Part I
APERITIF

The following strategies are suitable for the beginner trader and investor. They work, are easy to use and, for most people, are the only strategies they may ever need. For others, they comprise part of their armoury of strategies depending on the markets in which they are trading.

> The decline of the aperitif may well be one of the most depressing phenomena of our time.
>
> —Luis Buñuel (Spanish film director)

Recipe 1
Uncle's Favourite

Difficulty Level: Beginner

> No one in his right mind would walk into the cockpit of an airplane and try to fly it, or into an operating theater and open a belly. And yet they think nothing of managing their retirement assets. I've done all three, and I'm here to tell you that managing money is, in its most critical elements (the quota of emotional discipline and quantitative ability required) even more demanding than the first two.
>
> —William Bernstein

HISTORY OF THE RECIPE

Traders hate having to use their brains. They hate having to predict. They prefer to make things as automated as possible. Who wouldn't? So wouldn't it be helpful if, when we were trading, we could be pretty sure where a price will go? The essence of this trading strategy is that prices go back to where they were in the recent past.

This strategy is used by professionals and by novices and so should be simple enough for beginners to apply. The principle is 'mean reverting' – that is the price 90% of the time does not move in any trend but just back and forth.

Take a look at Figure 1.1. I have chosen the 3-minute chart, where each individual bar represents 3 minutes of price moves. I have taken this one from Sterlingmarkets.com, a broker that provides charting free as part of its brokerage services and one which I frequently use.

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Figure 1.1 GBP/USD 3-minute chart
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I have drawn a horizontal line pointing to 1.551, which I estimate to be the average or mean around which the price moves and to which it seems to revert. Some software will do this using a 'linear regression', which is a statistician's way of saying 'the average price over a period of time'. But I find it is accurate enough to do it by eye and in a fast-trading environment saves time anyway.

I could have looked at different time frames and then of course the mean would have been different and so would our trades. So who uses the 3-minute chart? Well, certainly someone who is trading actively during the day. They may even trade on the 1-minute chart. They do this because it gives them lots of trades and allows them to deploy their capital and get a return on it.

Figure 1.2 illustrates the daily chart, where each bar represents one whole day of price moves in GBP/USD. The average or mean I have drawn comes to around 1.58. Again the idea is that the price, even if it extends far away from this number, either above or below, tends to move back to this mean value.

Does the price actually revert to the mean? Very often yes. But given that we could lose lots of money if it didn't, we must as part of this strategy put in stop-losses to protect our capital.

Why did this strategy develop? Because usually traders do not like predicting trends. They want to have a better idea of where the price is heading based on where it has been, not where it might go based on where it has never been.

Below are three more illustrations. Figure 1.3 is another example of mean reverting. Figure 1.4 shows an example where a currency does not revert to mean and Figure 1.5 depicts the essential concept of 'mean reversion', that is there is an area of value around which a price will oscillate. Therefore our risk of the price not reverting to the mean is reduced because even if a new area of value is picked by the markets it

Figure 1.2 GBP/USD daily chart
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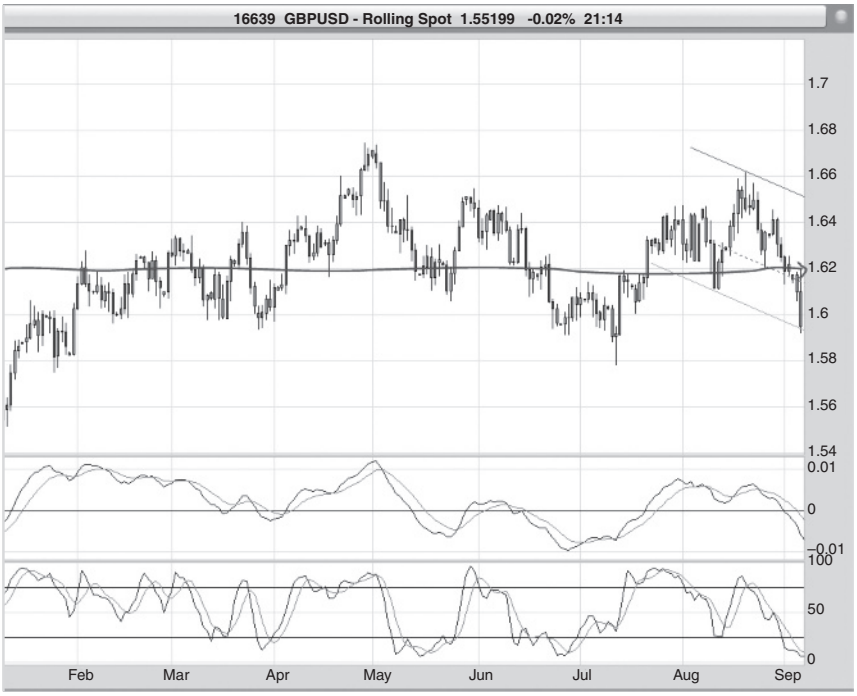

Figure 1.3 GBP/USD daily chart showing 1.62 as an area around which the price seems to be mean reverting

Figure 1.4 GBP/USD showing no mean reversion on the daily chart from November 2009 to June 2010. If we had expected the price to return to 1.7 USD per GBP we would have waited a long time and potentially suffered a large loss

happens infrequently. And if the price does move sharply against us to this new area, our stop-loss exit will prevent too large a loss on those occasions.

INGREDIENTS

- The rules
- Web charting

RECIPE

1. **Choose your time frame.** Do you trade all day, sitting in front of a computer? In this case choose a 3-minute or 5-minute chart. Or are you busy most of the day

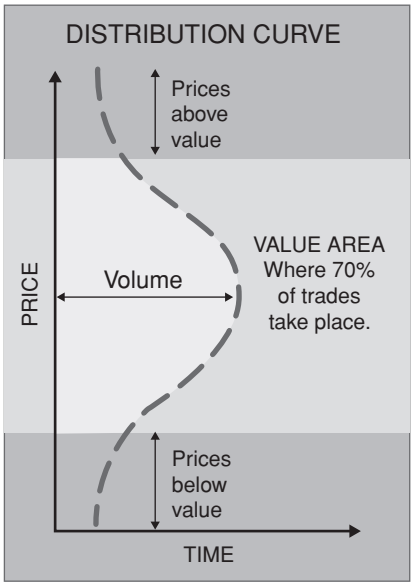

Figure 1.5 A graphical depiction of the principle of mean reversion. That is the price tends to move around a central 'value area' or mean

doing other things and so cannot be monitoring the markets every minute? Here a daily chart may be better, where each bar is the move of a whole day's worth of price changes.

2. **Choose a mean reversion line.** You will need a sufficient time frame of history on which to base the fact there is a mean around which the price oscillates. Only then can we choose a mean reversion line. In Figure 1.6 we have marked where we think the mean is by the horizontal line. Notice there are over 100 historical bars covered by this line. This tells me that the price has been moving around this mean for quite a while and the assumption I then make is it will continue to do so. This can be done by 'eye' as an estimate when looking at the chart, which is how I do it. Or it can be done on financial planning websites that provide charts by using the 'linear regression' line between a historic point and today's price.
3. **Choose an entry point** at which to trigger your trade. For instance Point A in Figure 1.6 represents when we felt the price had moved too far from the mean and will begin to revert back to it. How do we pick this point? We could use complicated statistical measures such as standard deviations. But let's keep it simple. For me the entry is 1.5500. This is because:
   a. it looks like a level which the price tends not to reach too frequently
   b. it is far from the mean and so is likely to result in a good catch
   c. it is not so far from the mean that it is the start of a whole new trend

Entry: 1.5500. Mean reversion line: 1.5525.

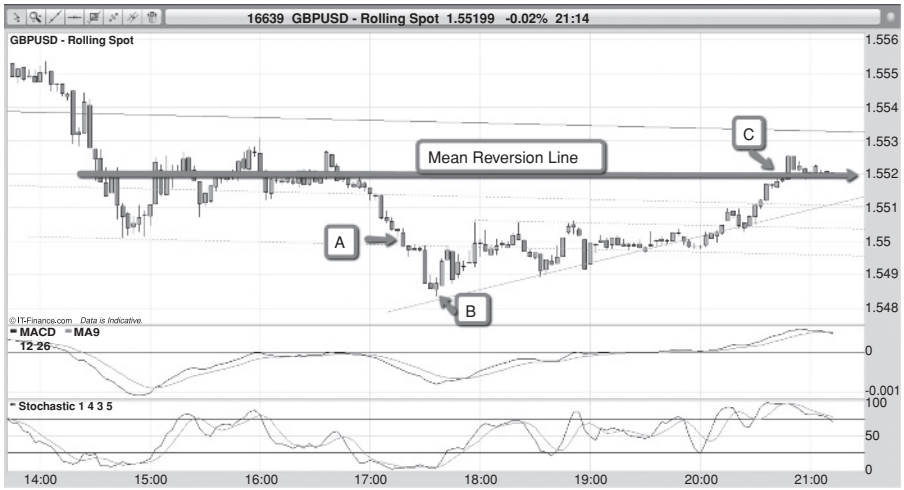

Figure 1.6 GBP/USD 3-minute chart. Mean reversion line = 1.5525. Point A (entry) = 1.5500. Point B (worst price) = 1.5485. Point C (exit) = 1.5525
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So how much would I make? Well, if I made $1 for every point from entry to exit at the mean reversion line, then I would make $25. (Of course you can trade multiples of that, depending on how much trading capital you have, but more on that in a moment.) 1.5525 – 1.5500 = 25.

This exit actually only happened at point C. It took a bit longer than expected, but got there in the end. But doesn't that mean you are hanging around for a long time with a lot of capital tied up? Not so, as on multiple currencies and commodities you can place multiple positions. This diversifies your risk (assuming they are not all the same time frame of 3 minutes and all USD trades – but even then you would get some diversification, i.e. they would not all be moving in tandem and so are not the same bet over and over again until it becomes one large single bet which could go wrong and expose you to large risk).

Point B represented our worst moment when the price went as low as 1.5485. At that point we were sitting on a paper loss of 1.5500 – 1.5485 = $15. How did we know not to exit at that point? Or put another way, what is our stop-loss, the point at which we exit with a loss? We cannot after all hold on forever in the hope of making $25.

If the stop-loss is equal to the profit to be achieved, i.e. $25 then that is a good measure. But surely then we win at $25 and we lose at $25, so if the number of wins and losing trades is the same, we don't make any money. This is true, actually after brokerage costs we would be losing a little.

But this is where the principle of mean reversion comes in. If we expect prices that have fallen quite far to rebound like on a bungee or a string of spaghetti, then we expect to win more often (i.e. prices extended from the mean, revert back to it) than

lose (prices go on extending and make ever greater losses for us and do not mean revert). So imagine we were therefore expecting to be right, i.e. the price reverts back to the mean, 6 times out of 10, and wrong a whopping 4 times out of 10.

Then our results would look like this:

$$\text{Profits} = 6 \times \$25 = \$150$$
$$\text{Losses} = 4 \times \$25 = \$100$$
$$\text{Overall profits per 10 trades} = \$50$$

More heat: But hang on. If we've found a profit-making machine, why don't we just make bigger bets, like 10 times the size? After all, we will make 10 times the profits. The reply is: what if we have a string of losses? Imagine we used 100 times larger sizes. And we had five losing trades. We would be down 5 × $2,500, that is $10,000. If your trading capital was $10,000 then you would be wiped out.

More sauce: Okay, but suppose your trading capital is not merely $10,000. How do you then decide how much to bet in each trade to maximise your return? After all you don't want to make a pathetic $25 now that you've discovered a profit-making strategy. As mentioned in the introduction to this book, when you are wrong, than ideally you should lose no more 2% of your trading capital. If you have $12,500, then that would mean you lose no more than $250 when you are wrong on any one trade.

That would mean you would have 6 × $250 winning trades, making you $1,500 and 4 × $250 losing trades, losing you $1,000. Overall for every 10 trades you make $500 profit.

Entry

- Draw a mean reversion line.
- Go long as price falls (or vice versa)
- Start with small $1 per point move profit or loss, for example if the GBP/USD rate moves 0.0001 you should make $1. Build trade size so that any exit at a loss is 2% of total trading capital

Exit

- If price hits mean reversion line or stop-loss

But what could go wrong with such a delicious recipe that has you salivating on its description? See the next section on money management and risk.

VARIATIONS TO THE RECIPE

Money and Risk Management

Be careful not to experiment too much. When does this strategy turn sour? When your discipline leaks like a sieve. Namely when you do not exit with discipline at

your stop-loss because you don't want to take the loss. Or you get greedy and do not exit at the mean reversion line. Or you make the trade size so large, that a couple of bad trades and your capital is all eaten up in losses.

Why not enter at closer to the mean reversion line? After all the price will revert. It is true you could. And your stop-loss should be proportionately set. But you will potentially make less money, because the move is small from a closer entry point.

Okay, you ask, **why not increase the bet size and trade from a closer distance?** Nothing wrong with that. As long as you stick to your stop-loss. The problem is the price could just keep hitting your stop-loss, i.e. continue away from the mean reversion line. The point of us picking Point A is that it is unlikely to go on beyond that value based on recent price action seen from the price chart. So your next question is . . .

Why not enter close to the mean reversion line, and put the stop-loss a lot further out? The answer is that you could as long as [number of winning trades] × [$ profit per winning trade] is greater than [number of losing trades] × [$ loss per losing trade].

So imagine you entered when the price moved $10 away from the mean reversion line. And your stop-loss was $100 loss away. That is if you suffered a $100 loss you would exit. This is fine as long as you had 10 winning trades for every losing one.

So take the example shown in Figure 1.7. You place a stop-loss very far away. You then just keep entering trades as you see fit as soon as they move from the mean reversion line. What could go wrong?

Well, as mentioned above:

- You have a string of losses and wipe out your account. For instance let us say you had all these positions open and your stop-loss was hit.

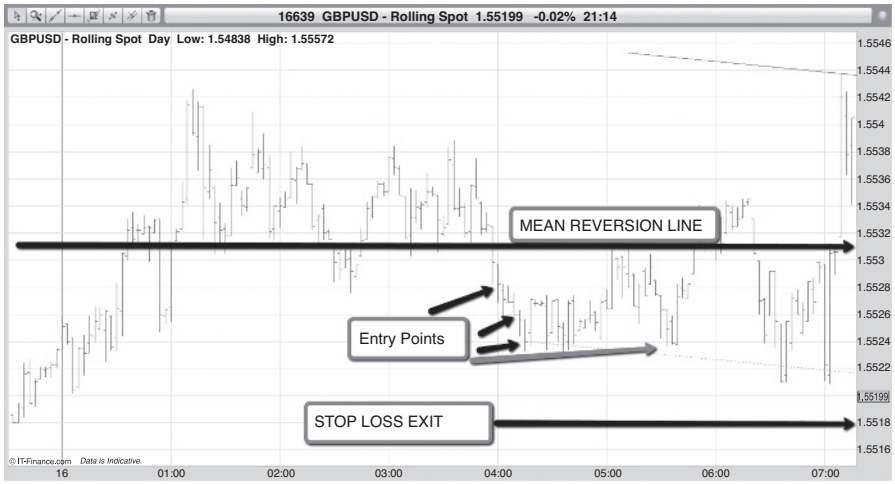

Figure 1.7 Mean reversion line and entry and exit points
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We avoid that by following the above rules of limiting our bet size and making sure if we have a string of, say, five consecutive losing trades, we do not come even close to wiping ourselves out. In fact five consecutive losing trades should lose no more than a total of 10% of our total trading capital.

HERE'S ONE I MADE EARLIER

Figure 1.8 illustrates the results from this strategy using actual trading results. The chart shows 454 trades placed in the first two weeks of July – 450 trades won. Each horizontal line shows the level of profit per trade. Why was it not exactly the same profit per trade? Because the strategy represents all trades, across all time frames and products.

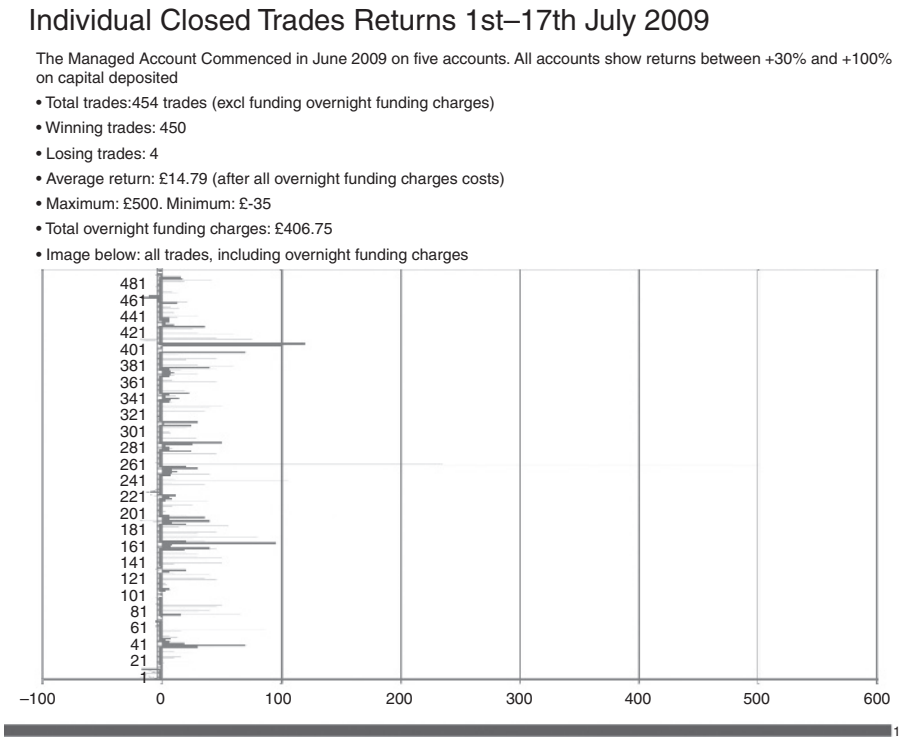

Figure 1.8 All trades and the profit or loss corresponding to that trade