is over. There are several, but none is convincing.

The first I noticed is a Japanese candlesticks evening star formation (Figure 5.3) at point A, but then isn't that one at B, too? In fact, I would say that neither is delineated with sufficient boldness. Remember that the best signals do not need a magnifying glass and a lot of contemplation – they will LEAP OUT at you.

Alternatively, consider the quite complex head and shoulders starting at either the left or right of C. On 26 April with the shares then at 1037p, IRC moved the shares to their bearish list on the grounds that the down day at point D marked the completion of this head and shoulders 'which now implies a test of the 1000p level'. Yet this 'should not damage the long term uptrend'. The test proved less of a challenge than feared and in fact the low had already passed. On 9 May, with the shares back to 1164p, IRC moved the shares back to neutral.

My June 2002 analysis: the shares look healthy but are reluctant to get into new trading territory. I'd be positive if they relapsed to 1030p and then recovered to 1050, or if they got past £13.00.

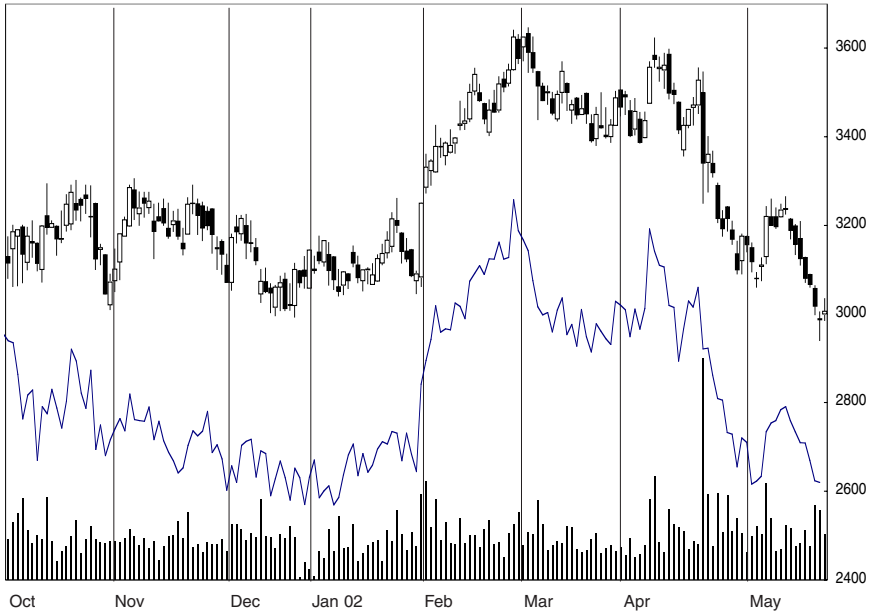


Figure 9.3a AstraZeneca

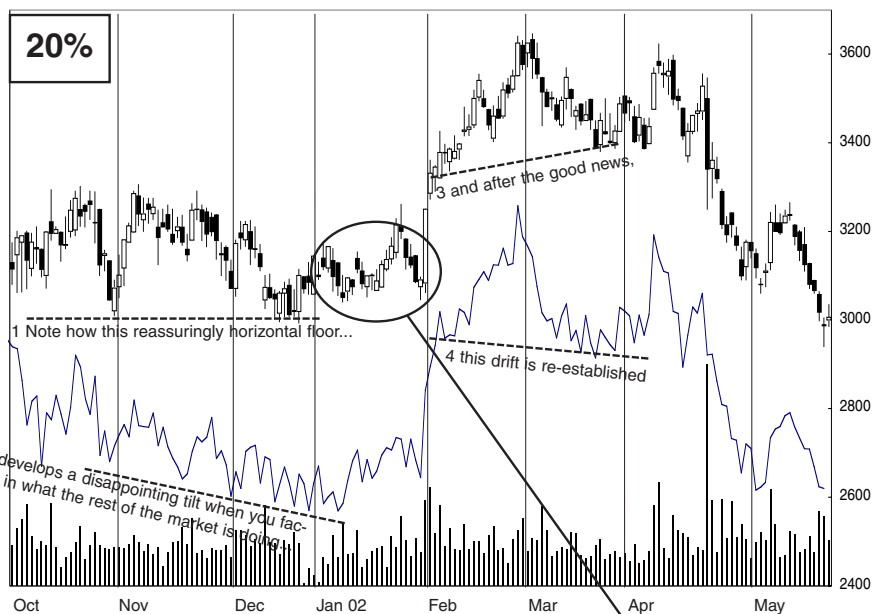


Figure 9.3b AstraZeneca (AZN)

The two big features here are not portended by any chart patterns; instead the driving force is provided by fundamental events.

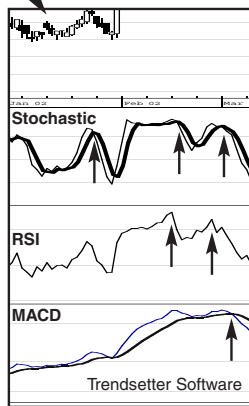
On the last trading day of January and again two-thirds of the way through April, AstraZeneca was the subject of perception-shifting news items. The first was a routine quarterly earnings announcement which reassured the market about outlook. The second was the late April news that US approval of a new drug was taking longer than expected. Of course, charting offers no means of anticipating such events.

Lest you are not convinced, here are the readings of three key secondary indicators for the relevant period. None offers a convincing buying signal – this includes MACD – its apparent near-miss occurs in the middle of the MACD chart, not in its lower, action-is-called-for margin. The selling signals these indicators each come up with from mid-February (indicated by arrows) are not much use, either.

The one charting feature I detected here that does seem useful is the divergence between the share price and the share price relative, which suggests that although the share is capable of reacting to good news, its tendency is to ebb.

A week after the end of this chart, AstraZeneca made another downwards lurch. JP Morgan's Technical team, whose guiding light is the share price relative, highlighted its gloomy outlook.

My June 2002 analysis: this chart reinforces my long-standing conviction (based on fundamentals) that big pharmaceutical stocks are over-rated. This share seems more likely to fall than to rise.



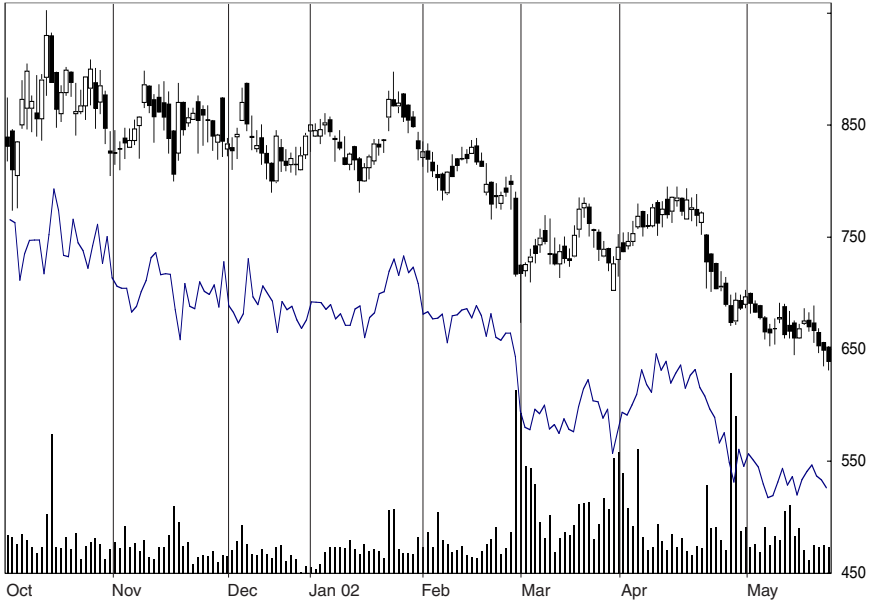


Figure 9.4a AVIVA

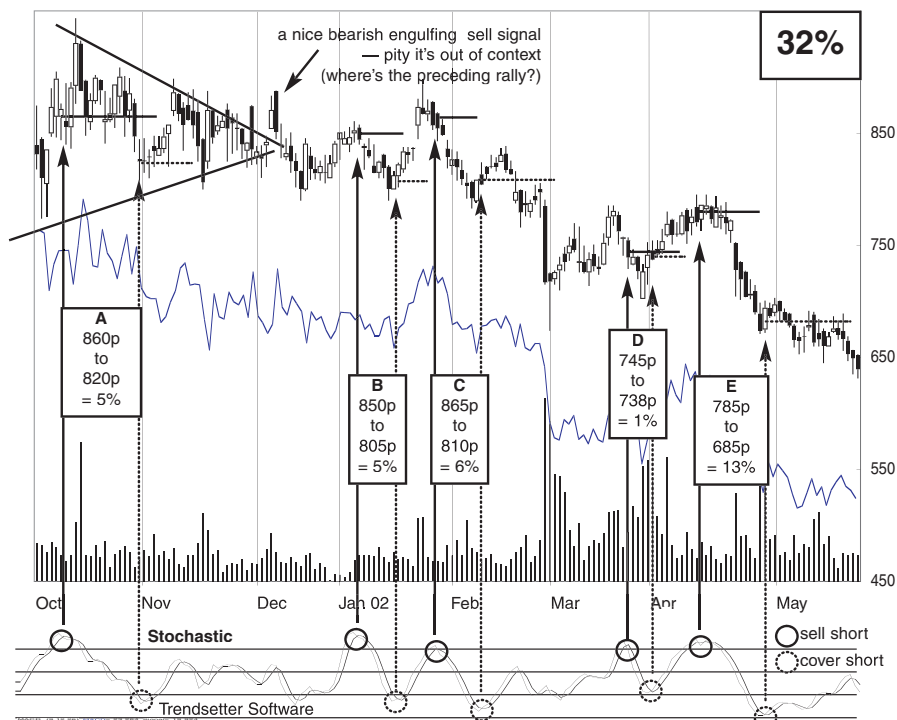


Figure 9.4b AVIVA (AV.)

Of course, there's always F, which works out at 840p to 650p, or 23 per cent, and an awful lot less work.

Where am I coming from? Since the main trend is exceptionally well defined and the subrends are as regular as clockwork, stochastic should generate good trading signals. Voilà, there it is, in this case generated by Trendsetter's default settings of 13-day %K and 3-day averages.

In view of the downwards direction of the chart, the best course of action seems to be selling the shares short using a spread bet or a contract for differences. My simple trading rule was to follow the signals as they emerged. The result seems quite pleasing, generating more than enough gross profit to meet the costs of trading. But not enough to tempt me to do this for a living.

Could the trading system be improved? Individual trades could be improved, but whether you could improve the trading system itself is another matter. Three days after A is initiated, the candlesticks give a classic top signal – the bearish engulfing formation (dark candlestick whose extremities are higher and lower than the day before's). Had this been used to initiate the position (rather than the stochastic over-bought signal), the profit from trade A would have doubled. But by my reckoning, if on this chart you make your trading rule 'candlestick signal plus stochastic confirmation', you don't do as well overall.

The up day half of the early December bearish engulfing formation noted in the chart wrongfooted Sharecast.com, which saw that it was a breakout from the triangle shown (which dates back into September). Citing the supporting highish volume, it made CGNU a buy.

My June 2002 view: it will fall further. Don't assume a base is developing unless all the indicators confirm it over at least three months.

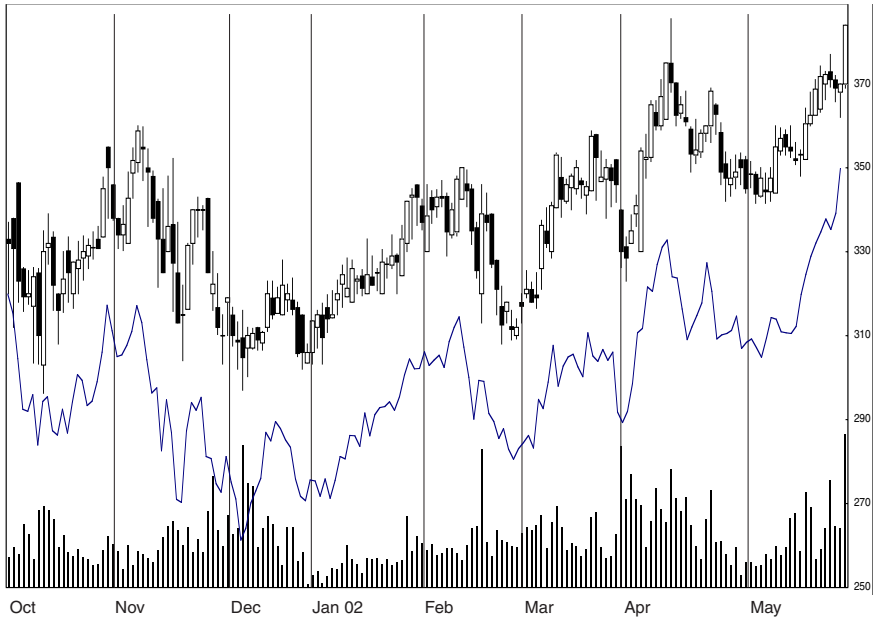


Figure 9.5a BAe Systems



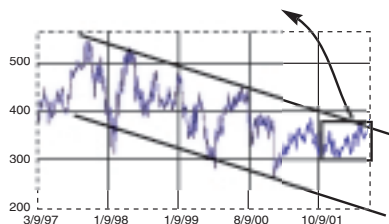
Figure 9.5b BAe Systems (BA.)

It looks promising enough, but in fact the period depicted merely completes the latest upleg in what has been a long-term downtrend in BAE shares since they touched 550p in early 1998. So the big question would seem to be: *Is that exuberant last reading the springboard for a breakout, or are the shares now going to turn down again?*

Dear reader, by the time you read this, the answer will be clear, but in the meantime, my hunch – no more – supports the former possibility, on the grounds that it looks to be a very healthy chart with strong up days being in far greater supply than strong down days. If the shares get as far as 400p in the current leg, I could imagine getting warm about them. Failing that, they would be a sell if they fell to say 340p, thereby indicating that, for a fourth occasion in this downtrend, they were heading off to connect with the trend line at under 200p at some point in the next six to 18 months.

Turning to the finer details, I see little of significance. There are several handsomely long-bodied candles, starting with the up day in mid-October and the down day in late November, but the general run of the candlestick signals is not of high quality. Progress is too choppy and the trading range too narrow. Traders and investors should look elsewhere until the main trend is confirmed or denied.

My June 2002 view: as those super-steep declines in the five-year chart show, BAE's undoing in recent years has been a series of profit warnings. The chartist can have even less feel than the fundamentalist for whether more of these are on the way. If they're over, the price should rise.



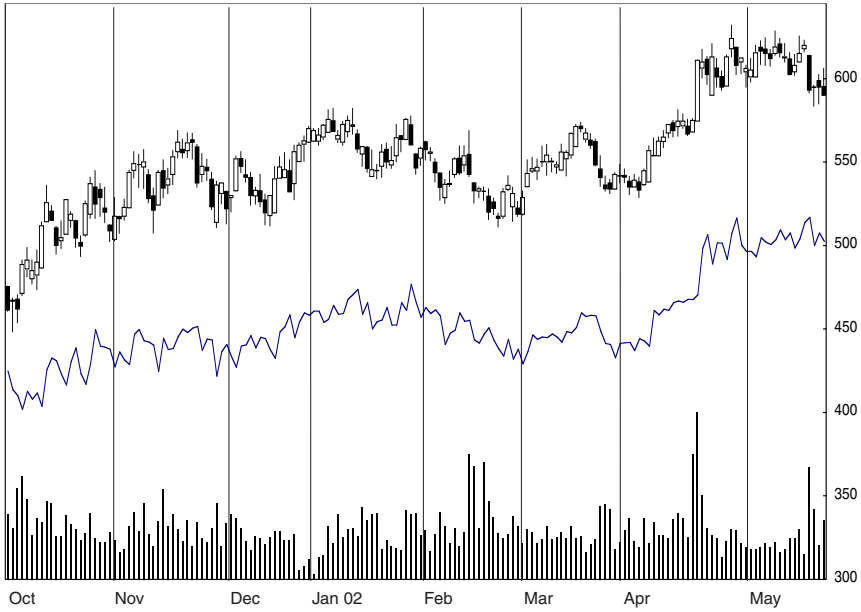


Figure 9.6a Barclays

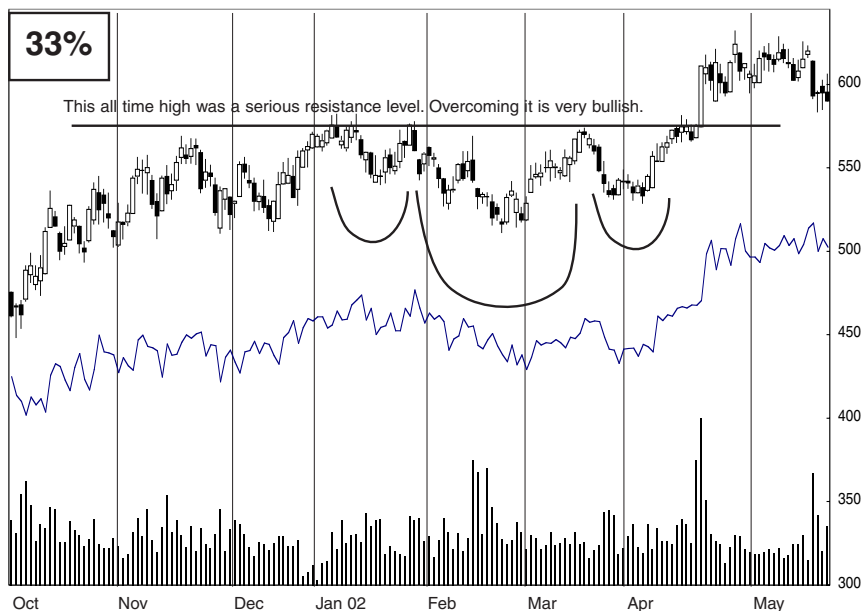


Figure 9.6b Barclays (BARC)

I'd say this is much the most bullish chart so far although, as before, you need a longer term perspective to appreciate its full charm. Barclays' shares first passed 580p in early 2001 (in fact, the level then was £23.20 – they were split on a four-for-one basis three days after the price breakout shown above). Over the succeeding 14 months, they returned to this level 18 times, without ever getting the momentum to reach £6 (£24 in old money).

It was not a specific item of news which finally carried the shares over the beachhead. The day in question was simply the eve of Barclays' annual general meeting, at which a favourable assessment of prospects – with little actual news content – was delivered.

The chartist would have been more impressed by the inverse head and shoulders completed four days before the breakout. Indeed, this was remarked upon by IRC on 26 April. The firm had earlier accorded Barclays bullish status on the grounds that it appeared to be getting into position to break through to new ground. According to its analysis, an inverse head and shoulders which does not mark a bottom (that is, not following an extended downtrend) 'implies further advances but gives no measurement as to the target'. However, they set 650p as the next staging point and advised that any pullback to 580p – which ought to become the new support level – should be treated as a buying opportunity.

As you consider this chart, you should reflect on the fact that as the shares broke through to new ground, virtually every Barclays shareholder was sitting on a profit and not one was minded to sell the shares on the grounds of cutting losses. Further, many of them were aware that the shares had achieved a target which had tantalised for over a year. You may well conclude that in these circumstances, further advances are likely.

My June 2002 view: helped by a benign economic environment, accident-prone Barclays has become a steadier vessel. The chart reflects these trends and if the environment stays favourable, we should expect more gains.

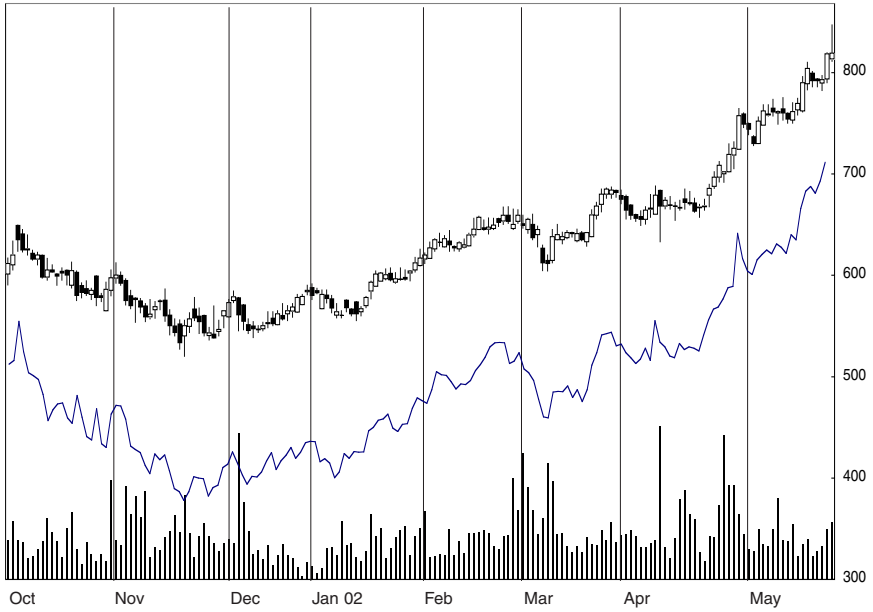


Figure 9.7a British American Tobacco

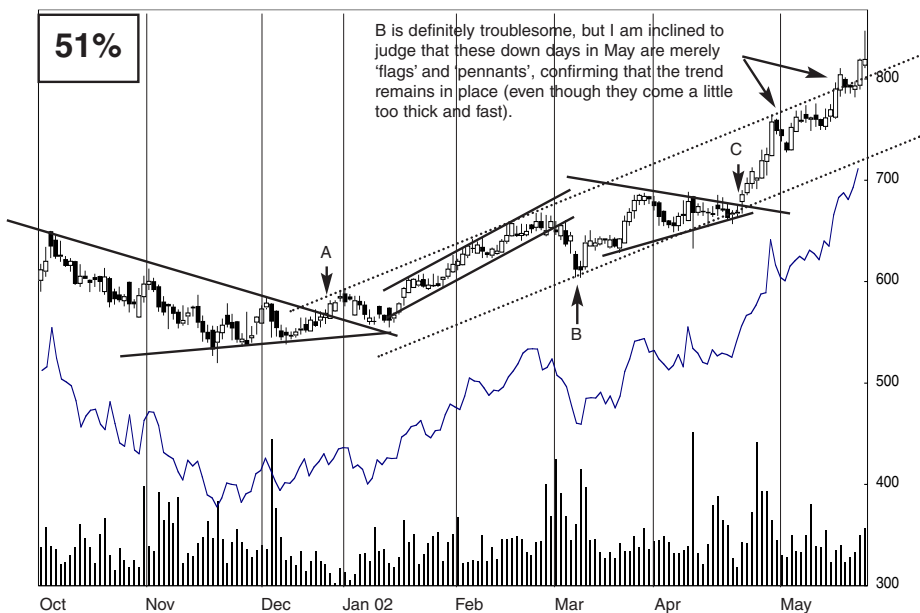


Figure 9.7b British American Tobacco (BATS)

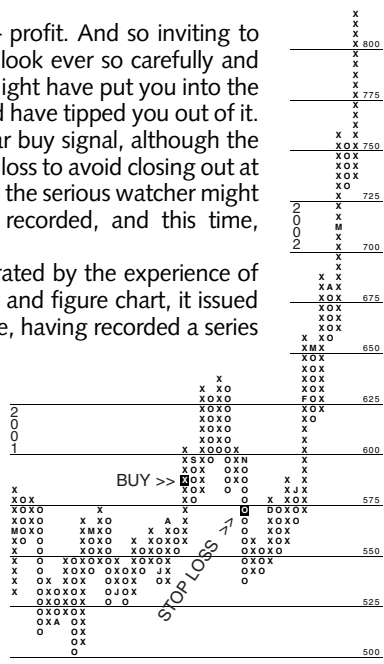
What a wonderful sight: pattern – breakout – profit. And so inviting to anyone with a penchant for adding lines. But look ever so carefully and satisfy yourself that the technical signals that might have put you into the share were not followed by others which would have tipped you out of it.

The breakout from the triangle at A is a clear buy signal, although the trader would have needed a finely judged stop-loss to avoid closing out at B. However, even if that closed the trade down, the serious watcher might return at C as another triangle breakout is recorded, and this time, progress is more assured.

The treacheries of stop-losses are well illustrated by the experience of Chartanalysts in this share. Based on this point and figure chart, it issued a buy notice in late August at 590p as the share, having recorded a series of rising lows, exceeded the price peak established earlier in the year (first column). Clients were advised to anticipate an initial rally towards 625p and to place a stop-loss at 550p.

As you can see, this advice proved good very quickly. It having done so, in early October, Chartanalysts raised its price target to 675p and its stop to 570p. The stop was triggered in early November as the shares retraced their path all the way to a late July low. Only then did the most glorious rally get into gear, which must have had them spitting at Chartanalysts.

My June 2002 analysis: I can't see this going much further. Isn't it about time for another class action judgement? If you're planning on spending any money, check any



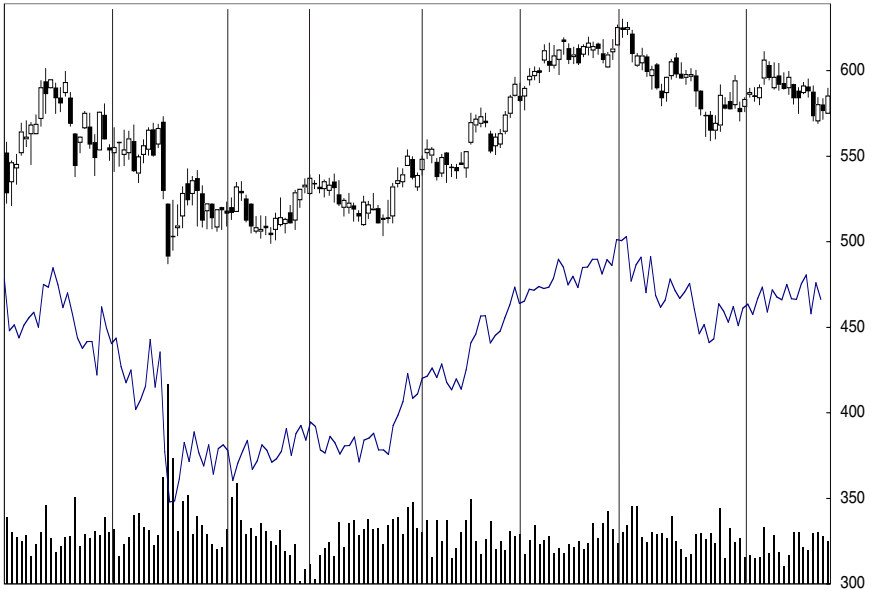


Figure 9.8a British Petroleum

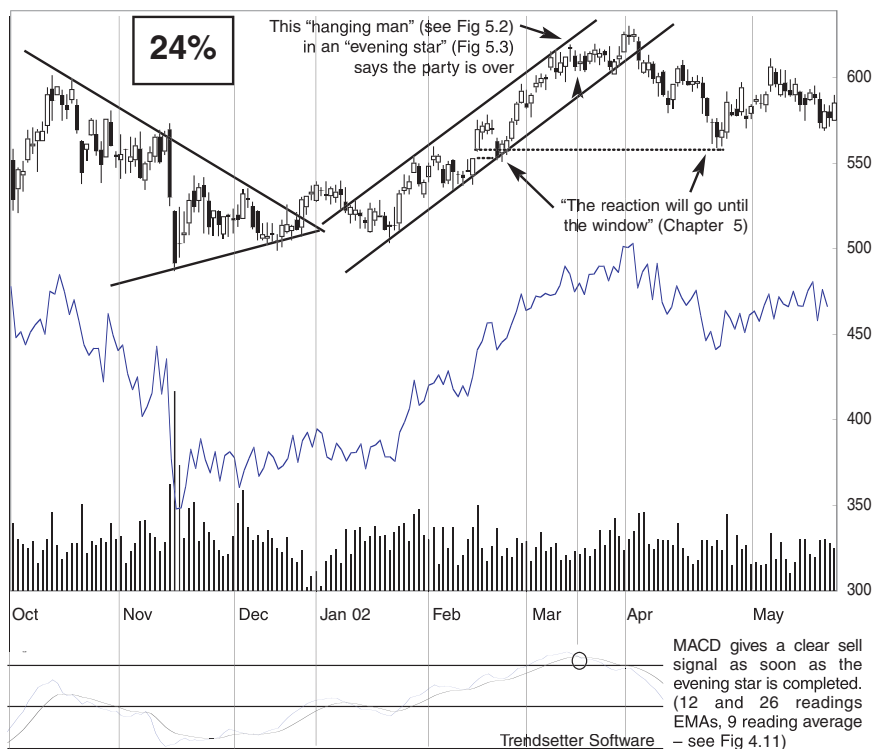


Figure 9.8b British Petroleum (BP.)

It took me quite a lot of looking to see any good indicators in this chart, but after a while I warmed up to it. What you want to do is get into the uptrend that gets going in January, and out of it again some time in the second half of March. That would be good for around 600p minus say 525p, which is 14 per cent.

The triangle that opens the chart up is as good as they come and marks the base of a satisfactorily sizeable downleg which started from 650p in May 2001. The big up day which breaks out of the triangle at Christmas is a good buy signal. Although a relapse sets in by the middle of January, the damage is pretty slight so should not tip you out of the trade. And if you are following the individual candlesticks, there's nothing very concerning – it's mainly spinning tops and dojis, which signify indecision.

Then the main trend starts off with a terrific up day, and after a few sideways movements you get that gap in the middle of February which is another encouraging sign. The down day four days following the gap closes within the gap, which according to Mr Nison means the main trend remains reliable. (Although the down day itself produces a gap, this is not disconcerting because the gaps that are significant are those which are features of the main trend, not of temporary reactions within the trend.) And then you're up and away until about 12 March, when you get not one but two candlestick signals announcing that the party is over.

And most of the candlestick action is confirmed by the trend channel, which can be readily drawn in by early March and gives its own sell signal a few weeks later. This quite smooth trending chart (from January, at any rate) is well suited to the MACD approach, as shown on the supplementary chart.

My June 2002 view: based primarily on the continuing rising lows, positive.

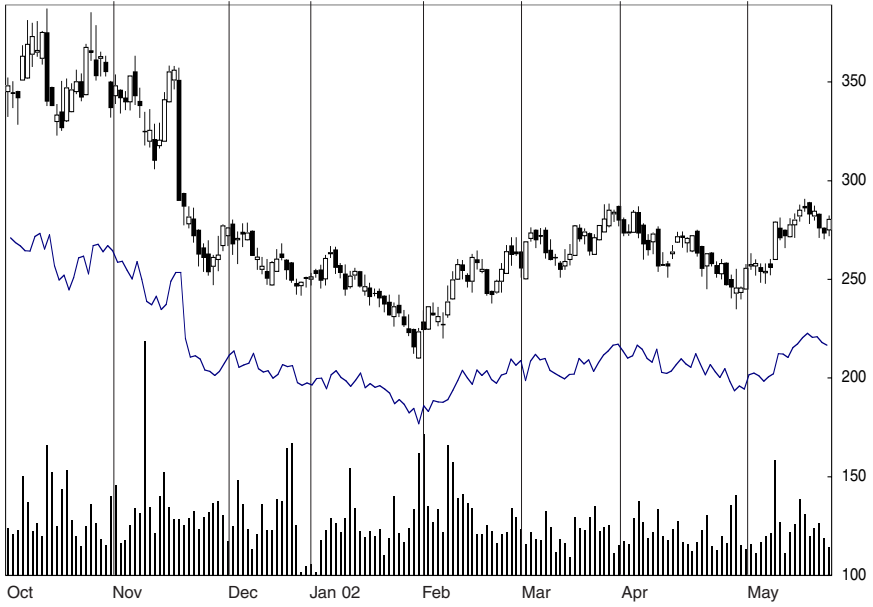


Figure 9.9a BT Group

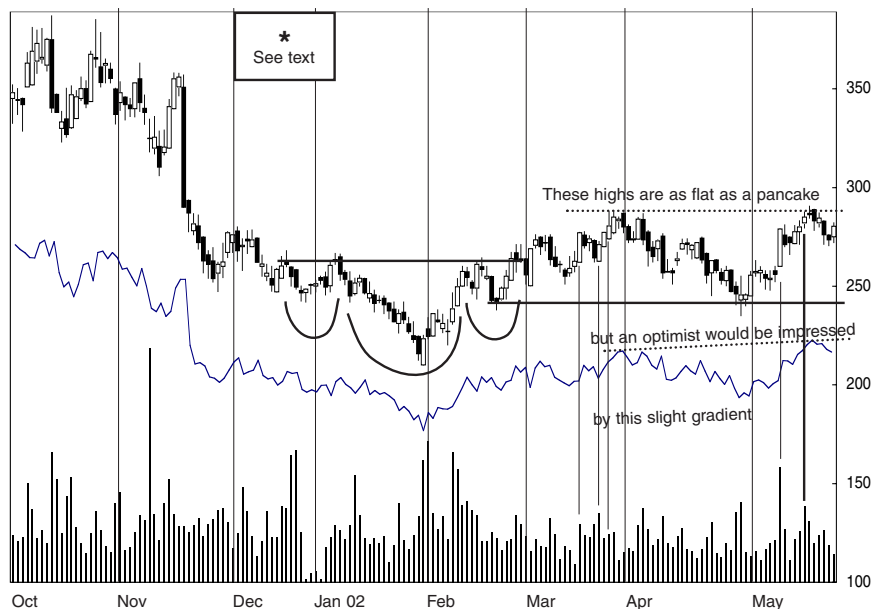


Figure 9.9b BT Group (BT.A)

If you're planning on spending any money, check out what those major price moves are, especially one-day moves. This one isn't. Instead, it's the day BT demerged its mobile phone activities under the name MMO2, which started life with a share price of about 80p. I don't know why the prior share prices haven't been adjusted, but they haven't. It's not the first time I have seen this kind of discrepancy and it won't be the last.

But frankly, it doesn't make a lot of difference. What a miserable time BT has had so far in the new millennium: the shares started at £10 and went to the 216p low shown here on railtracks. The only issue is: *Is that the bottom?* It is certainly the most sustained correction in two years. But that's not the same thing, is it?

In favour of it being the bottom, I spy an inverse head and shoulders as indicated. It's a pity that it's not more prominent. My eye was also drawn to the support at 240p – there were very few occasions in the previous two years when these shares found a support level still operational two months after it was first established. But an uptrend is made of higher highs, not level lows. And yet . . . I can almost convince myself that a good preponderance of the high volume days are also up days, signifying that up is the underlying direction.

My tendency to be positive about BT on slender evidence reflects my conviction that few shares get into situations as susceptible to crowd psychology as this one. It was palpably badly managed during the tech bubble by arrogant management, and needed a huge capital injection to get back on an even keel. If that didn't set it up to be unpopular beyond reason, nothing will. And unpopular beyond reason is what we're looking for, because when it unwinds it will make us some money. And the new management is a lot more credible than the old.

I am not the only person with expectations for this share. IRC has been bullish about it since spotting the completion of an inverse head and shoulders (a different one from mine – theirs 'developed since last October' – I can't see it myself, even on their charts). No matter: at the time of writing, IRC's near-term target is 315p.

My June 2002 view: that slight gradient will steepen favourably.

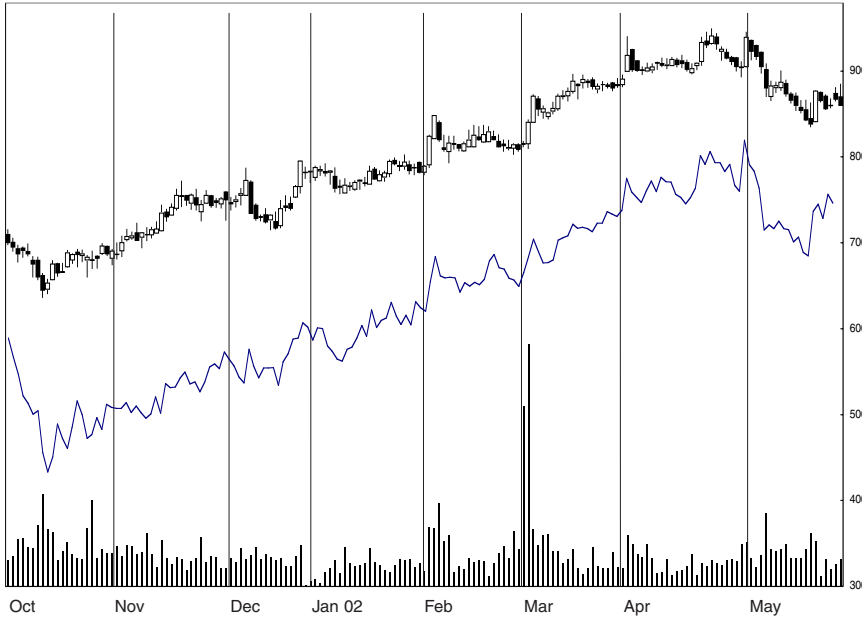


Figure 9.10a Diageo

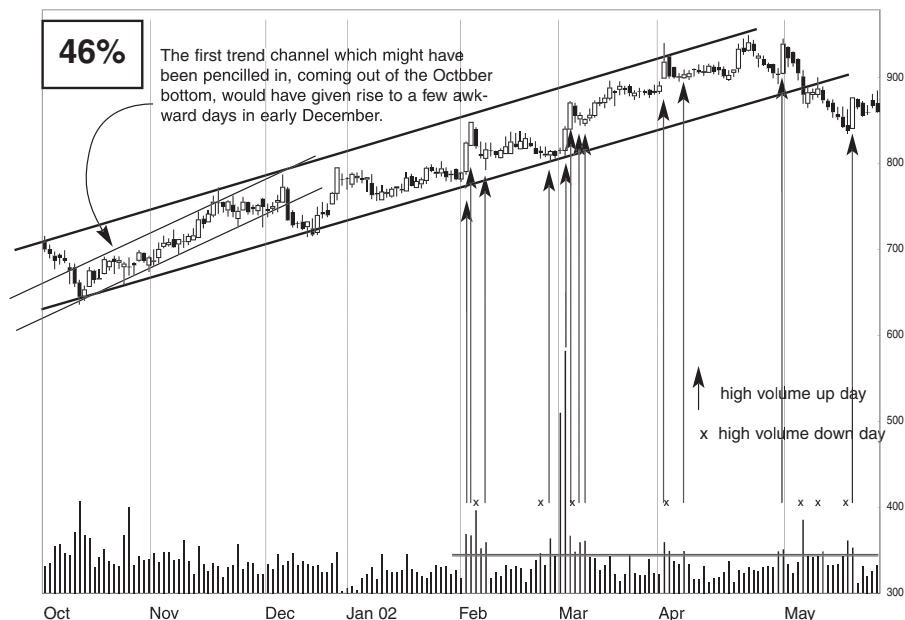


Figure 9.10b Diageo (DGE)

At the height of the tech bubble, Diageo was as popular with investors as are its products with teetotallers. Since then, it's up 150 per cent and if Jesse Livermore was right about *par* (see Chapter 8), it has barely started.

It is a breathtaking chart, easily the most regular in this chapter. Turn back to page 164 and compare it with Aviva's chart, which itself was unusually regular. But this is something else: the subtrends are so delicate and repetitive, they wouldn't look out of place carved into a renaissance pulpit. If this chart doesn't give the charting sceptic pause for thought, nothing will.

The October low completed a double bottom at 640p (from a high of 780p in July), and by my reckoning the new trend was clear by the end of November when the shares stood at around 740p. At that stage, the trend channel one would have been working with was the shorter, steeper one, so the early December pullback would have been disconcerting, but the trend gets back into gear quickly enough, and then it's a safe ride to well over 900p. And where does the trend take us after that? There is no clear signal that it is about to fall off its perch, although the distribution of high volume up and down days develops an unfavourable tone.

Diageo has been on IRC's bull list for most of the year, but it stirred a lot more excitement at Chart Breakout. In late January, the shares earned the newsletter's 'Simmering' tag and a month later, following the results, there was a more detailed positive write-up. But it wasn't until 28 March that Chart Breakout made Diageo a buy, citing a 'twin peaks breakout' above the 780p touched in 2001 and also in 1998. This had in fact occurred two months earlier, but being late on board was inconsequential against the scale of Chart Breakout's target: 'This should provide the platform for a substantial advance. The minimum target is 1750p.'

My June 2002 view: I'd like to see this share get back to 950p. If it did so in style, it would get onto my buy list.

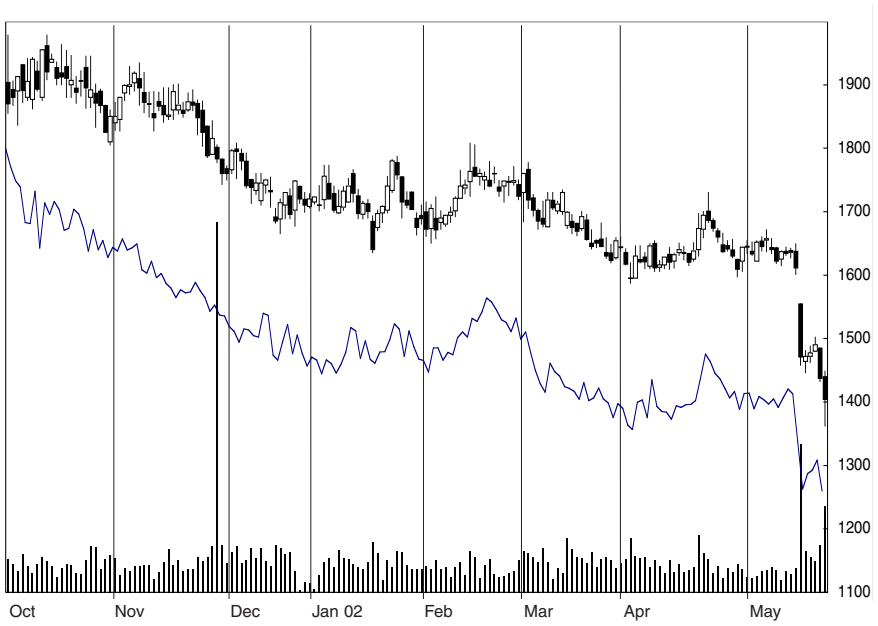


Figure 9.11a Glaxosmithkline



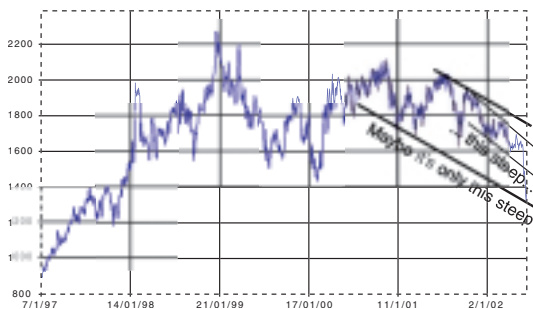
Figure 9.11b Glaxosmithkline (GSK)

I'm glad I don't work for this company. This trend is remorseless and deteriorating. There will undoubtedly be some respite in the near term, but the main trend will reassert itself before long. In the first edition of this book, the shares of Glaxo Wellcome, as it then was, were having a spot of difficulty breaking through £10. Look at what happened next: the shares were through £10 within 12 months and a glorious V (Figure 3.12) took them to £20 only a few months later. There was yet more to come. (Consult Jesse Livermore in Chapter 8 on the power of *par* then, if you should be an early buyer of this book, check whether Diageo is still on the brink of £10.)

As we go to press this time, GSK shares are making new five-year lows at an indecent pace and the next resistance is still another £2 away at £12. And then what? That spiky plateau above £16 is beginning to look as though it only needs to be rendered in a ten-year chart for it to condense into a *saucer top*.

This chart certainly suggests that GSK is dreadfully over-sold at the time of writing – I don't need to show you that chart, do I? – and therefore that there might be some scope to go long in these shares as soon as they rally, anticipating that the price will head on to the return line. But why take the risk? The trend is your friend and the trend is down, so wait until that re-engages, then sell them short.

My June 2002 view: negative.



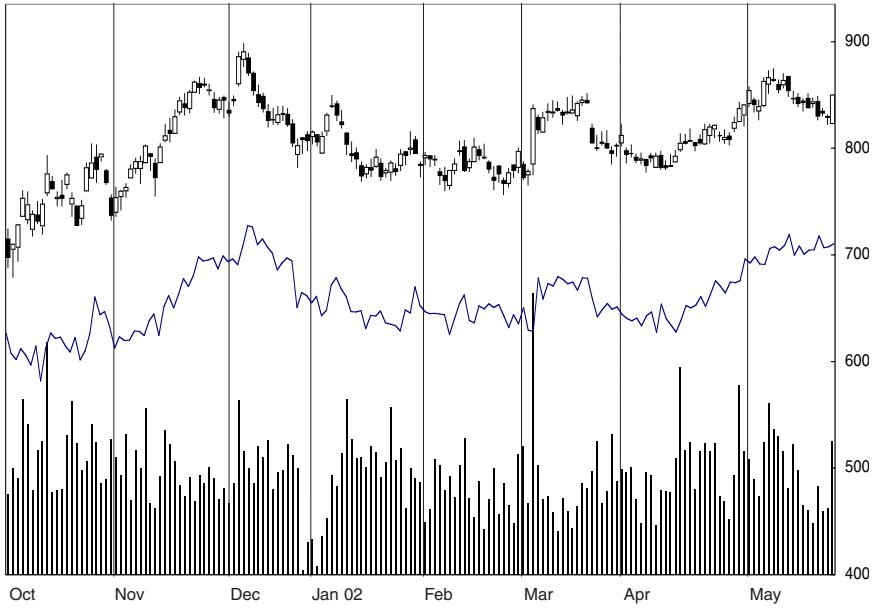


Figure 9.12a HSBC

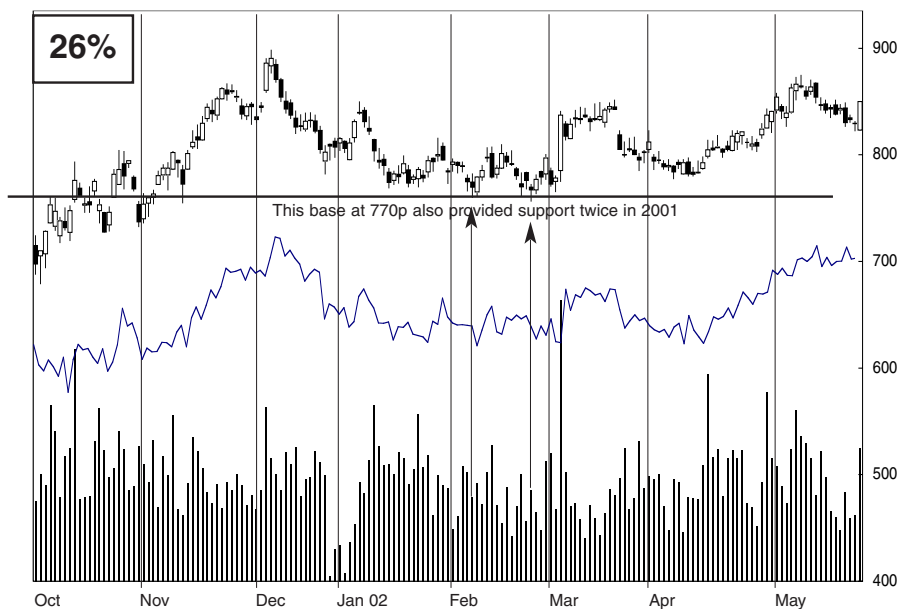


Figure 9.12b HSBC (HSBA)

I think this is what they call *trending sideways*. You could draw in four or five sets of mini-trend channels, but none of them lasts for more than six weeks, and since you need to be three or four weeks into the trend before you can delineate it, I doubt whether this chart would detain me for very long in real time.

Looking back, I noticed that the shares started 2001 at almost £11 and that in retreating from that level, they twice rebounded off 777p. They were a few pence lower on 10 September 2001, following which, of course, all bets were off for several days during the global selloff after the World Trade Center outrage. And then look, the same base came back into operation in February, in this case at 770p and 767p. I find this kind of persistence – repeatedly over a 12-month period – intriguing. It is as if some powerful fund manager has programmed his computer to buy HSBC at 770p, and been quite happy to leave the instruction unamended for a year (we might assume that the computer was turned off for a few weeks following 11 September). It would be intriguing to see a list of who bought HSBC shares on the six scattered days over the course of 12 months on which they encountered this low. Maybe one name would pop up every time.

IRC made HSBC a feature buy on 27 November at 857p, with a target of 1000p and a stop-loss of 725p (15 per cent below the buy price). Richard Marshall cited how even the September sell-off had not damaged HSBC's long-term uptrend, a strong recovery from that sell-off, and renewed vigour in the shares' relative strength (RSI – see Figure 4.7). IRC's feature buys always provide fundamental back-up to their technical recommendations. In this case, the prospective correction of the slowdown in the global economy provided conviction.

My June 2002 view: if I happened to be watching as the share moved up past 780p, having been a few pence lower, I'd be minded to buy for the short term. Longer term, it should be sound. But I have a penchant for more obvious value.

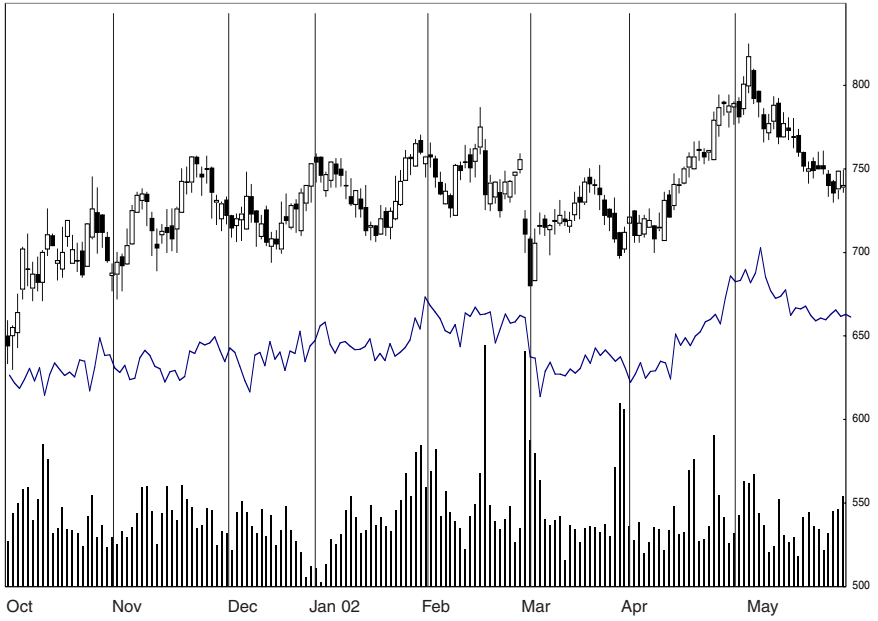


Figure 9.13a Lloyds TSB



Figure 9.13b Lloyds TSB (LLOY)

I count ten well-defined mini-trends and two wrinkly ones before it falls out of bed and ensures that any day traders who had left their trades on overnight would have had a rude awakening. This was another example of the real world breaking through with new information – or misinformation, as it turned out – and demonstrating that charting works best when there is not a lot of newsflow. On 27 February, one of Lloyds' rivals brought attention to an arcane piece of accounting affecting bancassurers of which Lloyds, thanks to its Scottish Widows subsidiary, is by far the largest. This took 10 per cent off the shares, before Lloyds got its side of the story out and began to repair the damage. And didn't it do an estimable job? By early May, an almighty mini-uptrend returned Lloyds TSB shares to the return line they were following before the real world broke in, following which the next well-defined mini downtrend takes them back exactly to the same old trend line. So, being at the trend line, they're a buy? Maybe, but you didn't get any early returns out of them. Writing a week after the chart ends, the shares are 715p. Although the market is down since 1 May, this share has deteriorated faster.

IRC made Lloyds TSB a feature buy on 22 January at 725p, citing a target of 820p and a stop-loss in this case 22 per cent behind at 570p – this was based on a support level you will see if you look back to 2000. I quote: 'Major resistance is in evidence at 760p whilst there is minor support at 700p–710p . . . there is very substantial support below 630p. If the resistance at 760p can be overcome, it should signal a rise to at least 820p.' The early May high is 820p. Under Chartanalysts' less flexible approach, the buy signal came on 14 February at 780p: 'The share is breaking above a two year base and should rally towards 850–900p. We place the stop at 680.' This stop-loss was much closer to the action than the one set by IRC, and would have terminated the investment within a fortnight but for a 'judgement call' on 28 February. At the time of writing, both firms were maintaining the share in their portfolios.

My June 2002 view: the chart is reassuring for holders but gives non-holders no reason to buy.

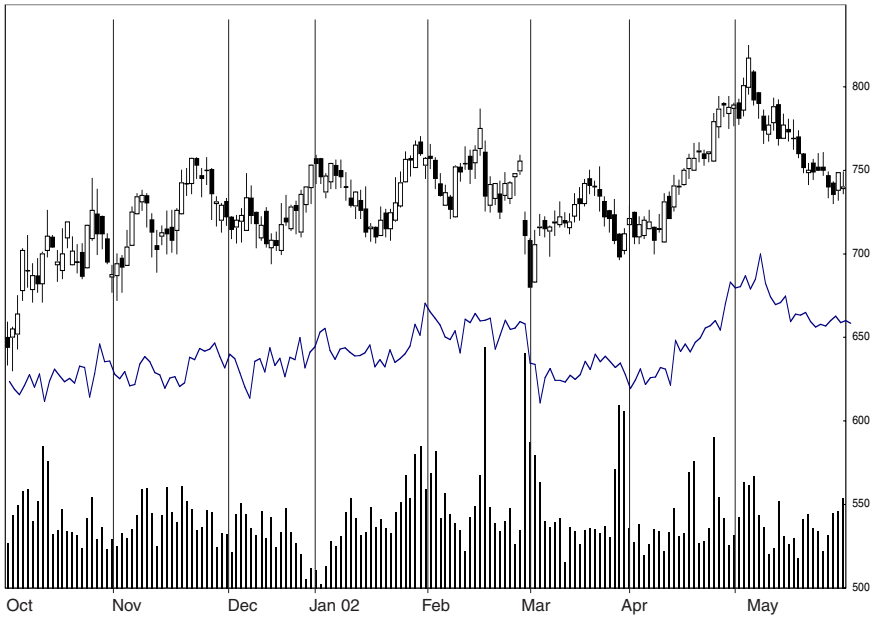


Figure 9.14a Prudential

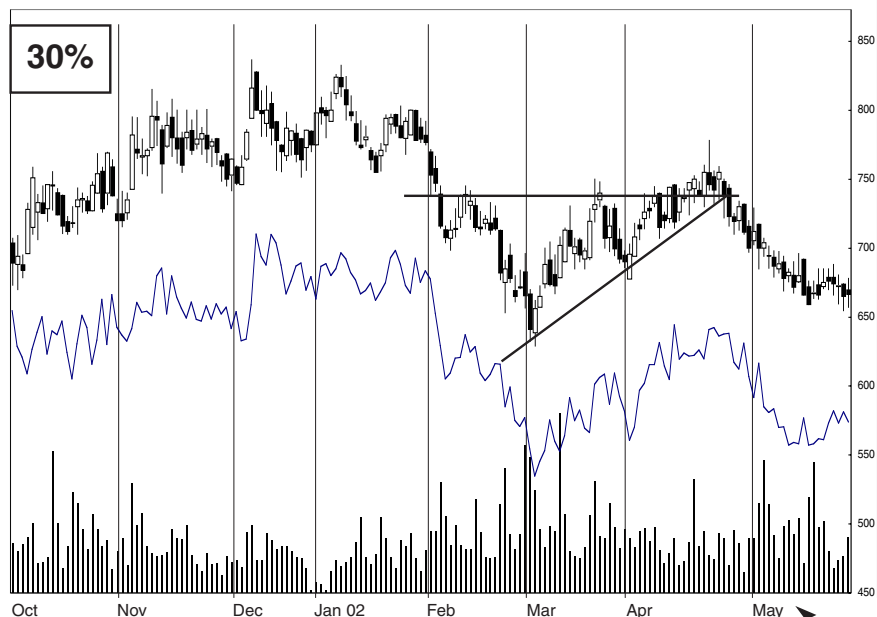
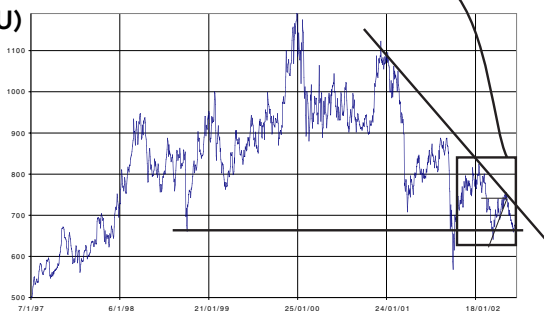


Figure 9.14b Prudential (PRU)

This chart is not a pretty sight but even less cheerful is the longer term one which, ignoring the special case lows of September 2001 and September 1998 (Russian debt crisis, etc.), shows the Pru's shares have not been south of 700p since 1997. And yet they are already below the 1998 low; and the 2001 level – which was under 600p – is coming back into view at a rate of knots.



Without a lot of conviction, I pencilled in that triangle on the main chart, which is also, you will notice, an inverse head and shoulders. This is supposedly a reversal pattern, signifying a bottom. But it's too large in relation to the share price fall since the new year high to look right to me as a reversal pattern. And it's in the wrong context to be meaningful in relation to the November 2000 high. So I don't think I am getting a lot from hindsight in suggesting that it was not surprising that the 'breakout' went nowhere fast.

The defining feature of this share is that descending line on the five-year chart, and the defining feature of any recovery will be delivering the shares decisively through that line. In the meantime, plunging through the horizontal line (which is what happened in the first week of June) will merely mean there's more misery to come.

My June 2002 view: having made 32p of ('normalised') earnings per share in 1997 and 1998, the Pru has had a few bleak years – in 2001, it made 8p on the same basis. But the consensus for 2002 and 2003 is 44p followed by 53p. If those prospects remain intact by the end of the year, yet the shares have not recovered, a promising situation will be in prospect.

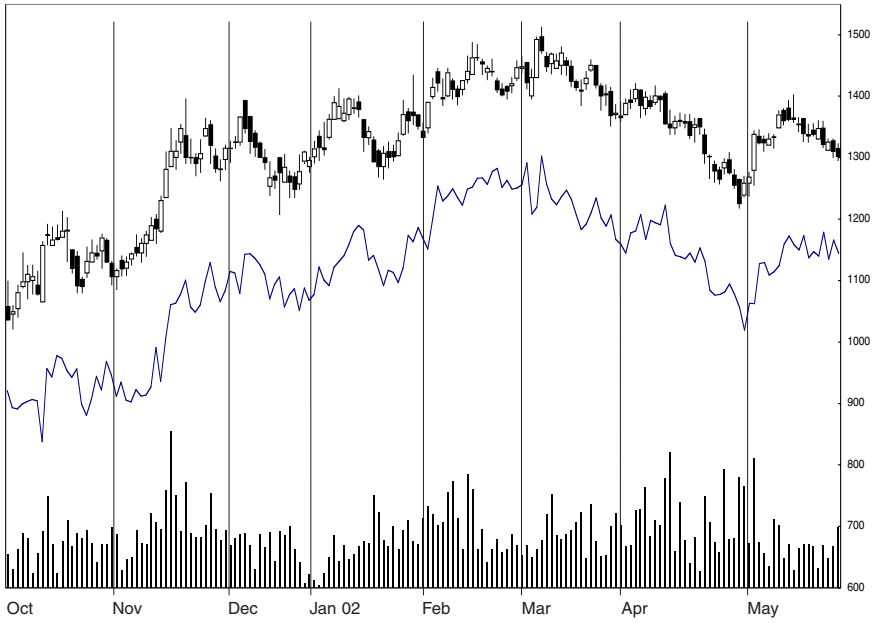


Figure 9.15a Rio Tinto

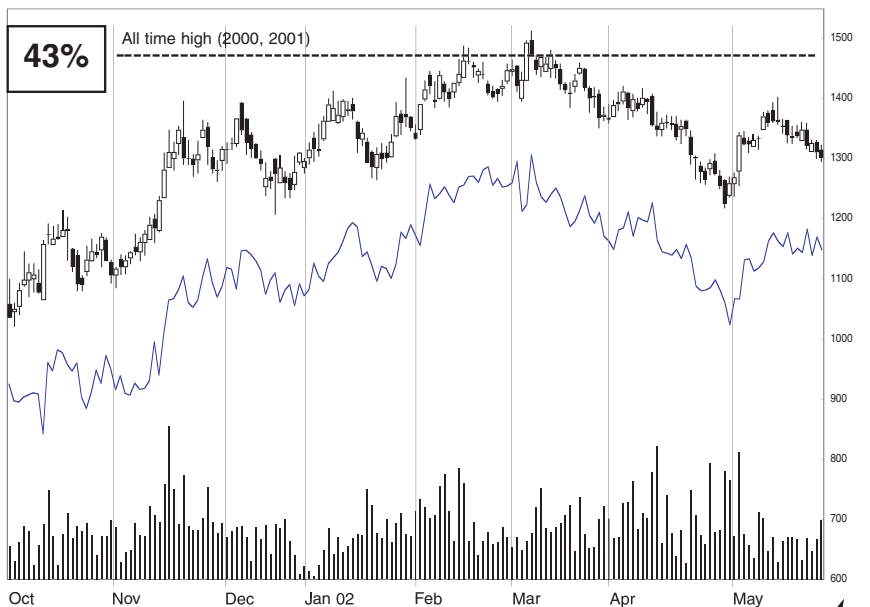


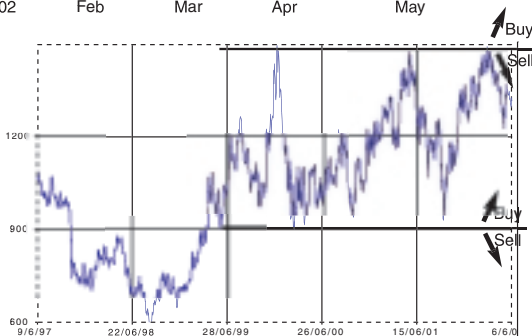
Figure 9.15b Rio Tinto (RIO)

Coincidence or causation? According to my data supplier, on the first trading day of the millennium, Rio closed at £14.95. However, there is no open, high and low data for that day so maybe we should look at the following day when it closed at £14.74. On 17 May 2001, Rio closed at £14.75. On 4 March 2002, it closed at £14.74. This does not seem like a random walk to me (which is not the same as saying it is predictable – still less, profitably predictable). In fact, I embellish this tale a little.

On 3 March 2002, the close was £14.92 . . . so real life is untidy: it knew where it wanted to be, overshot on the first attempt, and got to its destination 24 hours later.

Here's more of the same: on 1 June 1999, Rio's shares came to a halt at 898p after a correction which kicked in at £10.90. On 13 March 2000, a similar slide, in this case from said £14.74, came to a stop at 900p. These two events showed up on Chartanalyst's point and figure chart in September 2001, when Rio's shares fell back after the World Trade Center outrage. So having noticed that the shares bounced up from 930p, the firm called the shares a buy just a few days before the chart above starts, at £10.10. This was an excellent recommendation, the more so for suggesting that the shares would meet resistance at £11.50, which is exactly what you can see above in the middle of October. Detecting slowing momentum, and with its profit target satisfactorily met, Chartanalyst took its profits at £11.24 in early November.

My June 2002 view: over three years, Rio shares have traced out the most enormous rectangle (Figure 3.14). Its size and pinpoint definition increase its significance. The shares are a buy next time they come off 900p, or on the first close above £15.20.



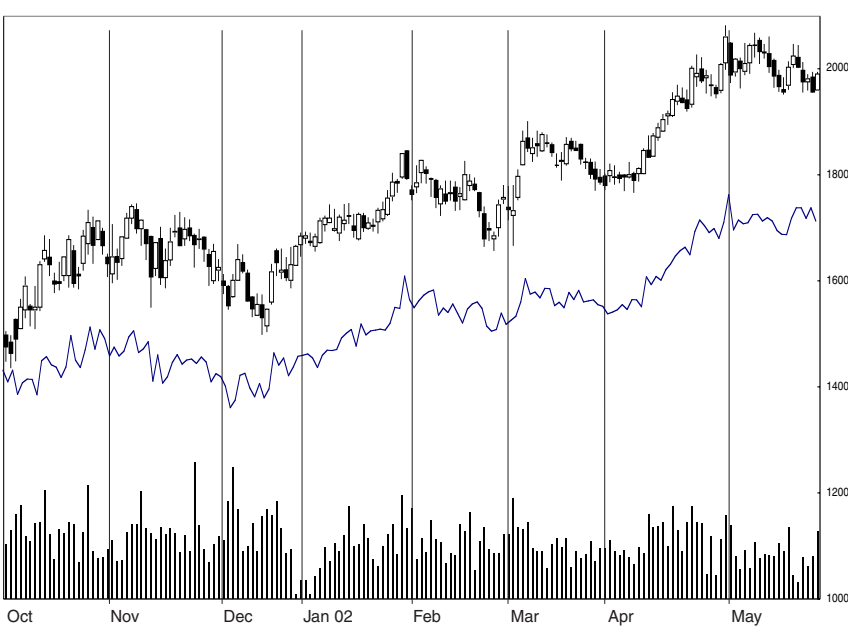


Figure 9.16a Royal Bank of Scotland

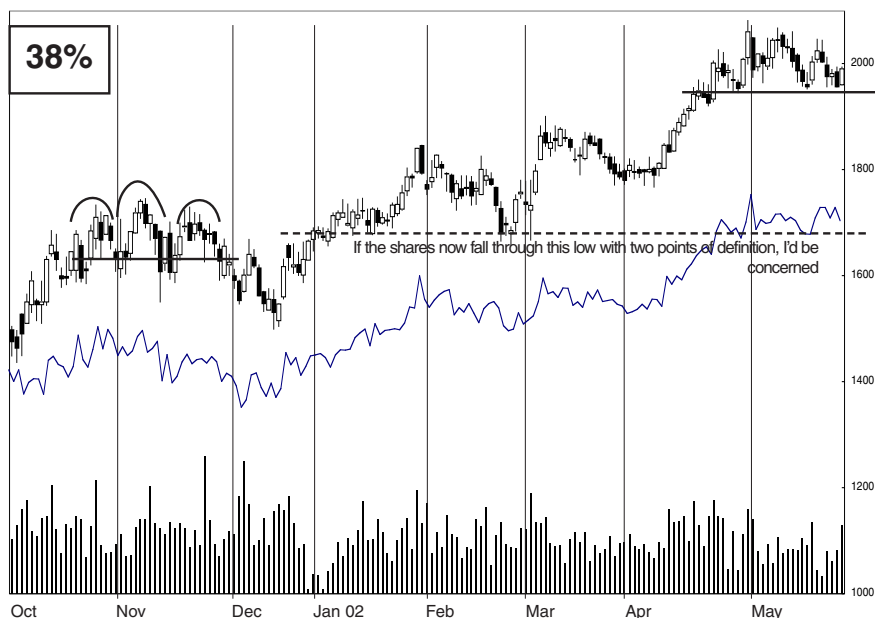


Figure 9.16b Royal Bank of Scotland (RBOS)

Since winning control of NatWest in that numbing three-cornered takeover battle in 2000, Royal Bank of Scotland has been a one-way street. From £14 when it engaged, the shares had slumped to only £7 three months later when it staggered forward to deliver the winning blow. But under its new anthem, 'higher still and higher', the shares have since put in the biggest sustained rise among all FTSE 100 stocks, helping deliver the bank to the index's very top table in terms of company values.

With all those gains behind me, I would have been a little perturbed by that head and shoulders which completed at the end of November. However, if you look at the longer term chart, you might agree with me that by staying over £15 the shares never reached a critical zone. Equally, while that formation in May is going to look like a telltale head and shoulders if it collapses from here, I don't feel it is significant yet. I don't think I would be seriously concerned unless and until I saw the shares penetrate the dotted line generated from the January/February lows.

So how would you play this? My simple mind says: Don't be clever: if you like it, hold it, because you are never going to be able to play all those ups and downs accurately, even if you do spot the odd candlestick signal in exactly the right place, such as those two at the end of January and again at the end of May (but where are the corresponding candlestick buy signals?).

My June 2002 view: ignore the fact that at its moment of victory Royal Bank's shares had fallen to 700p. Instead, regard the £14 at which they stood earlier as the real starting point for measuring what has happened since the takeover. On that basis, the shares are only 40 per cent ahead, which is impressive but not outlandish. Perhaps my judgement is coloured by the fact that NatWest always seemed the most dreadfully run bank, so I am not surprised if its new owner gets a lot of mileage out of it. And I think there could be more to come. Yet with such a lot of gains already in the bag, I would find it difficult to consider Royal Bank a buy from here.

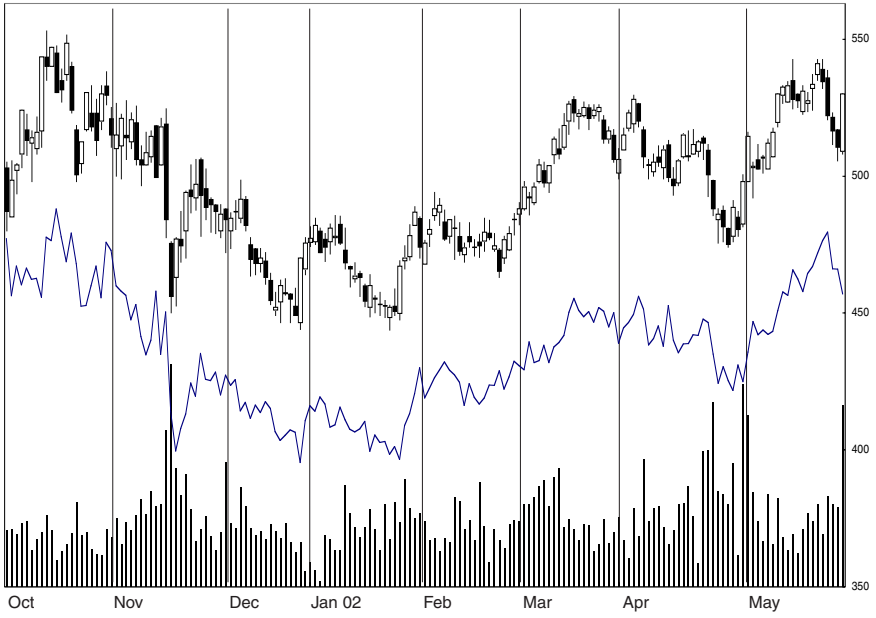


Figure 9.17a Shell

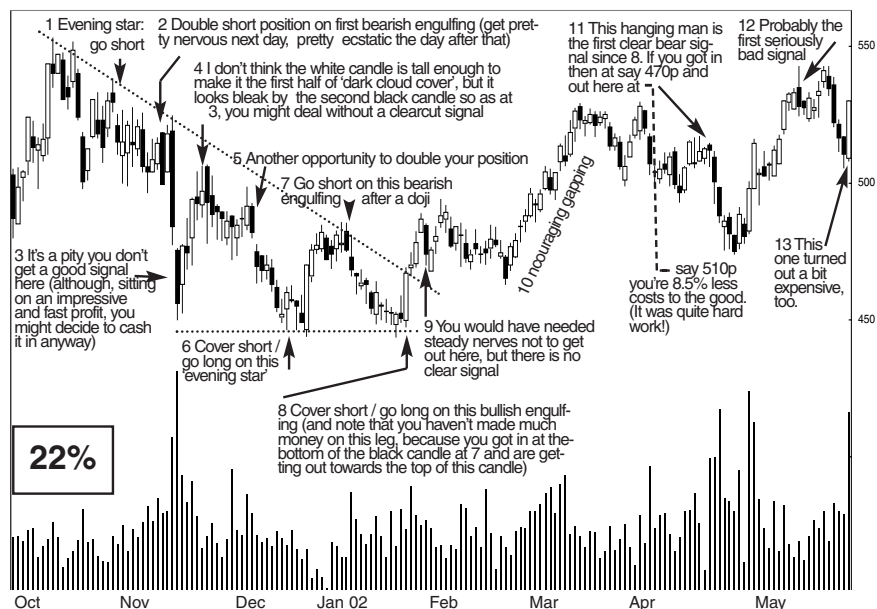


Figure 9.17b Shell (SHEL)

So far I have found the candlesticks in the charts in this chapter generally disappointing, but I thought that in this chart they looked more promising. Candlesticks are all about the short term: they're for day traders. You're looking at daily candlesticks here, but you can generate them by the hour and even by the minute, if you have the time to study them. This is not to say that the rest of us might not get some encouragement from this technique. But as a mainstream approach, even if only considered on a daily basis, candlesticks require a lot of time and attention because they generate signal after signal after signal. Although some are plainly irrelevant, others require careful consideration.

The Trendsetter software I am using to help analyse some of these charts identifies no fewer than 39 candlestick signals in the 169-day span set out above. But not all the signals I identified are included in this 39 (some which seem clear to me are passed over by the software), so there are more than 39 signals in total. This is (a) typical and (b) about one every four days. (You might be interested to know that on its default settings, Trendsetter gave 14 stochastic signals, the majority of which matched candlestick indicators, and two MACD signals.)

As you know, I did not carry out the trades suggested above. Further, I sketched them in full knowledge of where the chart was going next. That said, I believe I have been pretty realistic and am hoping you will agree that this is a meaningful appraisal. (And if you don't, that's good too, because it means you are developing a healthy scepticism.) My approach was to 'deal' on the very clear signals as set out in Chapter 5. I am invested at all times – in other words I am always either long or short of the share.

I haven't totted up my imaginary earnings – that would be a touch presumptuous – but I am left with three conclusions. A – there was some money to be earned here; B – it would have been hard work earning it; C – if Shell is the only one of 20 shares consistently generating good candlestick signals, that's a bit of a nuisance

From a more traditional point of view, did you spot the triangle? The shares went on to deliver the target price after the breakout.

My June 2002 view: the longer term pattern is attractive. Shell would be a buy at 560p.

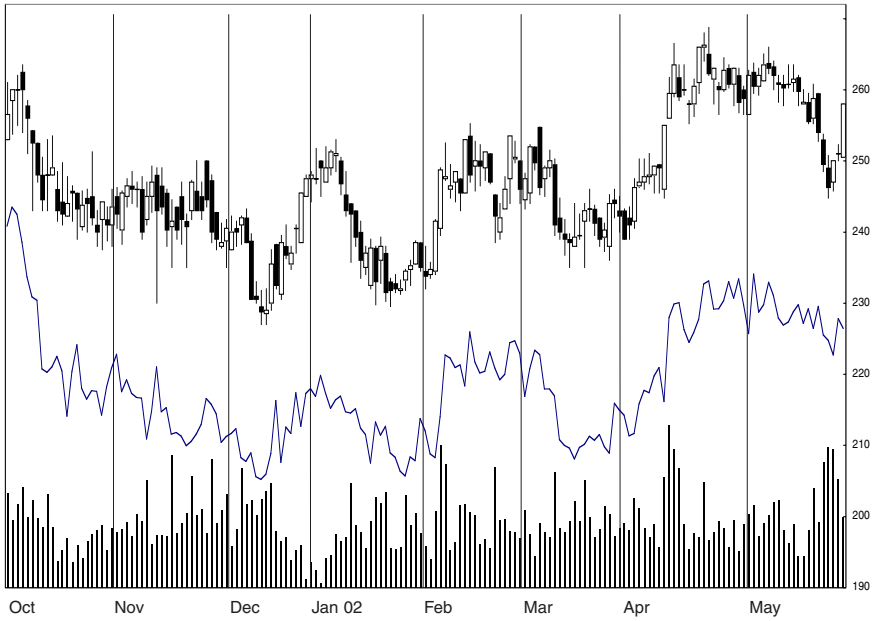


Figure 9.18a Tesco

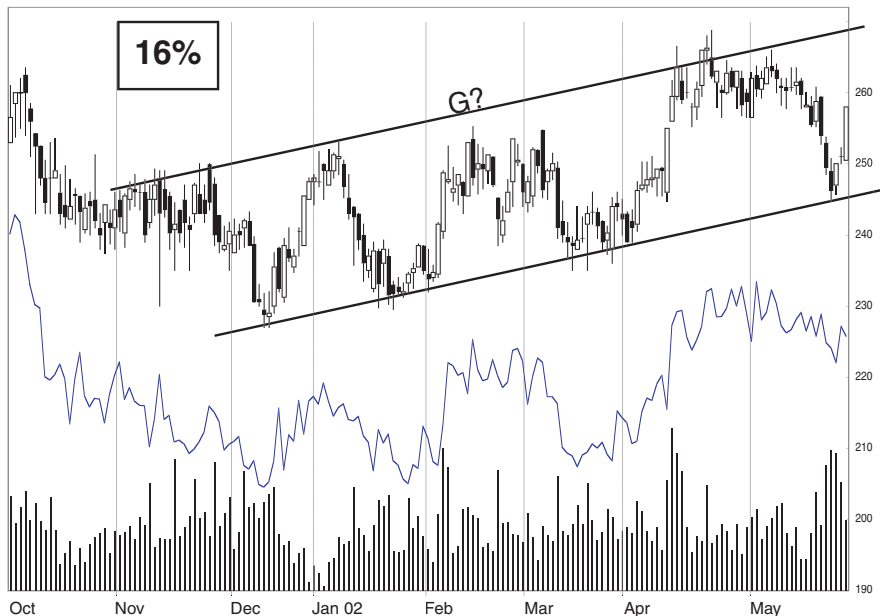


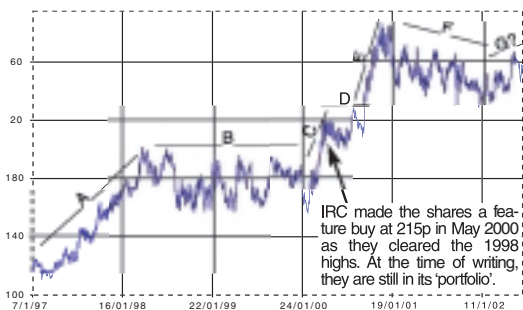
Figure 9.18b Tesco (TSCO)

Tesco offers an unusually meaningful long-term chart with no major over-runs which rapidly transform into U turns. Instead, it displays distinct phases occurring in a readily explainable sequence. This is *not* a random walk!

In A, the overwhelming balance of opinion is that the shares are under-valued, so they rise steadily. This phase ends when the shares reach a level at which only a few diehards believe they are still under-valued. During B, there is no clear evidence from Tesco that it is either progressing or declining. If the price ever ticks down to 160p, that always enlists enough enthusiasts to prevent further declines. But these are fair weather friends, who disperse fast as the shares approach 190p.

In C, Tesco's prospects brighten and the playing field tilts towards the enthusiasts. In D, they again wrestle with the sceptics, but this time Tesco only takes six months to deliver further decisively good news. Suddenly, it's everyone's favourite – that's phase E. Now, something you can't tell from this chart: Tesco outperforms the market significantly in 2001. This is the first sustained period on this chart of significant divergence between the share price and the share price relative. So whereas F looks like a mildly negative reappraisal, it is in fact a process of the share price being trimmed by a generalised lowering of expectations. At G, we start to see higher highs and higher lows, suggesting another positive reappraisal is in the offing.

My June 2002 view: generally positive, but the next sweet spot won't arrive until the shares break past the 2000 high, which was 286p.



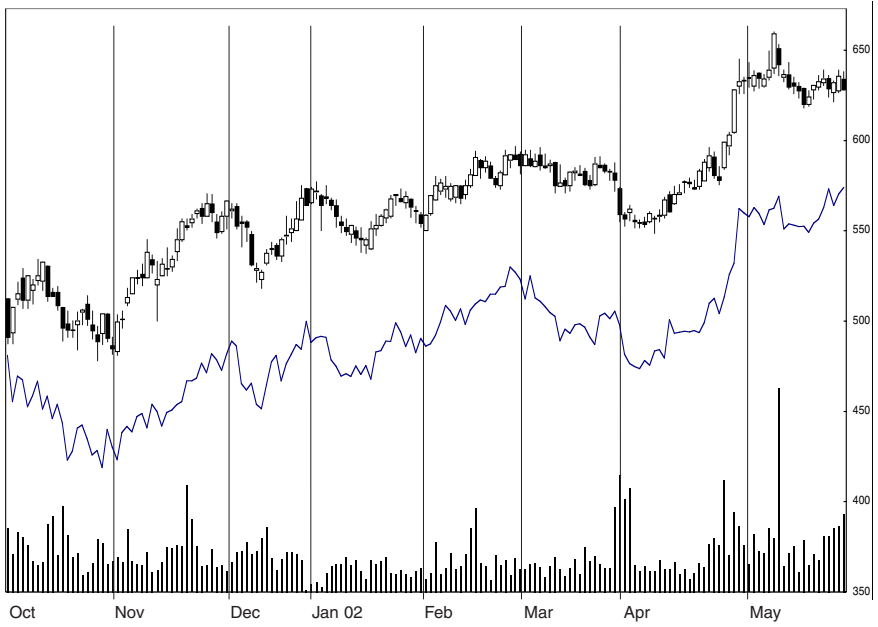


Figure 9.19a Unilever

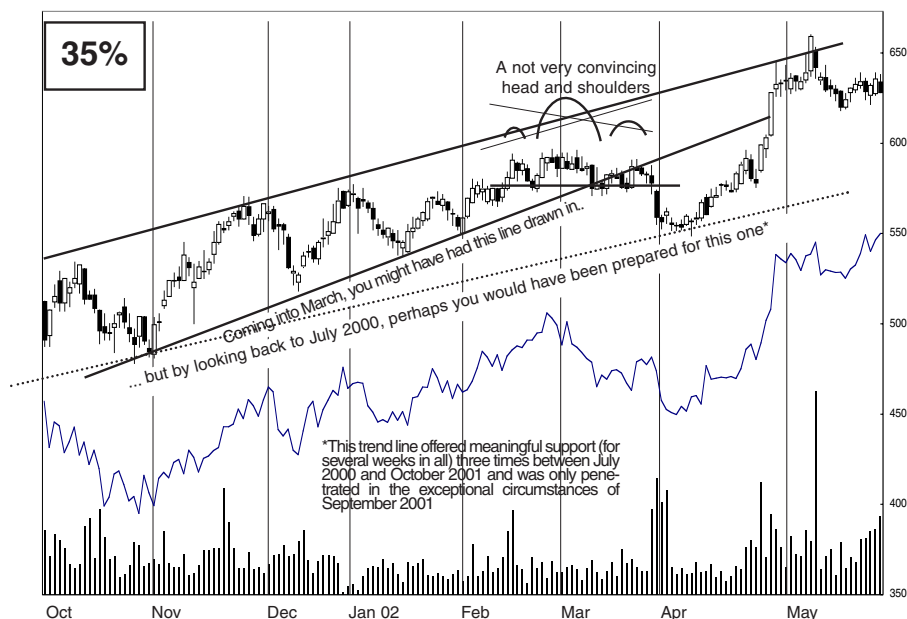


Figure 9.19b Unilever (ULVR)

That useful hike in the share price between March and May is a bear trap. In a pretty convincing demonstration that they have run out of steam, the shares fall below their trend line, claw back onto it, then tumble out again, completing as they do so a little head and shoulders pattern. On the last two trading days of March and the first of April, you get three black candles and a gap, backed by extremely high volume every day. With the shares having put in a solid advance from 490p to 590p, a correction is on the cards. Instead, the shares rose 18 per cent in four weeks.

If there was warning against anticipating such a correction, the first element was that progress up to its supposed start was a little too devious. A correction worth anticipating is going to be rather more closely connected to a price move worth correcting, and hopefully via some sort of top formation. And top means top: the base of your head and shoulders needs to be clear of the immediately preceding price action – not lined up with three recent highs. The second element was that dotted trend line, which I raked up via a not too imaginative interpretation of the chart going back to just after the start of the current primary trend in early 2000.

By contrast, the price action from 1 April to the end of the chart is a more convincing prelude to a possible downturn. It has a more definitive upstroke than anything Unilever shares did going back to the previous October, and then you have the basic sideways pattern of most tops. Yes, this could tumble. But I still can't get excited about it. The top, if that is what it is, is not yet beginning to show any of the classic top patterns described in Chapter 3. Yet it has been a month in the making already. And the tenth time I had a go at the trend lines, I positioned that one on top (the return line) and decided the price is currently rambling harmlessly within its trend channel.

I'm bored. Show me something else.

My June 2002 view: the long-term chart is fine, with rising lows from 340p at March 2000. If Unilever falls to and bounces off the dotted trend line, it could be a buy.

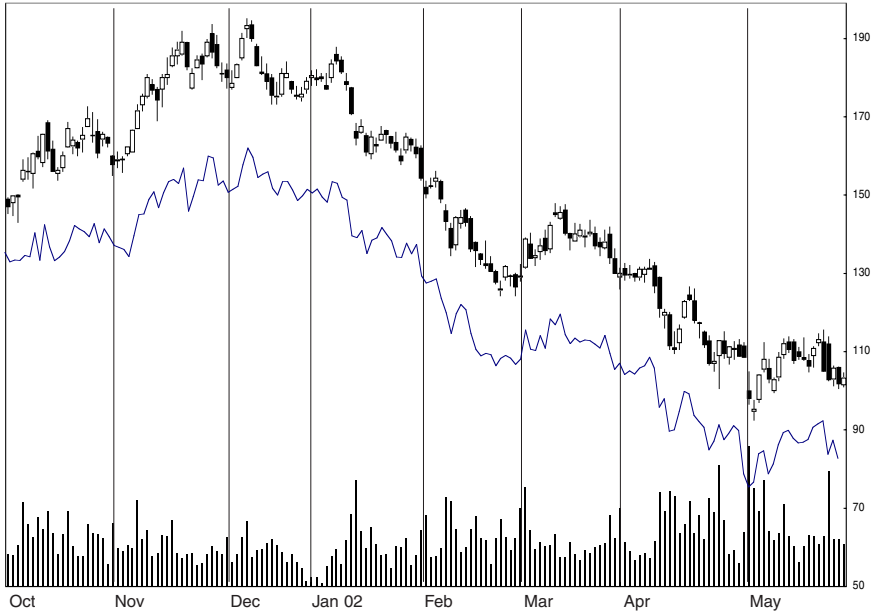


Figure 9.20a Vodafone

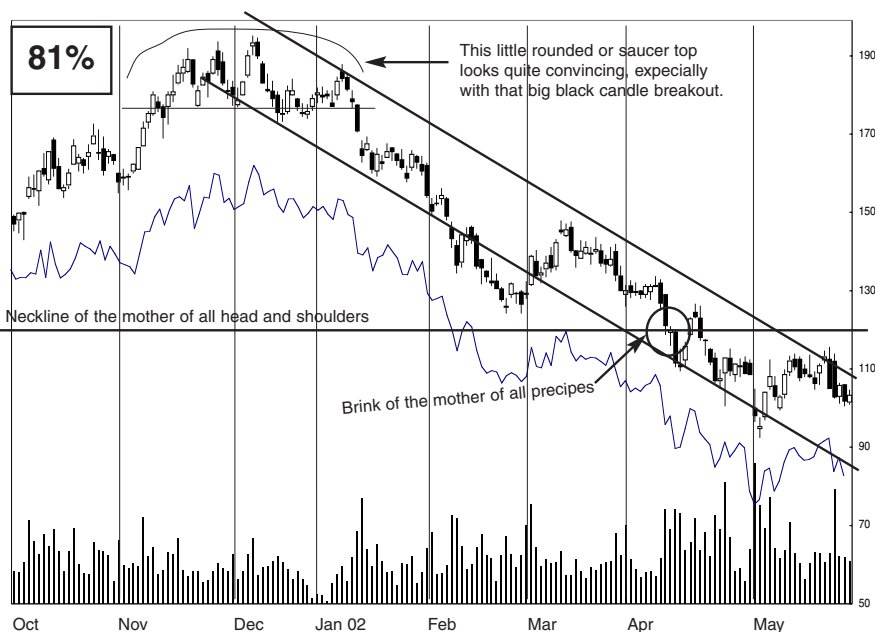


Figure 9.20b Vodafone (VOD)

Meet the fastest moving share in this chapter. And one of the most persistent. In fact, it's worse than it looks, because what you see here is the right shoulder of a head and shoulders, which began in 1998, took the shares up to 400p in the height of the tech bubble, and was completed in April when the shares fell below 120p. So here's a quick test of whether you've been concentrating: what is the target price now?

I confess that I find such a huge and distended structure as a four-year head and shoulders with a top 300 per cent above its neckline rather less convincing than the more typical pattern which forms over the space of a few months. So, it seems, do the Vodafone shares: having completed this mighty top, they so far do not seem very keen to do the decent thing, which is to jump over the mighty precipice.

Quantum Leap newsletter put out a well-timed sell on Vodafone at 161p as it clocked up that dark candle on 31 January. It refreshed this advice in mid-April at 115p as the head and shoulders described above was completed: 'Vodafone shares are either facing Armageddon or this is a bear trap.'

IRC neatly anticipated the pullback in mid-April as well as the longer term trend. On 11 April, the firm said: 'RSI implies a very oversold position from which a technical rally is now overdue. . . . With the moving averages falling . . . resistance now waiting in the 125–130p range could soon see selling pressure re-emerging and the downtrend resumed. We remain on the bear track.'

And this is my one chance to introduce you to John Urbanek, the rookie professional at home day trader whose weekly column in the *Sunday Times* in 2000 and 2001 was compulsive reading for every chartist. He wasn't a great one for blue chips, but having spotted Vodafone's 'steady recovery over the last month', he bought in at 164p on 9 October, selling two days later for 160p. Now look at the candles. You can see exactly which ones drew him in and tipped him out, cheated of what would have been a handsome profit. Would you have negotiated them any differently? The answer to the question above is 120p (neckline) – 280p (neck to top) = minus 160p. There's something to think about.

My June 2002 view: negative, but it has too much cashflow to become a penny share.

10

Will it work for you?

No more than sceptical

Patience or action

What is the chartist worth?

Get a system

TWO CHARTS

I started out this exploration of charting as a sceptic, and I am finishing it as one. I have found evidence that a few chartists have made a success of charting over, say, ten years or more, even though they have subsequently lost their touch. In my view, the second phase only takes the polish off the first: it does not render it meaningless. And although the information about them is sparse, there seem to be one or two chartists on the planet who haven't lost their touch, or didn't up to the point when they retired.

However, I am sceptical about whether many professional chartists, that is those who sell charting advice as an 'all you need' method of investment, would be in business if they were paid on a results-only basis (even assuming that their advice was used sensibly, as in, 'never risk more than a small percentage of your capital, always have a stop-loss . . .' and so on). Publishing a newsletter full of charting recommendations is surely a more reliable method of earning money than reading one.

But I cannot turn this scepticism into an out and out denunciation. Not only is there the fragmentary evidence of chartists who got and stayed rich, but there are also plenty of charts which just seem to contain more regularity than I could explain from my basic philosophy that share prices are driven by the fundamentals, and the fundamentals don't read the charts.

First, a modest example. Figure 10.1 is a price chart for Kunick, which operated one-armed bandits and similar machines in thousands of pubs. In the late 1980s it diversified unsuccessfully. The chart shows the share's rehabilitation as the diversifications were shut down and sold.

Assuming you've read the book through, you can surely spot the point I'm going to make. It's the support in 1994. For nine months, the share could rely on a buyer coming forward at 13p. Often after significant declines: from its February high of 18p, the share came back 28 per cent; after September, it came back by 19 per cent; and in November, by 13 per cent. Each time, the decline was reversed at 13p. I asked Kunick's chief executive whether he was aware of any shareholder who had been a backstop supporter of the shares during this time. He wasn't.

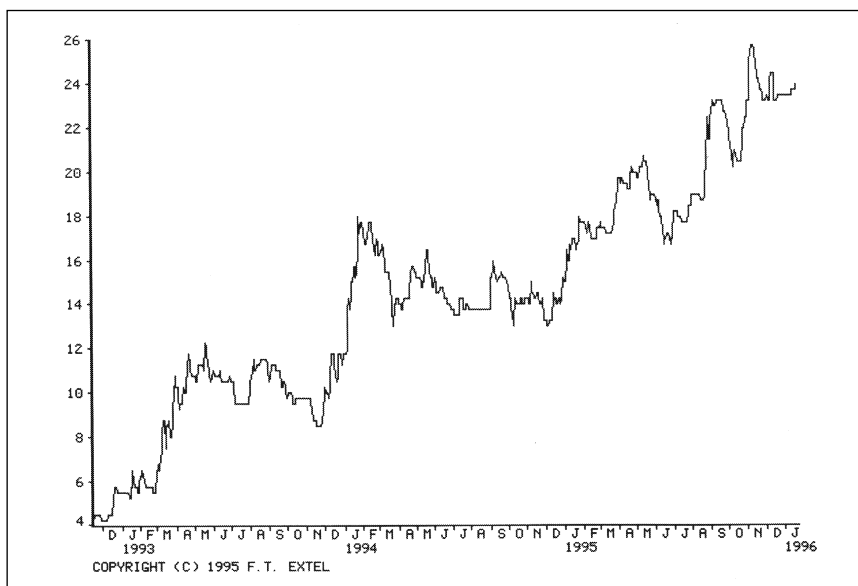


Figure 10.1 Kunick comes back

Even so, it seems to me that this is not coincidence. Someone or some people, quite possibly on the basis of fundamental analysis, had concluded that, as long as nothing untoward happened, Kunick was a bargain at 13p, and for a year kept coming back at that price. The duration of the support – nine months – impresses me in two ways. First, it was lengthy. This was not a fund manager who had decided to buy a big parcel of Kunick shares at 13p and was putting it together over the space of a few weeks (in which case you could understand why a particular price should obtain significance for a short period). This was someone with a longer term agenda.

Second, the duration also seems ‘about right’ for a fundamental analyst reacting to fundamental events in that it tallies with the newsflow from the company. It lasts for not far off a year, spanning two milestone annual results announcements. In December 1993, Kunick announced it was back in the black after a period of losses. A year later, it confirmed its recuperation by announcing a resumption of dividend payments. The half-year announcement (in May) only confirmed that the restoration of its fortunes was continuing. Although there was some excitement in early 1994 over the flotation of Kunick’s healthcare division (which enabled gearing to be brought down to a sensible level, but did not otherwise advance Kunick’s prosperity), nothing else of significance was reported

by or about the company during the next 12 months. In other words, it looks to me as if a fundamentalist, having arrived at a '13p is a bargain' conclusion about Kunick after its 1993 results announcement, could reasonably have stuck with this judgement for the next 12 months. After that, he would probably have lifted his valuation, or decided to take his profits.

All the same, it seems to me that Kunick's 13p is a meaningful manifestation of technical analysis, even if it was the result of a fundamentalist at work. Could you have profited from spotting this support level? The chartist would surely claim it as living evidence. The 13p floor, you will note (see Figure 10.1), is also the bottom of a triangle and the breakout from the triangle results in precisely the gain the chartist would have projected from measuring the triangle's base.

And the sceptic? He would probably not have profited directly, but it might have given him some comfort in late December 1994, as the price lifted away from 13p for what turned out to be the last time, that even if the price didn't move up quickly, if it came down there was a supporter somewhere in the undergrowth at 13p, as long as the fundamentals didn't deteriorate.

Kunick's 13p is interesting, but it was a relatively short-term phenomenon applying to a small share (Kunick was capitalised at £70 million in 1994). In these circumstances, it can take only one or two shareholders to have arrived at the similar opinions to produce events of charting significance. I could have found a dozen other charts for smaller companies and provided a similar rationale for them. What about a bigger share, over a longer term, where it is harder for individual shareholder's footprints to leave an impression? What about Trafalgar House (see Figure 10.2)?

This property-based conglomerate was one of the most colourful companies of the 1970s and 1980s. Via bid battles with Cunard and others, it laid its hands on several icons of Englishness, adding the *Daily Express* and the Ritz Hotel to its ownership of the QE2. But in the 1990s the tide went out and never came back (in 1996 it was taken over by a Norwegian company which then got into a very sorry way).

What I find compelling about this chart is the regularity of the decline. I can well understand that a large company can get so many things so wrong that it falls into oblivion. What I cannot fathom is why it should do so at such a regular rate over such a long period of time. It's almost as if Gann, with his theory of the *squaring* of price and time, had it right.

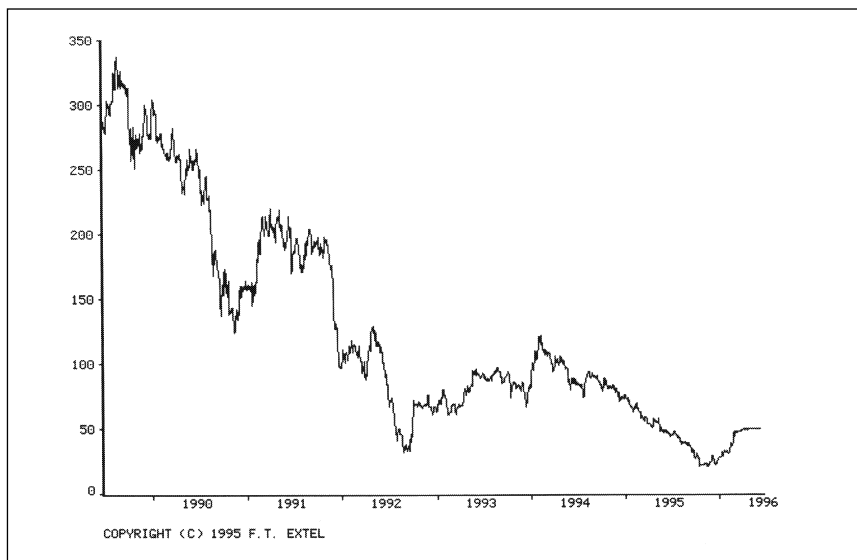


Figure 10.2 Trafalgar's remorseless retreat

On first sight of this graph, the eye tends to draw in a single line sloping from 330p in late 1989 to 0p in late 1996. On second inspection, it probably needs two lines: the first through the regular price action to mid-1990 and also cutting through that of 1991. This line gets to 0p in December 1994. The second line, with an identical slope, can be drawn from the peak in early 1994 through the bottom axis in about May 1996.

For me, these lines have a strange significance. A majority of all the prices on the graph – and remember, it extends over six years – are significantly close to them. They're not just *lines of best fit*; they also fit exceedingly well. The lines show that for every year from 1989 onwards, Trafalgar House lost 50p of value every year. Yes, the price twice veers off the line – in mid-1990 and again in late 1991. But on both occasions it returns to the line. You could argue that each time the market temporarily got the value wrong, recognised its error, and went back to where it should have been: back on the line. In early 1994, the line took a step move rightwards – and then continued to decline at 50p each year. Why was it so regular over such a long period of time? Why didn't this company – in the process of near terminal collapse – do so in a chaotic manner? Collapses are after all meant to be scenes of high chaos. Yes, the price veers off the line, not once but twice. There was in fact chaos there. But there was pattern to the chaos. When the bout of speeded-up decline was over, a

rush of optimism took it back, but only to where the measured pace of rot took over again. The price went to exactly where it would have been without the the deviation.

It is in fact a coincidence. That's how I rationalise it, although I have to think determinedly to do it. The two deviations and the rightwards movement of the line for Trafalgar's last two years show that there was in fact no meaningful regularity to it. It's just my brain preferring to see a pattern by linking up a few fragments of a graph.

And even if there's more to it than coincidence, do my observations about regularity mean anything in a charting context? Probably not. Nothing we haven't heard already at any rate. The chartist doesn't say a trend has to last for any particular length of time. He doesn't say a decline has to go on until there's no value left. He may sometimes suggest that interrupted trends can pick up again where they left off (as this one does in early 1991), but that rightwards shift at the end robs him of any significant conclusions along those lines.

The main point is in fact, for the chartist as well as me, that the trend is your friend. And that trends can be both reliable and persistent, and therefore valuable. If you can see them, and trust in them.

WHAT WORKS FOR THE PROFESSIONALS?

If the chartists have got no clothes on, as is asserted by a large and prestigious section of the investment community (many of whom also assert that fundamental analysts have no clothes on either, and we should all invest in tracker funds), it's strange how large is another section, which pays to see those clothes. In the UK, the Society of Technical Analysts has over 700 members, a majority of whom are full-time professionals. Most of these focus exclusively on the currency, commodities and derivatives markets, but their stock market-oriented colleagues nonetheless generate plenty of output. This is received, and very often voluntarily paid for, by what must be at least a few hundred fund managers.

What do they do with it? Very few if any, it is clear, make their investment decisions based on technical analysis alone. It seems to be used in three ways:

- to confirm judgements arrived at from fundamental analysis
- as a sieve, for identifying shares which show technical promise, which are then reviewed to see if their fundamentals are also inspiring

- charting professionals often say that their work is used to determine the timing of an investment decision along the lines of: 'It may look good value now on the fundamentals, but let's wait until we see sentiment swinging behind it in the form of promising charts . . . an upturn after a double bottom . . .' etc.

Nobody has ever measured how useful charting is when used in these circumstances. In any case, it would be impossible to separate out the charting element. Quite probably, many fund managers themselves do not have a clear view on the matter, although Anthony Bolton is in no doubt (see Chapter 8), without being able to quantify it. Obviously there are many who don't rate charting as an outright waste of time.

Apart from the tactic of using charts in conjunction with fundamental analysis, managers who are fundamentalists at heart tend to quote two circumstances in which they find charts useful. Both are very diluted forms of the art of technical analysis. First, if important information about a share is leaking out, the first place it will show up is in the price chart. If a share price is weak or strong without any obvious reason, the cause may be fundamental, but the symptom is purely technical. Poring over the charts for the first inklings of good or bad news is a respected technique. However this is so far downstream from what most people think of as technical analysis that it's arguably nothing to do with it.

A slightly more upstream charting tool used by many fund managers is relative strength, in the 'how's the share/sector doing against the rest of the market' guise (see page 78), rather than Welles Wilder's RSI version. It is probably most often applied to sectors rather than individual shares. Even over short periods of time, divergent sector performances are very significant in determining investment success among professionals. As I write, the tobacco sector is up 30 per cent in the last year, software is down 57 per cent. It often seems to me that it is much more difficult to carry out a fundamental analysis of an entire sector, relative to other wildly different sectors, than to compare a single company against the single amorphous mass of the whole stock market. Perhaps this is why fund managers, having used up their reserves of fundamental analysis energy on individual shares, might turn to relative strength as a means of catching these vitally important sector trends.

But as to open commitment to head and shoulders, pennants, stochastic, Gann and all the rest at the upstream end of charting, my admittedly less than comprehensive research suggests that only a tiny minority of fund managers subscribe wholeheartedly to it.

JUST THE GOLD-PLATED SIGNALS?

One of the great divides of the charting world is between those who look for occasional very high quality signals, and those who like to trade all day, every day. If you are interested in trying out technical analysis as a method of investment, you have to decide which side you're on. This is more likely to be determined by your psychological make-up than by any scientific analysis you carry out. Are you Mr Action or the much rarer Ms Patience? Here is the case for Ms Patience.

In Chapter 1, I suggested that the roulette wheel comparison supported the charting case. A run of 16 or 32 blacks would certainly get many fundamentalists looking out for red. However, the chartist's chips, it seems to me, are often heading for red after only four blacks. I am not aware of any research on the subject, but I suspect that a triple bottom would be a more reliable indicator of a forthcoming rise than a double bottom. After all, the triple bottom category includes all the failed double bottoms. As Jesse Livermore said, 'Money is made by sitting, not trading.' He meant sitting through 16 blacks, and although I'm not aware of him addressing the subject of bottoms as such, I'm sure he would have seen the triple bottom as the superior signal. The trouble is, of course, that triple bottoms are rarer. Waiting for triple bottoms doesn't suit Mr Action.

Nor is he encouraged to do so. Most chartists have to sing for their supper. And they eat on a daily basis. No professional chartist, except one running his own fund, could afford to restrict his advice to the rarest and presumably best signals: the gold-plated signals. This is true even if the chartist is not earning commissions: the fee-paying client (who pays a fixed amount irrespective of the amount of business he does) will want to hear from his chartist more than a few times a year.

An acquaintance of mine who is an economist says the reason economists so often give us the wrong answers is that their clients ask the wrong questions. In his view, the economics profession is not capable of answering the questions the rest of us continually put to it. So why do we put them? And why do they answer them? We ask them because they're the questions to which we want answers. They answer them, because they're the only questions they're ever asked.

Chartists are in a similar bind. (However, unlike economists, chartists have an alternative, which is to desert their clients and manage their own money, full time. I will return to this subject shortly.) Most investors abhor

'sitting'. Even Livermore: in his own book, *How to Trade in Stocks*, he relates how impatience caused him to invest in cotton 'before the time was right'. As this trade didn't earn him a quick profit, he liquidated it at a modest loss. The next week he repeats the exercise. He does this six times in all. When he's finally decided to have nothing more to do with cotton for the moment, the indicator he had been anticipating comes through and the price soars.

Other investors have the same weakness in following Livermore's advice about sitting as he did himself. And they require their advisers to demonstrate this weakness too. Realistically, how many fund managers are going to pay fees of £5,000 or £10,000, or sometimes I understand £30,000 a year for advice from a chartist, if the sum of that advice is three or four phone calls a year when the truly gold-plated signals come through? The chartist is required to have a view on everything that moves. The client wants to know whether his ICI shares are a technical hold. Is the chartist going to reply 'I haven't a clue'?

And yet the chartists make rods for their own backs. One charting firm faxes a daily 'Share of the Day' recommendation to its clients. The flagship publication of another contains recommendations on hundreds of shares per month.

My yearning for the gold-plated charting signal is probably a leaf out of my fundamentalist book. I prefer fewer stocks in my portfolio to many. I believe that the fewer you look at, the more you can know about them. I don't see any point in having 20 excellent shares and 30 good ones. Why not just have 20 excellent ones?

But there's more to the gold-plated signals argument than my preferences. In the camp of the rare Ms Patience you will also find Jesse Livermore (at least in spirit) and Stanley Kroll.

OR DIME-A-DOZEN?

Read Jack Schwager's interviews with the market wizards and you won't find anybody waiting patiently for gold-plated signals. In the first place, they would be dubious about the prospect of identifying them. Second, they argue that it's safer anyway to trade on all the signals. A trading system means putting a small and equal amount of money on every signal. The good ones will more than pay for the bad ones. That's what

makes a trading system worthy of the title: the built-in ability to deal with losing trades. He who waits for gold-plated signals inevitably bets more on each one. Even gold-plated signals will not be totally reliable so a few bad trades will decimate your capital, not to mention your confidence.

The wizards' trading systems aren't designed to give them a big profit on every trade. They aim to win regular small profits and irregular large ones, sufficient to more than pay for regular small losses. They are happy to run a system that gives them only a slight advantage, but extracting it means following the system in a very mechanical way. They trade all the signals, running the winners and cutting the losers. It is not necessary for a majority of the signals to be winners. A system which gives an 8 per cent winner for every four 2 per cent losers will break even – as long as the losers are kept rigidly within these bounds. From this base, all that's needed is for the occasional 8 per cent winner to turn into a 12 per center. That puts the system ahead. If the trading system is durable, that will make its designer rich. To follow such a system, three disciplines are needed:

- 1 *Never wittingly let a loser run.* A central feature of a good system is that you don't need to do this. The winners will more than pay for the losers. It doesn't matter that they might have come back and turned into winners.

'Wittingly', because some losers will inevitably exceed 2 per cent. The tool that keeps losses in check is the stop-loss order, but it doesn't always work. Your stockbroker cannot execute an order at 180p if the price moves straight from 190p to 170p.

- 2 *The discipline to discontinue trading when the system ceases to work.* No system works 100 per cent of the time. Market conditions change, sometimes imperceptibly. The only sign that they have changed may be that what has been a winning trading system turns into a losing one. The wizards often cite two rules intended to cope with this problem. First, monitor the volatility of prices. If volatility changes, stop trading until the level with which the system was comfortable returns. Second, determine an overall system loss (say 10 per cent of capital) at which point trading will cease (regardless of volatility) pending a review.
- 3 *Never risk more of your capital on a trade than the system allows.* You can have a winning system and yet run out of money before you win. If the testing of your system against old prices and signals shows that you sometimes need to run 50 trades simultaneously, then the limit you can

risk on any trade is 2 per cent of your capital. Risking 3 per cent is the same fault as running losses.

Mr Action may be more restrained in his trading style than you might think.

Perhaps the difference between Kroll and Livermore on the one hand and Schwager's more up-to-date wizards on the other is that the latter have computers. Computers make it feasible to track scores of markets and to generate and act upon dozens of trading signals a day. There's no need to wait for the big chance when there are lots of little ones.

NOT NEEDING TO UNDERSTAND

Schwager's interviewees are also pretty unanimous on another point. They don't feel the need to understand why their systems work. Several of them started out as business school graduates brought up on the *random walk* theory. They encountered technical analysis as sceptics. They tested it to prove the point. Finding that they couldn't, they opened their minds to the possibility that it was false, at least some of the time.

Most of us want to understand what we're doing and why we're doing it the way we do. But many modern exponents of technical analysis don't feel the need to explain why it should work. Not for them explanations of such and such a price sticking in investors' minds for months, and those investors' desire to buy back in at price they previously thought was high enough. The successful chartist's rationalisation is that his system makes money. He doesn't know why, but it does. This ability to put aside the need to understand is probably part and parcel of the ability not to argue with the market when a trade turns out to be a loser.

BUT NEEDING TO CHANGE

The same people also emphasise the need both to develop their systems and to recognise that they don't always work. Several of Schwager's interviewees say that they spend only half an hour a day executing the trades signalled by their systems. The main working day is spent developing their systems, for instance, by trying to identify common features of their losing trades and working out how if at all these can be

screened out. Moreover, they work on new systems to run alongside existing ones, and to take over from them if the existing ones start to fail.

SHOULD PROFESSIONAL CHARTISTS BE RICH?

They should. And not from income received in commissions and fees, but from profits earned by investing in their chosen markets.

The justification is that chartists, even where they admit to serving merely as back-up to the fundamentalist process, claim to add an edge. This edge should be demonstrable in the most obvious place: their own pockets. A ten-year run of success as a chartist investor should put six or seven noughts on a bank balance. And the test should be a ten-year test, because stock market history is littered with chartists who got it right for shorter periods, then flunked.

Either the rich practising chartists are very publicity shy, or there aren't any, apart from a very few who are obviously doing more than charting. I have never seen a list of wealthy people, such as appear in the *Sunday Times* and *Forbes* magazines, that includes a single chartist.

That's not to say that chartists aren't entitled to earn their livings, and in some cases very ample ones, from fees and commissions. In my view, anybody is entitled to make a living from anything legal for which others are prepared to pay them. But surely the first question anyone offered advice by a chartist should ask is, 'And how rich are you?'

AND FUNDAMENTALISTS?

Fundamentalists who manage other people's money should also be richer than the rest of us. The reason they don't come in for the same observation as above is that their performance is monitored. We don't need to ask them how rich they are because we know the answer to the more useful question: 'How rich are they making their clients?' Or at least, we know the answer if it occurs to us to ask the question.

Stock market chartists, however, seem to live on the sell side of the industry, and their long-term performance is not measured as rigorously as that of the buy side.

AND YOU?

I may have put you off technical analysis altogether. Alternatively, you may want to assign it a strictly supporting role to fundamental analysis. Even if you're keen, it may be a gold-plated signals approach for you. In any of these cases, I doubt whether there's any more I can offer you. But if you're keen and want to follow an active programme, here's my advice:

- 1 Treat technical analysis as a purely mechanical exercise.
- 2 Identify one or two simple signals that you are going to look for. For instance, a golden cross, a stochastic signal in a sideways trending share, a breakout after a five points of definition triangle, a hanging man followed by an engulfing formation.
- 3 Spend as long as it takes to work through at least 500 years of share price (that is, one year for each of 500 shares) and ascertain how often your selected signal was good. If you don't have the time to do this, you won't have the time to be a chartist.
- 4 Work out whether it would have been best to sell the good trades after a 5, 7 or 10 per cent gain. Obviously you can either have fewer big gains or more small ones. Going for the big ones will mean giving up some of the smaller ones. For the moment, don't consider higher gains.
- 5 Assume you had put £500 into every good and bad signal in your 500 one-year share price histories. Now work out your peak requirement for money, assuming you had traded all the signals.
- 6 Assuming you have at least one-and-a-half times this amount of money available, it is worth working out how much you would have made or lost. If you don't have the money, don't bother. (Perhaps, if you defined your signal more tightly, you wouldn't need as much.)
- 7 So how much would you have made? Now work out the commissions you would have paid. Still worth it?
- 8 Now work out how many times your stop-loss would not have taken you out of a losing trade at the level you set and how much these events would have cost you.
- 9 If it still makes sense, it's time to get going.

11

Net gains for charting

What the internet can do for chartists

High minimum standards from free charts

Effortless scanning for secondary signals

US stocks are better covered

On the day I write, 30 North American stocks have made MACD sell signals, 41 have made RSI buy signals, 53 have declined on strong volume, 5 made morning stars, 154 gave point and figure triple top alerts, and I could go on. And on.

So what? So this. Five years ago, obtaining this kind of information would generally have involved hours of poring over charts – even if you had your eye in to the point of being able to recognise a morning star in a single twinkle. In fact, identifying every stock that made any kind of signal would have been impossible for any small investor because there weren't enough hours in the day. It is true that some of the most sophisticated charting software, combined with a daily share price download, could have mechanistically compiled daily lists of signals. But more than a few minutes' work was involved, and only a limited number of signals would have been covered. By contrast, the information above, and similar data on 59 other technical signals is available instantly and free to anyone capable of getting to StockCharts.com (and if you're not, you can't be serious). As are the names of the companies in question and dazzlingly detailed charts. For chartists, the internet is almost as amazing as the prices paid by early internet investors said it was going to be. But a lot cheaper – so far.

Signal identification – or scanning as it's known in the business – is in fact not the most significant internet gain for chartists. That, I would say, is simply the mass availability of charts. Five years ago, hassle-free charting involved shelling out £10,000 a year for a terminal from Reuters or one of a handful of other providers. Today, there are countless websites offering charts of what would – only a few years ago – have seemed considerable sophistication. But the standard has moved on. The modern level of considerable sophistication is set by a few sites such as StockCharts.

Before we review in more detail what the internet offers chartists, let us point out two things:

- 1 The information in this chapter has a half life of about six months. The internet evolves rapidly, so if you're reading this book a year or two after publication, don't regard this chapter as more than a hazy view of

what's out there. On the other hand, it should give you an idea of the absolute minimum standards you should be looking for and an idea of the websites most likely to deliver them and any evolution of them.

- 2 This review is limited to free sites. Some of the sites have extra services available to paying customers, but the cost of even the top service will typically be less than £250 or \$350 a year, and you are in any case unlikely to feel you need this level of service as much of the expense relates to live *streaming* datafeeds, which are aimed at day traders rather than typical chartists. If that's what you want, you have been reading the wrong book! You can get a professional-level service by paying more, but you would have to be managing money for several hours a day to justify the considerably higher expense (or perhaps managing money successfully for only a short time each day).

OBLIGING ONLINE BROKERS

Not every online broker offers share price charting, but if you want one that does, you should not have to look very far. For instance, E*Trade.co.uk's charting facility, which is an integral part of its main site, has five years of share price history, candlestick formatting (if you want it), seven or eight secondary indicators such as RSI and MACD, log charts, and a limited selection of FTSE indices. Up to the time of writing, it has also always boasted an alarming and quite annoying idiosyncrasy, which is that prior share prices are not adjusted for capital changes. Thus, if a company splits its shares into four, the E*Trade chart shows a price fall of 75 per cent on the day. Other shortcomings include an inability to calculate secondary indicators from data earlier than that on display (see the top panel of Figure 11.1). However, for many charting applications, E*trade has a lot to offer.

Schwab also offers charts. In fact, its charts are supplied by BigCharts, about which you are about to read a lot more. However, its charts are hopelessly small for serious chartists and the seam between its dealing facilities and its charting facilities is extremely clunky.

These are not the only online brokers offering charts. Chartists thinking of opening an online account should not have to look far to get free charting as part of the service.

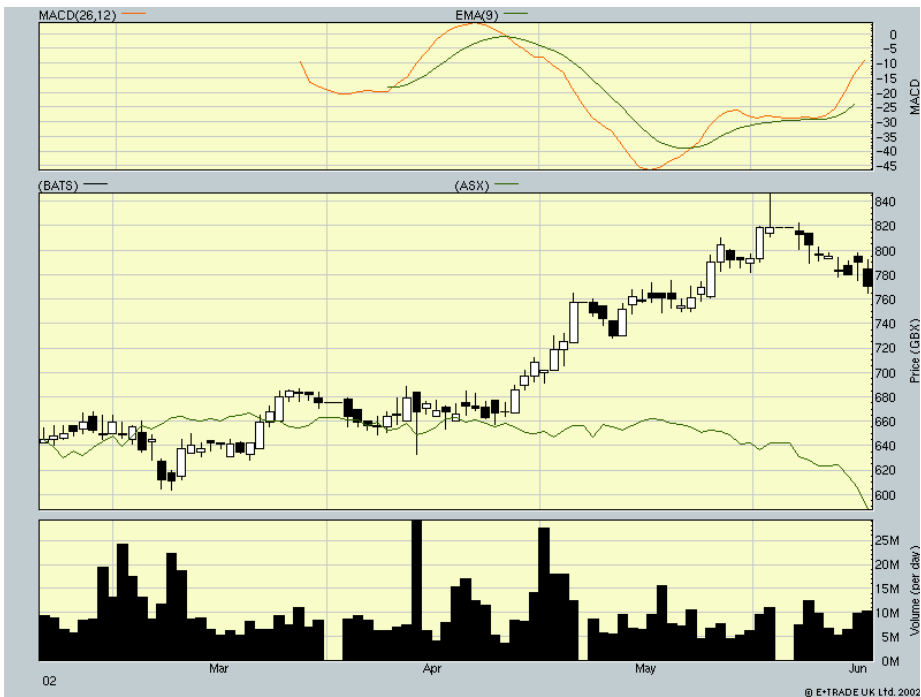


Figure 11.1 Don't be happy with any less than this

COMMUNITY OFFERINGS

Whether or not your broker offers charting, you should also consider the charting facilities offered by investing community sites. ADVFN.com offers almost everything available at E*Trade and quite a lot more. For instance, its share price database goes back to 1986 for blue-chip stocks and generally at least ten years even for small stocks. At the other end of the event horizon, for the price of a subscription, ADVFN will draw a minute-by-minute chart in real time (Figures 11.2a, 11.2b).

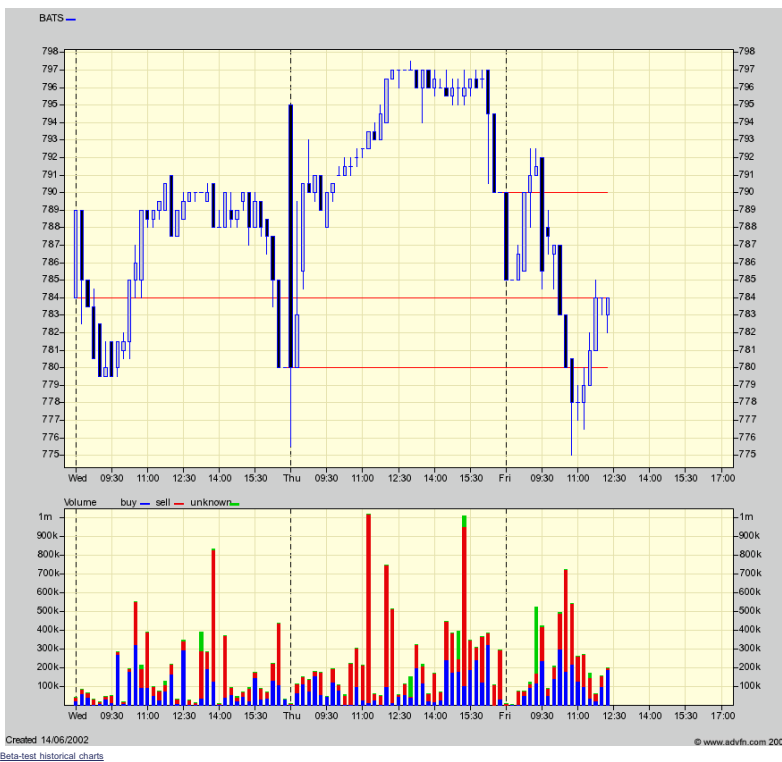


Figure 11.2a But ADVFN's 15 minutes . . .

You get similar facilities at The Motley Fool (Fool.co.uk), where the plusses include a bigger range of secondary indicators than ADVFN and the promise (but rarely the actuality) of showing fundamental factors such as earnings figures on your chart. On the other hand, there are a few minuses, of which the most annoying is a tendency to regard any slightly complex capital event such as a demerger as a reason to regard the share as a new issue.



Figure 11.2b ... to 15 years is even better

Figure 11.3 shows what you get when you ask the Fool for a 'back as far as possible' chart of British American Tobacco. Compare it with Figure 11.2b, which is ADVFN's 'back as far as possible' chart for the same share. The different starting dates are explained by BAT's 1998 demerger of its financial services side. It would seem that the purists at The Fool reckon that was an end of life event for old BAT, and they might have a justifiable argument.

However, if you ask the Fool for a 'back as far as possible' chart on BT (or as it used to be known, British Telecom), the arguments for making the starting date as recent as October 2001 – as it does – are pretty threadbare. That was when BT demerged its mobile phone operations. But these were a comparatively small component of the whole BT group. Any chartist with an appreciation for the long term would prefer to have BT's previous share prices adjusted for the value of the demerged unit than just to have them disappear.

But this is a pretty minor failing. The Fool's roster of 16 secondary indicators, 14 years of data, and log scale option (not available at ADVFN) make it a pretty close to a gold standard in the arena of free internet charting facilities. Fortunately, this gold standard is quite widely available, for if you look at Figure 11.3 closely, you will see that the Fool's charting facility is provided (seamlessly) by www.bigcharts.com, which is a big name to look out for in internet charting.

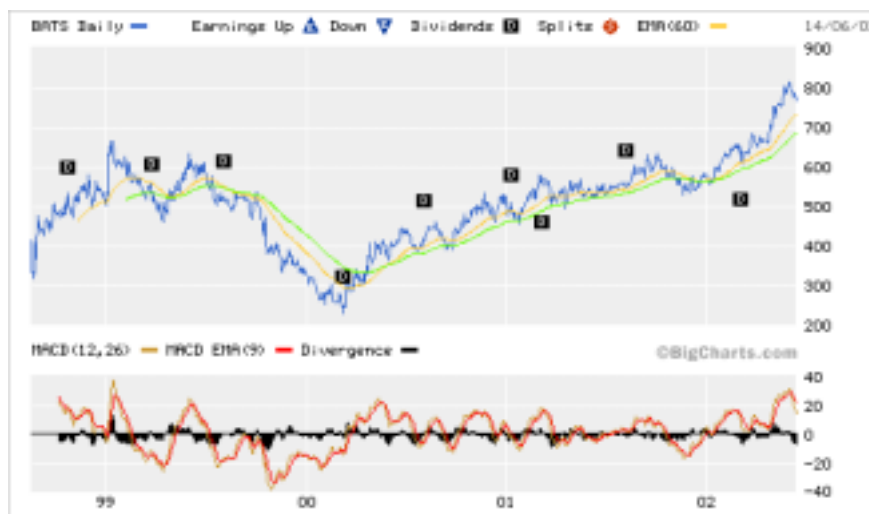


Figure 11.3 The Fool is even more advanced, most of the time

At FT.com, for instance, the presentation is remarkably similar to that at the Fool and the explanation is not far away: the BigCharts logo again shows who is really behind the package on offer. The FT's parent company, Pearson, is by the way a 34 per cent shareholder in BigCharts' parent company, Marketwatch.com. (Let's hope it continues to be, because Marketwatch's profit and loss account has dotcom written all over it; although in early 2002 it was also sporting a distinctly promising chart.)

Pearson is also the 100 per cent shareholder of the publisher of this book, so it causes me some embarrassment to say that I have always found the more advanced parts of FT website so unstable as to be almost unusable and this certainly applies to its charting sections. This may be because I use an Apple computer rather than a PC running Windows. But then, I don't have these problems with any other sites and I don't understand why I should have to put up with them at a blue-ribbon site like the FT's. If the FT site works for you, it has the advantage over the Fool of offering a wide variety of industry comparators and a half decent handful of FTSE indices against which to track individual shares.

GOLD STANDARD






But you can always go to the gold standard itself, at www.bigcharts.com (Figure 11.4). Here, the world is your oyster, including stocks from 16 countries and phenomenal Java charts. These allow you to zero in on selected time periods and to read the figures behind every plot on the chart simply by running your mouse over it. When you have done that a few times however, you might ask yourself whether – however technically impressive they may be – these features are genuinely phenomenally useful in your career as a chartist. Personally, I suspect not. But I confess they are great fun: and should I ever be called to give a gravitas-laden stock market commentary on television news, I will certainly be using a chart with BigCharts' gravitas-laden 'globe' background option (Figure 11.5).



Symbol Lookup

1 Enter Keyword:

2 Select Country to Search:

<input checked="" type="radio"/> All Countries all	<input type="radio"/>  United States none	<input type="radio"/>  Italy * it:
<input type="radio"/>  Australia au:	<input type="radio"/>  Japan ** jp:	<input type="radio"/>  Spain es:
<input type="radio"/>  Canada * ca:	<input type="radio"/>  Netherlands * nl:	<input type="radio"/>  Sweden se:
<input type="radio"/>  France * fr:	<input type="radio"/>  New Zealand nz:	<input type="radio"/>  Switzerland ch:
<input type="radio"/>  Germany de:	<input type="radio"/>  Norway no:	<input type="radio"/>  United Kingdom uk:
<input type="radio"/>  Hong Kong hk:	<input type="radio"/>  South Africa za:	

3 Select Security Type:

<input checked="" type="radio"/> All	<input type="radio"/> Fund	<input type="radio"/> Index
<input type="radio"/> Currency	<input type="radio"/> Stock	

4 

Figure 11.4 BigCharts: the world is your oyster



Figure 11.5 Very useful for television appearances

The only issue for UK investors using BigCharts' own site is that it has no UK indices. However, it has effectively all UK stocks and price histories going back a decade or more. Unless you are a point and figure enthusiast – it doesn't do point and figure – you will find it difficult to do better. Nevertheless, you should also have a look at StockCharts, which is platinum for US chartists and potentially so for everybody else. StockCharts' impressive scanning capabilities are where this chapter started. But its charts are staggeringly good. And it does not overlook the point and figure format.

BREATHLESS IN THE US – PLATINUM STANDARD

Whereas BigCharts is a website built by people who had figured out how to make great charts, whoever put the StockCharts website together had

figured out not only that, but everything else that chartists could conceivably want. This is first evident in StockCharts' interface, which is better than the more-than-adequate-one at BigCharts. You get a feel for the StockCharts version in Figure 11.6. Another big plus is that StockCharts' standard format comprises not one chart but three – *on the same screen* (they are standard size, arranged in a column – you scroll down your window to see the second two). The default selection is a three-day, intra-day chart, a five-month chart of daily readings, backed up by a two-year chart of weekly readings. If you prefer an alternative configuration, say a long-term point and figure chart instead of the intra-day view, it's easy to set up.

And that's not all. You can't see StockCharts' full range of secondary signals in Figure 11.6, but in this area too it pushes beyond BigCharts with a stable of no less than 24 offerings. I wondered whether the Rabbitt Q-Rank might have been invented by John Q Updike. I have not so far investigated what the Aron Oscillator has over and above the Ultimate Oscillator. But on the basis that you shouldn't look a gifthorse in the mouth, I am very grateful for them. Along the same lines, StockCharts offers its candlesticks in three colours, not two. I read its explanation for this, but lost my way when I got to 'oxymoronic candlesticks – they're coloured bullishly, but filled bearishly or vice versa'. You know, it's funny how the Japanese have always managed with just two colours. I probably can too.

And I should remind you that I am exploring charting, not popularising it. If you still have the appetite to study more signals after investigating the first 16, hasten over to StockCharts. And if you're still at work on the first 16, have a look at StockCharts anyway, because its charts are extremely attractive, very clear and the most flexible on the internet.

So why would you ever go anywhere else? Because StockCharts is a US-centric site. It covers Nasdaq, the New York Stock Exchange, the American Stock Exchange, two Canadian exchanges and US mutual funds. It therefore covers any UK or other foreign stocks listed on any of these exchanges (these will be large companies already listed on their home exchanges and seeking to cultivate interest among US investors by having a secondary listing on a US exchange). But it does not at the time of writing offer any coverage of foreign stocks not listed on a North American stock exchange. And, like BigCharts, it doesn't offer any foreign indices either. So when you have carefully composed your perfect StockCharts format and used it to display the conclusive chart for, say, British Energy, don't be disappointed when you can't inspect its share price relative to the FTSE 100.



Figure 11.6 StockCharts even has 'oxymoronic candlesticks'

BTI - P&F Charts from StockCharts.com

16/02 9:58 pm



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http://stockcharts.com/def/service/SC.pnf/chart=BTI,PLTD[PA][DD][F:3!]&pref=G

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Figure 11.7 And P&F is only a scroll away

But I haven't finished with this impressive site yet. It also beats the competition hands down for comparing one stock against another, offering both multiple small charts on your screen simultaneously and a breath-taking version of the standard 'compare to' big chart (as offered by almost all the sites mentioned here) in which you can plot several different shares from a common starting point (on a percentage change basis). And then there are those scans. Apart from transferring dollars directly into your bank account, StockCharts has got the lot – if you are focusing on US stocks . . . 'twas ever thus.

Of course, on the basis that chartists are theoretically uninterested in the fundamentals, this shortcoming can be overlooked: why not forget about stocks not covered by StockCharts? Yet I somehow doubt that you will be willing to do that, which brings up a related point. StockCharts is not interested in fundamentals. At BigCharts, you get a newsfeed, earnings data, a link to the corporate website, another to regulatory filings and all the other paraphernalia of conventional investing. Purist StockCharts gives you none of that. But it does give you phenomenal charts.

There is one other site I should mention which is Chartanalysts. This is a comprehensive source of point and figure charts for UK stocks. Its technology seems a touch behind the times compared with StockCharts' since it relies on inflexible Acrobat Portable Document Files (PDFs) to display its wares. Nevertheless, it is a serious service, covering a very wide range of stocks. It is on the edge of this chapter's territory, since it is only available to subscribers paying £250 a year. However, for that you get a daily update of over 500 UK stocks and every sector, similar coverage of Pacific and European stock markets and also of currencies, commodities and financial futures, a scanning service delivered by e-mail and the well-known and highly regarded FullerMoney newsletter.

NET ADVICE

That's it for charts. Of course, the internet also offers any number of chart commentary and analysis services, which promise to identify emerging patterns. It is impossible to appraise these as objectively as it is possible to appraise the pure charting sites and I do not propose to do so. But here come a few clues on where to start the process for yourself. Inevitably, a majority of these websites have a US focus.

Often, investment community sites have a resident chartist. At the time of writing, UK sites www.Sharecast.com and www.Hemscott.net fall into this category. www.Clearstation.com, a US investment community site owned by online broker, E*Trade, has a charting bias and always offers immediate, free access to 20 or 30 supposed current charting signals, including charts and explanations. This would be a good place to get your eye in.

Websites focusing purely on chart interpretation generally require subscriptions for their mainstream services. That is certainly the case at www.Chartpatterns.com, which looks at the difficult-to-reduce-to-a-formula patterns such as the head and shoulders, pennant and triangle that you will not find identified (on a live basis) on any of the charting sites mentioned above. Its coverage is US stocks and it undertakes to bring your attention to 25 pregnant patterns a week.

www.hardrightedge.com promotes a set of paid-for charting services, in part by listing (on its Daily tab) a handful of daily-updated scan results.

www.Decisionpoint.com operates on the same basis. Its main focus is sectors and markets rather than individual stocks, but 'Nick's Picks' caters for stock-seekers.

www.Equitytrader.com, which has quite a cute charting tool, is the website of John Bollinger as in those famous bands.

You will find a wealth of comment and analysis on the website of *Stocks & Commodities* magazine, www.traders.com.

URLs of sites mentioned in this chapter:

www.advfn.com

www.bigcharts.com

www.chartanalysts.com

www.chartpatterns.com

www.clearstation.com

www.decisionpoint.com

www.equitytrader.com

www.etrade.co.uk

www.fool.co.uk

www.ft.com

www.hardrightedge.com

www.hemscott.net

www.sharecast.com

www.stockcharts.com

www.traders.com

Glossary

Time is an important component in the definition of many of these terms, but cannot be expressed specifically because many of the terms can be used equally in long- and short-term time frames. For instance, a base area could form over three days between 60 and 63p, and over six months between 60 and 70p.

accumulation A phase in the market cycle when supposed long-term/well-informed/'smart money' investors are buying shares ahead of an advance. This term and its opposite, *distribution*, are core elements in Dow Theory.

advance/decline line A measure of how many shares have moved forward, and how many backward.

base area The levelling out of price, and the price at which this occurs, in advance of a reversal pattern or breakout.

bear trap Following a price rise, a reversal signal turns out to be false, so proving expensive for any bears who sought to profit from the anticipated new downtrend.

beta A measure of the volatility of a share price. A high beta share demonstrates greater price variability than a low beta share.

blowoff Or speculative orgy. An extended and unsustainable upwards surge in a share price or market. At the start of a blowoff, prices are already far ahead of any level which would be indicated by fundamental values. The blowoff first magnifies this discrepancy, then murders it. The imminent reversal is not obvious to those participating in it. The doubling of Wall Street share prices in the last 12 months before the 1929 crash, followed by their immediate halving, was a blowoff.

Bollinger bands A pair of lines plotted above and below a moving average to define a trend channel. The width of the channel is defined (mathematically) to accommodate changes in volatility, so as potentially to avoid false signals.

breakout A decisive movement by price out of a level at which it has been consolidating. Sometimes breakout is used exclusively for upward movements, in which case 'break' means the opposite downward movement.

bull trap Following a price fall, a reversal signal turns out to be false, so proving expensive to any bulls who had expected to profit from a new uptrend.

call option A contract in which the buyer pays a premium for the right, should it suit him to exercise it, to buy shares in the future at a price fixed now. This is a way of profiting from expected price rises. If shares in Antelope plc are currently 100p but expected by the investor to rise to 200p, he might be interested in acquiring an option to buy them at 120p. If the option costs 10p per share, he will profit from any price rise above 130p. See *put option* and *option writer*.

confirmation Two simultaneous signals pointing to the same conclusion.

congestion area A level at which a price sticks for an extended period.

continuation pattern A share price pattern, observable on a chart, which follows a significant up or down move and portends the resumption and continuation of that move.

correction A price movement against the direction of the prevailing trend, but not so extensive as to reverse it. A correction eventually gives way to a resumption of the prevailing trend, which takes the price to a new high (in an uptrend) or low (downtrend). A correction can only be seen for what it is once it has completed.

crossover The action of one moving average crossing over another (related) series. Normally seen to be a trading signal. See *whipping* and *dead cross*.

dead cross A sell signal made when a short moving average cuts down through a long moving average. Opposite of a golden cross (page 39).

derivative An investment that has no intrinsic value but is derived from investments that do have such value. If you buy gold, a commodity or shares, you can wear it, eat it or live on the dividends, etc. If you buy an option or future (the two main forms of derivatives), you do not expect to gain these benefits. The value of such instruments lies in the difference between the price at which you are entitled to acquire (or sell) the underlying investment and later prices. You profit (or lose) by dealing in your 'right to acquire' (or to sell). (In fact, in the case of a futures contract and indeed some options, you can sometimes 'take delivery' of the underlying article. But usually such contracts are closed out prior to this stage by the payment of the cash profit or loss earned or incurred up to the point where delivery would otherwise have taken place.) Share indices are transmuted into investable instruments by the futures and option contracts derived from them and interest rates have their own extensive range of derivatives.

- distribution** The opposite of *accumulation*.
- divergence** The failure of one indicator to confirm a signal given by another.
- dynamic resistance/support** A line connecting highs or lows on a graph, which is not horizontal, denoting that, with the passage of time, resistance or support is moving to new levels. Contrast with *static resistance/support*.
- efficient markets hypothesis** The theory that new information about a share is immediately reflected in its price. Part and parcel of the strong form of the *random walk theory*.
- exercise date, exercise price** The price and date (or last date) at which the holder of a call or put option may require the option writer to sell or buy the shares under option.
- failure swing** A term used in conjunction with oscillators, such as MACD and Welles Wilder's RSI. A failure swing occurs when the share price makes a new high or low, but the indicator does not. This may herald a change of trend.
- future** A contract arranged now (including the price) but to be completed on a fixed future date. Often, completion involves paying over the money earned or lost on the contract rather than actually taking possession of the item on which the contract was based. A future is one kind of *derivative*.
- gap, gap day** Observable only on bar charts. A price opens higher or lower than the highest or lowest price at which it traded the day before and stays outside the previous day's range for the rest of the day (or at least closes outside yesterday's open–close range). Accordingly, there is a gap between the two days' bars. These events are also known as gapping up and gapping down.
- hedge** A subordinate investment made to protect a primary investment. Also, 'to hedge' and 'hedging'. 'Hedge funds' normally have nothing to do with hedging in this sense. These are investment funds which invest in a wider range of investments than 'normal', with the objective of making higher returns than normal. This makes them arguably more risky and more difficult to regulate. Accordingly they are usually structured so as to be outside the scope of conventional financial regulation (quite legally so). They cannot therefore be marketed to the public in general. Instead they seek 'sophisticated investors'.
- indicator** Any charting device which gives or is designed to give trading signals, i.e. encouragement to enter or close out a trade.

inside day On an inside day, the highest price recorded for a share is lower than yesterday's highest price and the lowest price is higher than yesterday's low.

island When an up gap is followed shortly by a down gap, the bars formed by the prices on the day or days between form an island, separated from the main price action on the graph.

key day reversal The price moves a considerable distance on one day in the opposite direction to that in which it has been trending in recent days, reversing several days' worth of movement.

log scale Strictly, 'semi-logarithmic'. A special kind of price scale which keeps changes in proportion.

Meisels Indicator A measure of the net total of up days against down days in the past ten. If the share went up on three days and down on seven days, the Meisels Indicator would be +4. Meisels readings higher than +6 suggest a share or market is over-bought and vice versa.

momentum The rate of change of price.

moving average A calculation which is updated (typically) on a daily basis by calculating the average price of the last so many days. A weighted moving average gives 'a louder voice' to recent prices. An exponential moving average is a weighted moving average whose calculation includes all previous prices.

neckline A line of support or resistance in a reversal pattern whose penetration marks the completion of the pattern.

on-balance volume An indicator devised by Joe Granville, a celebrated but ultimately unsuccessful chartist of the early 1980s. Volume is considered negative if the price falls on the day and positive if it rises. The cumulative OBV total should echo the pattern set by the price.

option writer The investor who 'takes the other side' of a call or put option. In return for a premium, he offers to buy or sell shares in future at prices which may be turn out to be disadvantageous to him but advantageous to the option buyer. However, they will not always be so, and when they are not, he profits from the premium. He usually owns, or is willing to own, the shares in question. See *call option* and *put option*.

oscillator An indicator which is constructed in such a way as to ensure it moves up and down within a band. Oscillators normally generate signals when they reach the extremities of the band (see Chapter 4).

outside day The opposite of an inside day: the outside day's high is higher and its low, lower than those of the previous day.

over-bought Widely used term to denote that prices have moved significantly into new high territory. The secondary indicators (RSI, MACD, etc.) normally have a specific level (e.g. over 70 or over 80). An over-bought share is not necessarily one that is imminently set for a reversal. Normally certain further events must occur in the over 70 or 80 zone (such as a failure swing) before the reversal is anticipated.

overhead supply The supply of shares to the market by sellers which prevents a price from breaking out through resistance during an uptrend.

over-sold Opposite of *over-bought*.

pullback An unexpected reversal after a breakout. A pullback may or may not be itself subject to a reversal (see Figure G.1).

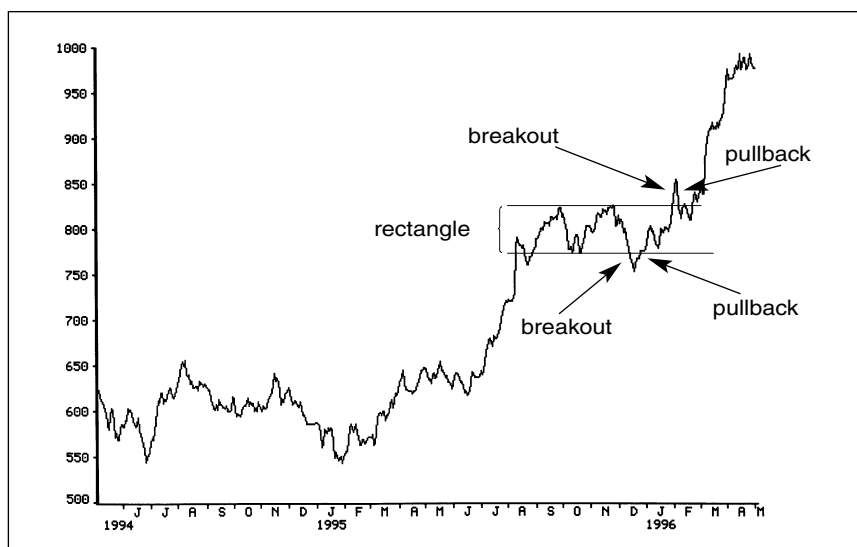


Figure G.1 Pullback

put option A contract in which the buyer (of the option) acquires the right (if it suits him to exercise it) to sell shares at a future date at a price fixed now. The buyer pays a premium for the privilege. This is a way of profiting from expected price falls. If shares in Zebra plc are worth 100p, but you expect them to fall below 70p, you might be interested in buying an option allowing you to sell them at 90p. If your expectations are correct, you could subsequently buy the shares at 70p and sell them to your option writer at 90p. See *call option* and *option writer*.

pyramid To increase the size of a speculative position based on its success to date, in anticipation that the profitable trend will go further. If Yak plc has

broken out and delivered you a profit on the 100 shares you bought, you might consider pyramiding your position up to 200 shares. This will be highly profitable if your forecast that the new trend will continue is correct. But if instead the price declines, the profits you have earned to date will be lost twice as quickly as they would have been if you had not pyramided.

random walk theory The theory, widely supported in academia, that it is impossible to forecast movements of share prices, whether by technical or fundamental analysis, and therefore impossible to make more profit, over the long term, by these methods than by selecting a share portfolio at random (e.g. by throwing darts at a list of shares). Any extra profit apparently earned by analysis, say the random walkers, is in fact earned by luck which will come to an end and go into reverse. The theory comes in 'weak', 'semi-strong' and 'strong' forms.

relative strength The strength of a share price when considered against the market as a whole.

resistance A price at which a share tends to stick, or bounce back from, when it has been rising. The price may have been set (in investors' minds) by some significant pattern several months or years ago when the share was last in this region. If the price pierces the resistance it may move a considerable distance before encountering the next resistance level. Such a move would be seen as a *breakout* past the first level of resistance.

reversal pattern A share price pattern, observable on a chart, which is regarded as generally being associated with the end of one trend and the beginning of another in the opposite direction.

short-selling Selling shares which the investor does not own. The transaction can either be closed out before the day due for settlement (by buying shares in and settling difference in prices), or satisfied by means of borrowing (more accurately, 'hiring') shares from someone who does own them. The short-seller anticipates making a profit from a decline in the share price before he closes out the transaction, or ultimately buys in the shares to satisfy the lender.

static resistance/support Repeated turning points in share prices which occur at the same or approximately the same price and therefore can be shown as a horizontal line on a graph. Compare with *dynamic resistance/support*.

stop-loss An instruction to a stockbroker to 'close out' a trade if the price moves disadvantageously to or past a predetermined level.

support The equivalent of *resistance* for a downward trending share.

trade A purchase or sale of an investment, including one following another to close out the first and realise its profit or crystallise its loss.

traded options Option contracts on the 100 or so largest (capitalisation) shares (and on the FTSE 100 Index) are continually traded and can be bought and sold at advertised prices in the traded options market. By contrast, options on smaller shares are priced on request and cannot be sold in the market.

trending A price which is moving up or down. Such a movement includes temporary reversals of the main trend. The defining characteristic is that succeeding highs and lows are higher (in an uptrend) or lower (in a downtrend). When a share price is trending, its support and resistance levels are *dynamic*.

trendless The opposite of *trending*: a share price is moving up or down, but the short-term movements do not deliver the price into new territory. Support and resistance are static.

volume Turnover, or amount of business done. The volume yesterday was 10 million shares. Tomorrow it might be only 6 million.

whipsaw, whipping A quick succession of signals which reverse each other (buy, sell, buy, sell, etc.) before a profit has been earned. In Figure G.2, crossovers of the 20-day and 200-day moving averages give two excellent trading signals in June 1994 and August 1995. However, the same system gives four bad signals in April to July 1995. The rapid and expensive reversal of these signals is known as whipsawing or whipping.

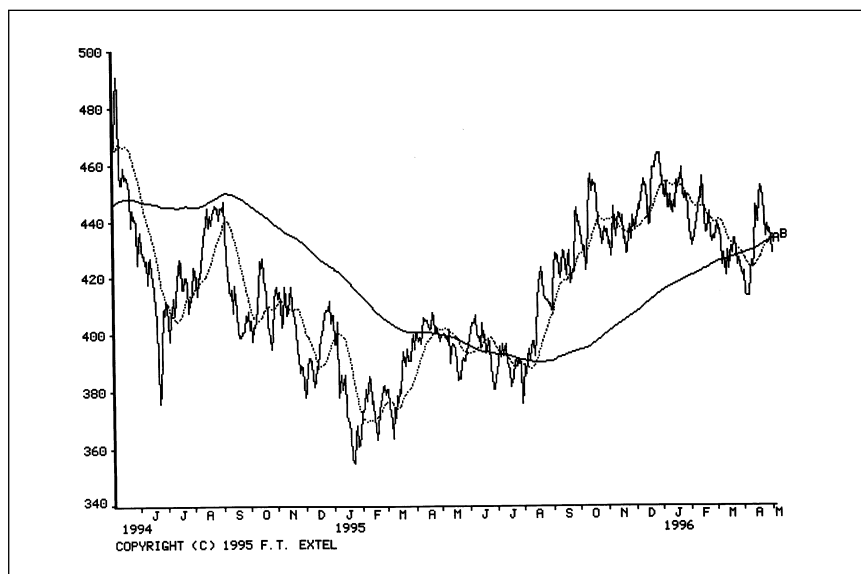


Figure G.2 Whipping

Further reading

IMPORTANT BOOKS ABOUT CHARTING AND CHARTISTS

Kroll, Stanley (1974/1996) *The Professional Commodity Trader*. Traders Press.

A practitioner admires his collection of scalps.

Lefèvre, Edwin (1923/1994) *Reminiscences of a Stock Operator*. Wiley. See Chapter 8. If you read only one (other!) book . . .

Schwager, Jack D. (1996) *Schwager on Futures: Technical Analysis*. Wiley.

The book issued to rookie traders by all the big Wall Street firms. This is a textbook, but well set out and not beyond the average enthusiast. You should work through its 200 pages of 'What happened next?' graphs before venturing your money on technical analysis.

Schwager, Jack D. (2001) *Stock Market Wizards*. Wiley.

This is the latest addition to the Wizards series which got going in 1989 with *Market Wizards*, followed up by *The New Market Wizards* (1993). Each is a collection of interviews with professional short-term investors, many of whom use a sizeable dose of technical analysis. The books give a good feel for the unusual personality types which succeed in this profession.

Sperandeo, Victor (1997) *Trader Vic II – Principles of Professional Speculation*. Wiley.

Victor Sperandeo (see Chapter 8) spent 20 years doing and thinking about technical analysis, which he blends with fundamental analysis. He has some very good insights, often based on his own extensive research.

SOME TECHNICAL ANALYSIS CLASSICS

Ellinger, Alec (1971/2000) *The Art of Investment*. Wiley.

Ellinger founded Investment Research of Cambridge.

Gann, W. D. (1976) *How to Make Profits Trading in Commodities*. Lambert-Gann.

Kondratieff, N. (1984) *The Long Wave Cycle*. Richardson & Snyder.

Livermore, Jesse L. (1940/2001) *How to Trade in Stocks*. Traders Press.

Nison, Steve (1991/2001) *Japanese Candlestick Charting Techniques*. Prentice Hall.

Steve Nison's groundbreaking book was originally published in 1991.

Although it is the one that gets the most references and has recently been reissued, in fact I prefer his (1994) sequel: *Beyond Candlesticks*, Wiley.

Prechter, Robert and Frost, Alfred (1980) *The Major Works of RN Elliott*. New Classics Library.

Prechter, Robert and Frost, Alfred (1998) *Elliott Wave Principle*, 7th edn. New Classics Library.

Rhea, Robert (1932/1993) *The Dow Theory*. Fraser.

Shabacker, Richard (1932/1997) *Technical Analysis and Stockmarket Profits*. FT Prentice Hall.

Welles Wilder, J. (1978) *New Concepts in Technical Trading Systems*. Trend Research.

For an up-to-date list of popular charting titles, go to www.global-investor.com and select the technical analysis list. Authors whose works have benefited me include Brian Millard, Martin Pring, Leigh Stevens, Thomas Dorsey and John Murphy.

The long-standing heavyweight encyclopaedia of technical analysis, now in its 8th edition, is: Edwards, Robert and Magee, John (2001) *Technical Analysis of Stock Trends*. Amacon.

A new contender for this slot is: Bulkowski, Thomas (2000) *Encyclopedia of Chart Patterns*. Wiley.

OTHER ILLUMINATING BOOKS

Graham, Benjamin (1997) *The Intelligent Investor*, 4th edn. Harper & Row. Possibly the best book on investing – from a fundamentalist viewpoint – ever written. Very readable. It barely dates.

Mackay, Charles et al. (1995) *Extraordinary Popular Delusions and the Madness of Crowds and Confusión de Confusiones*. Wiley.

A special edition combining the three investment chapters from Mackay's nineteenth-century classic and the whole of Joseph De la Vega's brilliant seventeenth-century monograph.

'Delusions' is a long book dealing with the cupidity of investors and non-investors too, but its three opening chapters are the definitive accounts of the South Sea Bubble, the Mississippi Scheme and the Tulipomania.

'Confusiones' is an account of options trading and much more on the Amsterdam Stock Exchange in the 1680s.

Malkiel, Burton G. (1999) *A Random Walk Down Wall Street*, 7th edn. Norton.

Professor Burton Malkiel does an academic demolition job on technical analysis, and on fundamental analysis. An up-to-date classic. Very readable – although scholarly, it is not a textbook.

Siegel, Jeremy J. (2002) *Stocks for the Long Run*, 3rd edn. McGraw-Hill.

This professor is not so scathing about technical analysis. The most widely acknowledged sourcebook of long-term investment statistics.

Smitten, Richard (2001) *Jesse Livermore World's Greatest Stock Trader*. Wiley. This excellent recent biography is almost as exciting as Lefèvre's book.

Train, John (2000) *Money Masters of Our Time*. HarperBusiness.

John 'technical analysis is fakery' Train (who is a successful investment manager) brings his *Money Masters* series up to date.

All these titles are available, usually with meaningful discounts, from www.Global-investor.com or by phone from +44 (0)1730 233870 (fax 233880).

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