Cloud Charts

Trading success with the Ichimoku technique

David Linton
About the Author

David Linton MFTA

David Linton was born and raised near Melbourne, Australia and studied engineering at King's College, University of London in the United Kingdom. After graduating he dealt in Traded Options on the London Stock Exchange and developed computer software for analysing price behaviour. In 1991, David founded Updata plc, based in London, where he is Chief Executive Officer. Professional traders and analysts now use Updata in over forty countries around the world.

David is a well known commentator on financial markets in the UK. He has appeared on BBC television, ITN News, Bloomberg and CNBC finance channels and has written for The Mail on Sunday, Shares Magazine and the Investors Chronicle. He has taught Technical Analysis to thousands of traders and investors in Europe over the last two decades with numerous financial institutions employing him to teach and train their trading teams.

He is a member of the UK Society of Technical Analysis (STA) where he teaches the Ichimoku technique as part of the STA Diploma Course and is a holder of the MSTA designation. He is a member of the Association of American Professional Technical Analysts (AAPTA) and was awarded the Master Financial Technical Analyst (MFTA) qualification by the International Federation of Technical Analysts (IFTA) for his paper on the Optimisation of Trailing Stop-losses in 2008.

David lives in London and his interests include skiing and yachting.
Preface

This book represents a stage in a long journey to master the behaviour of financial markets. There are a lot of people who have impacted me along the way. This started out, for me, as a teenager when I was almost obsessed with probabilities and outcomes of all things financial. As a student in the early 1980s I would study the share pages of the Financial Times in London noting all the stocks that had jumped in price the previous day. I was fascinated to understand how a share price could suddenly leap and wanted to know how it was possible to identify such moves beforehand.

My first foray into buying shares involved reading the share tips in the weekend newspapers and ringing a stockbroker first thing on a Monday morning, buying small amounts of all of them. It seemed perfectly logical to me that they would go up because someone ‘in the know’ said they would and everyone reading what I was reading would be buyers too. I would give my well spoken broker my list of shares to buy, a few hundred pounds in each, while he would leave me in no doubt with his sighs that I was ‘small fry’.

In those days a two week account period operated. If you bought shares at the start of the account, you would have two weeks before you would have to send a cheque to your broker to pay for them. If you sold before the end of the account period and made a profit you would receive a cheque from your stockbroker for how much you had made less their commissions and stamp duty.

The first time I did this I received a cheque for over £300, and it struck me that this was the easiest way to make money in the world. I would buy shares each fortnight on Monday morning and sell them at the end of the account period on the Friday afternoon the following week. Just as I was starting to get used to the idea of receiving a cheque from your stockbroker each fortnight, something almost inconceivable to me, happened. Stocks had fallen heavily at the end of the account period one Friday and I had suffered a loss. Instead of receiving my cheque in the mail the following week, I got a statement of account that informed me that I would need to send a cheque to the broker. This would cover the difference between the prices I sold at a few days earlier and those I bought at, almost a couple of weeks beforehand as well as the commission and tax on the transactions. I had to sell the shares as I could not afford to purchase them outright, and suddenly, the idea that I would have to send a cheque for £600 pounds, almost all I had made in the proceeding weeks, and have nothing for it made me feel sick. I remained in a state of disbelief for weeks. How could every one of the shares that were tipped to go up, do exactly the reverse and fall? They were all great companies. I had researched them in order to decide on my investment weightings. I knew their products and the companies were, indeed, undervalued as the press had pointed out. It made no sense to me that their prices fell and as the pain of the loss had subsided, I returned to watching the prices in the paper each day with an increasing resolve to profit from such moves while avoiding painful failures.
Introduction

Every year around the end of October the International Federation of Technical Analysts (IFTA) holds its annual conference. Members from technical analysis societies around the world gather to share their experience and hear the latest ideas in presentations over the course of a few days. In 2004, it was the turn of the Asociación Española de Analistas Técnicos to host the IFTA conference in Madrid. It was a memorable event and it was great to have so many esteemed technicians in one gathering.

By nature, running a software company that covers so many bases in technical analysis and travelling the world to meet some of the best names in the business at their desks, it is rare that a conference presentation breaks new ground. But, as with reading a book, you never know what gem you will pick up buried deep within the content. One of the speakers at the Madrid conference was Rick Bensignor, who was then Chief Technical Strategist at Morgan Stanley and his presentation was about Ichimoku Kinkho Hyo charts. I had seen these ‘Cloud Charts’ before and heard people speak about them in other presentations, but on that November morning, Rick presented them in a way that made them understandable to many of us in the audience for the first time. That is where this started for me. As a result I am grateful to Rick Bensignor for sparking my interest in the Ichimoku technique.

Soon after Madrid, I started looking at these charts more and more and I was keen to find out as much as I could about them. The charts seemed to display a natural phenomenon in mapping the price of a financial instrument with an uncanny degree of accuracy. I wanted to know why this was, so I searched the internet only to find descriptions on their construction, which is elegantly simple as we shall see in Part 2. There was a real lack of material that explored these charts in any meaningful depth. I visited Rick in New York and met up with him at subsequent IFTA conferences in Switzerland and Egypt. I spoke with other technical analysts based in London who used them. I approached the Japanese delegates at the IFTA conferences each year in a bid to find out how they used them. Did they have any further gems of wisdom? Did they know of anyone in Japan I should speak to? I was drawing blanks. Many of the Westerners I spoke to implied that there was a bigger secret and while the Japanese analysts were always politely enthusiastic, I sensed that they also might be holding something back.

My curiosity towards Cloud Charts coincided with their increasing appearance in my work. They were becoming a regular part of my weekly commentaries on markets, and featured in my monthly reports and in presentations. I would show them in television interviews and webcasts and found myself using them to explain what was going on when sitting at trading desks with institutional clients. The UK Society of Technical Analysts (STA) asked me to speak on the subject and then invited me to prepare and present a module for the STA Diploma evening course, taught at the start of every year in London. A growing number of people were turning to me to explain the Ichimoku technique more fully. Part of me felt uncomfortable that I might not know all there was to the subject, while another side of me questioned if there was any more to it anyway.

About this book

Part 1

The book is split into three parts. Part 1 is designed to give you enough knowledge of technical analysis in order that you may fully understand Cloud Charts, complimentary techniques and more advanced ideas. It is by no means a comprehensive guide to the whole subject. The better your understanding of technical analysis, the easier you will find understanding Cloud Charts. It should be possible to get up-and-running with using Cloud Charts from this book alone. The explanations of support and resistance, moving averages and basic Candlestick charts in these early chapters are all fairly essential to understanding Cloud Charts.

We have also covered basic technical analysis indicators in Part 1 so you may gain an understanding of how they are applied in more advanced Cloud Chart techniques outlined in Part 3. There is a chapter on Point and Figure charting as this really powerful technique often agrees with what Cloud Charts tell us about an instrument. We show the power of using Cloud Charts and Point and Figure together later in the book.

Towards the end of Part 1, stop-losses and money management are covered. While the tools shown here are not strictly technical analysis techniques they are a vital tool for any trader. There will be times where tools such as stop-losses take precedence over other techniques including Cloud Charts as we will come to see. Understanding trailing stop-losses will also be helpful when we come to explore the idea of cloud stops-losses in Part 3.

If you are already an experienced technician, you may choose to skip Part 1. But a quick revision of the subject may be useful and might uncover some things you did not fully appreciate.

Part 2

This section of the book addresses the basics of using Cloud Charts. If you are only interested in getting to grips with the technique and using it, you could get by on this section of the book alone. The construction chapter is important to truly understand these charts and apply them as covered in Chapter 10. The chapter on time horizon is vital for maximising the value of Cloud Charts for multiple time frame analysis. Chapter 12 looks at using Cloud Charts alongside other techniques with some practical examples.

Part 3

The final part of the book looks at some more advanced analysis ideas and trading strategies. Many of these ideas are derived from applying the standard techniques covered in Part 1 to Cloud Charts. While you can easily conduct cloud analysis from only reading Part 2, Part 3 might inspire an extra idea or two. Hopefully you will find some of the new material in this final section original and groundbreaking enough to want to apply to your own trading.
Chapter 1 - History

The cloud chart technique is one of the newest forms of Technical Analysis, a subject that has been described in many ways over the years, often referred to as Charting. Technical Analysts in the US are normally called Technicians and in many parts of the world they are often colloquially known as Chartists. For many years analysts, particularly of share prices, fell into one of two camps. You were either a fundamental analyst or a technical analyst. It was rare that you used both forms of analysis as the approaches are so different.

Fundamentals versus Technicals

Fundamental analysis is by far the most common route that investors took. This required you to analyse all the underlying information about a company such as annual accounts, trends of demand for products, news, directors’ share transactions or macro economics. You name it, anything that could affect the price. It all seemed very logical but the problem with this form of analysis is that nearly all this information is already reflected in the price. So unless you have managed to spot something that very few people have it is unlikely that any information you find will help you predict where the price is going. We see this all the time when prices go down on good news because it wasn’t as good as expected. Similarly the price can rise when the news isn’t as bad as was feared. Good news does not necessarily make prices go up!

Fundamental analysis is essentially an analysis of value, while technical analysis studies price. Value and price are two different things. If they were the same, there would be little need for financial markets. Nothing would be overvalued or undervalued. While fundamental factors may have a bearing on prices in the long run, shorter term moves are more likely to be entirely technical. The price chart represents everything that everyone knows in the market at that time. New information may come to light in the form of news which can affect the price, but there was little chance of knowing it. The extent to which the price reacts to such an event will often be technical. The Microsoft chart below shows that in late 2007 the company had a market value of around $350 billion. Less than 18 months later the company was capitalised at less than $150 billion.

Chapter 2 - Basics of Technical Analysis

Most of us appreciate the advantage of representing a series of numbers as a graph. In our early mathematics lessons at school we learn how to plot data on two axes to get a pictorial representation. If you run a business and enter all your sales numbers in a spreadsheet, by the end of it you are itching to drag your mouse over all the data and click the draw a chart button. Why? Because we all know that a graph helps us see things, such as trends, that we might easily miss by looking at the raw numbers alone. A picture is so much more valuable and can help you get a feel for where the data is heading. The chart below is of….well in fact it doesn’t matter what it is of. You can rely on the chart alone to guide you. Where do you think the price is likely to go next?

Figure 2-1: Nationwide UK House Price Index 1991 - 2009, courtesy of Nationwide Building Society

If you do technical analysis for long enough, the chart at a first glance tells you most of what you need to know. You get a feel for what more detailed analysis is going to tell you. And the key point here is that the price chart in technical analysis is more important than any indicator you can derive from it. The basic theories, set out by Charles Dow, cited in Chapter 1 are central to understanding price behaviour.

Chart 1-1: Microsoft market capitalisation over 3 years
Chapter 3 - Moving Averages

With On Balance Volume we looked at a moving cumulative line that was building each day with a simple arithmetic calculation. Moving averages are also a rolling calculation but the value of the average on each day is arrived at by looking back over a period. So for a simple 10 day average we start at the beginning of the price history and on day 10 we add all the prices together for the last 10 days and divide by 10 to get the average price. This value is the first plot of our moving average. On the next day we look back 10 days such that the first day is now not included in the calculation and plot the average again. So with each new day we take into the calculation, we drop the day 11 days ago out of the equation. And we move right through the history, such that the average of prices is changing, or ‘moving’, all the time.

Signals

Understanding the way that the price and the average ‘snake’ about one another, due to the calculation, is synonymous to how Cloud Charts are constructed. So getting to grips with this section will stand you in good stead for mastering Cloud Chart analysis.

Chapter 4 - Indicators

In technical analysis, there is a whole group of indicators, sometimes known as oscillators, which are typically displayed in a bottom window below the price chart. Like moving averages they are based on a rolling calculation and normally require a look-back period. The points on choosing periods for moving averages covered in the previous chapter generally apply to periodic indicators as well.

Many indicators are first derivative measures of the price. It is useful to use the analogy of distance, speed and acceleration to get a feel for what most indicators are trying to measure. Speed is distance over time (first order) and acceleration (second order) is speed over time. If you imagine pulling away from a stationary position at a set of traffic lights in a car, to begin with you are not moving very fast, but the rate at which your speed is changing is dramatic. You feel the back of the seat against you from the force of accelerating. Once you have reached the speed limit, you are going fast but your speed is near constant such that you have no acceleration. As you approach the next set of traffic lights you apply the brakes, feeling yourself being pushed forward as you slow down. Your speed is in fact changing fastest when you feel these forces of acceleration and deceleration, but it is not clearly apparent by looking out the window as you might be going very slowly or very fast respectively. Second order oscillators are trying to show up these changes in acceleration in order to get a heads up on how the speed of prices will change. Is the price about to take off or is it coming to a halt?

An indicator that demonstrates prices changing speed is Momentum, which measures the rate of change in price over a chosen period. This line, normally shown below the price, oscillates above or below a zero line showing times of positive and negative velocity respectively. Rising momentum above zero indicates prices are rising with increasing speed. Falling momentum above zero indicates prices are still rising but the speed of the rise is slowing. If we are below zero and falling, prices are falling at a gathering pace, while rising below zero means prices are still falling but the speed of the full is slowing.
Chapter 5 - **Point and Figure Charts**

There are several different ways of representing price action on a chart. Nearly all the charts that we have looked at so far are simple line charts that join up the closing prices and plot a continuous line. There are a number of chart types that replace the line chart with forms of representation in order to show an extra level of information. In this chapter we will look at one such chart, the Point and Figure chart.

First, let’s look at some other variations on the simple line chart. Bar charts join the high and low prices for the day as a vertical bar and then show the open and close as points marked on the left and right sides of the bar respectively. Bars can also be colour-coded for up and down days, as shown on the chart below. These give you a feel for the volatility in the price with the height of each daily bar. You can also see gaps between trading days that wouldn’t show up on a line chart. We will look this in the next chapter.

Other chart types include;
- wave charts,
- swing charts,
- Renko and Kagi charts,
- CBOT Market Profile charts,
- Cloud Charts,
- and Candlestick charts, covered in the next chapter. Here we will see that Point and Figure charts are also a unique area of technical analysis.

It is impossible within the scope of this book to cover the subject of Point and Figure charts to a level where you can use them extensively. To really master this truly powerful technique The Definitive Guide to Point and Figure by Jeremy du Plessis is really the ‘must read’ on the subject. This section would not be possible without du Plessis’s comprehensive book. A large number of technical analysts disregard this type of chart in the belief that it won’t add any value to their work. This is a big mistake because Point and Figure Charts can add an extra dimension to your technical analysis in ways that no other technique can. We will come to see throughout this book how Cloud Charts and Point and Figure Charts frequently confirm one another. The more tools that point to the same outcome, the more you can trust that analysis for your trading decisions.

Chapter 6 - **Candlestick Charts**

As outlined in the history of technical analysis in the first chapter of this book, Japanese technicians have been using Candlesticks for hundreds of years. They form an integral part of Cloud Charts and have been left to be covered towards the end of Part 1, in order to lead you into Cloud Charts in Part 2. Reading more about Candlestick Charts is highly recommended in order to get the most from Cloud Charts. It is impractical to cover every aspect of the Candlestick analysis in one chapter so here are the basics.

At the start of the previous chapter we explained the advantage that bar charts gave, over a single line chart, by showing the trading range of each day. Candlestick charts make these trading ranges clearer by showing the range between the highest price and lowest price for a day, as well as the range between the opening price and closing price for that day, in a more succinct way. Because candles assign more importance to the range between the open and the close, visually, with a wider body than bars, the four key elements of open, high, low and close on a trading day are much easier to see at a glance. While rising and falling bars may be colour coded as corresponding candles can, the wider body also allows candles to be further coded as hollow and solid, respectively. On days where the price closes higher than it opened, candles are hollow (often colour coded positively blue or green) and on days when the price closes lower than where it opened candles are filled solid (often colour coded negatively red or black).

A quick analogy for newcomers to remember is this, hollow candles are like balloons which go up and solid candles are like bricks which fall. The pictorial nuances of how candles represent price may not seem very important at this stage, but when it comes to recognising the various Candlestick price patterns it can be the difference between spotting them instantly, or missing them altogether. The almost subliminal information that candles can convey provides many traders with an extra dimension for decision making under pressure.
Chapter 7 - **Using Stop-losses**

In this chapter we will look at maximising your trading profits with stop-losses. Money management is a vital part of successful long term investing or shorter term trading. Understanding how to trade with stop-losses will also be useful when we look at similar cloud stop techniques.

**The maths are against you**

When most people start out trading, they don’t appreciate that there is an inbuilt mathematical disadvantage to trading. Percentage loss and percentage gain from a starting point are not equal going forward. For instance if you lose 10% of your capital on a trade you are left with 90% of your original capital, and to get back to where you were on the next trade you need more than a 10% gain. A 10% return on the 90% you are left with will in fact be 9% of your previous capital. If you had a losing 10% trade and a winning 10% trade, you will therefore have ended up losing 1% overall. The same applies if your trades are the other way round. If you win 10% on your 100% first, you get to 110% of your original capital, and if you then lose 10% of that amount it will be the equivalent of 11% of your original capital taking you to 99%. Either way round a winning trade of 10% and a losing trade of 10% will end up costing you 1%. Percentage losses cost more than percentage gains.

The next aspect of losses versus gains is that the cost increases exponentially. If you lose 20% of your capital and then make 20% on your new capital pool, you are left with 96% of your starting capital, not the 98% you might expect from the previous 10% exercise. Indeed, if you lose 20% of your capital, you need 25% (20 upon 80) to get back to where you were. If you lose a third, you need a 50% return on what you have left to recover the third lost. Lose half and you need to double your money next time and so on. This burden of recovery is what encourages gamblers to take bigger risks in attempt to win back money they have lost. The more you lose, the more you need to win to get back to where you were. The table inset in the chart below highlights this in numerical terms and as we see from the chart, lose more than half your money in a trade and it becomes an impossible road to recovery.

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Chapter 8 - **Cloud Chart Construction**

Cloud Charts look complex at first glance and there is some irony in this as ‘Ichimoku’ in Japanese is often translated as ‘at a glance.’ Once you do get the hang of these charts it is true that you will start to see a lot of information at a glance. There are a number of key elements on the chart and we will look at each of these in turn. Cloud Charts are very simple to construct because all the lines are derived purely and simply from the price history alone. There are five lines that make up a Cloud Chart:

1. Turning Line (sometimes called Conversion Line)
2. Standard Line (sometimes called Base Line)
3. Cloud Span A (sometimes called Cloud Span 1)
4. Cloud Span B (sometimes called Cloud Span 2)
5. The Lagging Line (sometimes called Lagging Span)

These lines are shown on the chart below

**Turning Line**

Sometimes called the conversion line, this line is constructed like a moving average. The look back period is 9 days, but instead of averaging each day in the period, we are calculating the overall midpoint between the highest daily high and the lowest daily low in the period.
Chapter 9 - Interpreting Cloud Charts

The most important aspect with Cloud Charts is how the price interacts with the cloud. Time and time again you will see prices turn right on the edge of the cloud. The price effectively creates ‘a rod for its own back’ into the future with the cloud mechanism. It interacts with the cloud running ahead of itself on a perpetual basis providing us with a unique roadmap. Below we see how Antofagasta made a number of points of contact with the cloud in 2009.

Chart 9-1: Price making contact with the cloud

Cloud touches aren’t always precise, but prices often make contact and rebound or run along the cloud edges as we see below with Aviva shares. Prices can interact with outer and inner edges of the cloud.

Chapter 10 - Multiple Time Frame Analysis

So far all of the charts we have looked at have been daily charts. One of the most powerful aspects of technical analysis is that all the principles we have applied so far to daily charts can be used in the same manner on charts of other time frames. This is especially true of Cloud Charts.

Time Horizon

Simply by changing the frame of your chart you are changing your time horizon. The screen below shows six charts of the same instrument with the same period moving averages. Moving from the top left chart clockwise, we have a monthly, a weekly, a daily, an hourly, a ten minute chart and a one minute chart. The Candlesticks in these charts are constructed from the open, high, low, close prices for those periods. The averages are 21 month, 21 week, 21 day, 21 hour, 21 ten minute and 21 minute averages respectively. All the tools are read in the same way but your time horizon is now governed in each case according to the time frame of the chart.

Figure 10-1: Technical Analysis principles are the same on each time horizon
Chapter 11 - Japanese Pattern Techniques

In Chapter 1 we looked at the history of Cloud Charts. Hosoda, who first developed the chart, did not make great reference to the analysis of multiple time frames. This was almost certainly due to the work involved in plotting all the data points manually before the advent of computers. Hidenobu Sasaki's book, written in 1996, does not cover the subject of multiple time frames either. All of the charts in the book are daily charts. Even as recently as the mid-1990s computerised Ichimoku charts were not common. As computers have become more powerful, the ability to switch rapidly between data intensive intra-day time frames has increased. Many traders now have several screens on their desk enabling them to see dozens of different charts simultaneously. The idea of viewing multiple time frames, say weekly, daily, hourly, 10 minute, of the same instrument and analysing them all is something that many traders now do in practice. Multiple time frame analysis of Clouds Charts may have been conducted in the 1990s, but it has not really been documented until now.

Sasaki's book did cover three other areas of Ichimoku analysis under topics he called; wave principle, price target and time span. The vast majority of people using Cloud Charts in the Western world do not use these Japanese principles. We have seen up to now that Cloud Chart analysis is an objective technique with a degree of subjective interpretation. The concepts in this chapter are more subjective ideas which are therefore more difficult to apply. If you choose not to use these additional techniques and to simply apply Cloud Charts as we have learned them so far, you should still find Cloud Chart analysis to be valuable. The multiple time frame approach, seemingly not heavily used historically in Japan, is likely to be quicker and more reliable for newcomers to Cloud Charts.

Wave Principle

While computers are very good at taking time series data, constructing charts and switching from one time frame to another instantly, they are still less good at dealing with highly subjective techniques such as pattern definition. The first aspect of the wave principle in Ichimoku analysis looks to identify a number of different price patterns. While some of the patterns are recognisable in line with those we covered in Chapter 2, most will be new to Western technicians. Curiously these patterns in Japan are named after letters of the English language alphabet. The patterns apparently resemble the price action they are labelling more closely than Japanese characters. Here we identify the main patterns as Sasaki set them out in his book.

Chapter 12 - Cloud Charts with Other Techniques

In this chapter we will look at bringing the analysis techniques covered in Part 1 together with Cloud Chart analysis. This is done as a practical exercise by looking at the US stock market first and then at a well known US stock.

US stock market analysis

Very long term

For the long term picture we start with the monthly Cloud Chart for the S&P 500 Index. From this chart we immediately see that on this time frame, the market is in bearish territory with both price and lagging line below the cloud. There is a resistance level of 1,550 points marked which the market tested twice in early 2000 and late 2007. There is a support level at around 765 points set by the low in 2002 and again in 2009, where prices did briefly go below this level. While the breach is a concern, it is reasonable to say, that over the last thirteen years the market has traded in a wide range between 700 and 1,550 points. Right now prices are in the middle of that range and heading higher.

For the long term picture to be bullish again on the Cloud Chart the price would have to rise above 1,400 points within the next six months. If the S&P 500 Index did jump above 1,200 points in a matter of weeks, we would have the unusual scenario of the lagging line crossing the cloud before the price. The price would need to continue running to more than 1,300 points over the months ahead, without a setback, in order to cross the cloud. If prices move sideways or a little higher over the course of a year, they will be hitting cloud resistance. The price will either struggle at the cloud and fall or break through testing a new 1,100 support level from the other side. The lagging line might take anything up to another two years (26 months behind price) to cross into bullish territory on this chart. Most importantly, we see how the lagging line found strong support on the cloud when the price was making lows in 2002-3 and therefore we should not be surprised to see it testing the cloud from below in the months ahead.
Chapter 13 - Ichimoku Indicator Techniques

In the previous chapter we looked at using Cloud Charts alongside other technical analysis techniques. Now we will look at ways to combine the techniques such that the resulting tools are hybrid charts of clouds and standard analysis tools. This combines the ideas we learned in Part 1 with the Cloud Chart techniques form Part 2.

Students of the subject often ask if other cloud construction periods can be used. We will look at optimisation of the periods in the next chapter, but here we see the effects of changing the 9, 26 and 52 periods. The Fibonacci numbers, 8, 21, 55 used, shown in the top window make little difference in the chart appearance versus the standard periods.

Chart 13-1: Cloud Charts comparing different construction periods

Move to periods further away though, such as 5,13, 34 in the top window and we see that chart differences start to appear. You may get a slightly earlier signal, as with the bullish cross in March 2009 but you also had a failed signal in December 2008 with the shorter signals, which was avoided with the standard 9,26 and 52 periods.

Chart 13-2: Cloud Charts comparing different construction periods

Chapter 14 - Back-testing and Trading Strategies

One of the most common questions that students of Cloud Charts ask is ‘Have you back-tested the technique?’ Cloud Charts require a degree of subjective interpretation which can make quantitative back-testing with hard coded criteria challenging. Back-testing, sometimes known as system testing, can be done by programming certain entry and exit criteria and seeing the overall trading results. Covering the subject area in great detail is beyond the scope of this book and this chapter is designed to show you some basic findings from simple back-test results surrounding Cloud Charts. This is a rapidly growing area of computerised trading and to keep abreast of it in reference to Cloud Charts, visit cloudcharts.com.

Stop and Reverse systems

Towards the end of Chapter 7, we looked at how money management based trading tools such as Optimised Stop-losses and Parabolic SAR produced better overall profit results by keeping losses small. The chart below shows an Optimised Stop-loss, stop and reverse system, in this case on Eurodollar. This ‘Flip-Flop Stop-loss’ system is based around the idea that you exit a long position when a long trailing stop-loss is breached, and you then enter a short position until the short stop is breached swapping you back to long. This system is designed to keep you the right side of any big move such that you are running a profit, while keeping losses small when the instrument is non-trending. The secret is the optimisation of the stop percentages, as we explored in Chapter 7. Here we see, for the Euro, that 2.7% long and 2.3% short stop-losses produced the optimum results with the Equity Line in the lower window showing the growth in capital with this strategy.

Chart 14-1: Flipflop stop-loss tested with equity line for Eurodollar

In the previous chapter we looked at Cloud Stop-losses which were based on Cloud Span A with the price and the lagging line crossing for an exit signal. Unlike the trailing stop-losses we looked at in Chapter 7, Cloud Stop-losses are not suited to an optimised percentage. Variability in where the cloud stop would give a signal may be created by altering a number of elements of the cloud construction.
Chapter 15 - Cloud Market Breadth Analysis

Market Breadth is a long established method of technical analysis which seeks to analyse a group of underlying instruments as a whole. This might be a group of instruments in a sector, such as Banks, or a market index. Market Breadth lines will measure each member instrument in the list to produce a rolling line showing the sum of the criteria for the group. Each member in the list is treated with equal weight which is significant with most indices which will be weighted. For instance, in the UK FTSE 100 Index, the top ten stocks account for around 90% of the weight of the index. A handful of stocks determine most of the movement in the index. With a Market Breadth calculation the smallest weighted stock and the largest weighted stock are treated in the same way. Such a calculation will give a broad picture of the market, hence the term Market Breadth.

The chart below is one of the most famous Market Breadth indicators, the Advance/Decline Line, often called the A-D Line. This example is calculated on the S&P 500 Index and its 500 constituent stocks. Each day the difference between the number of advancing stocks and the number of declining stocks is added to the cumulative line. If more stocks rise than fall, the line will rise and if more stocks fall than rise, the line will fall. The main purpose of the line is to look for Divergence between the price and the broader picture. Here we see the US stock market in 2009 has recovered around half of its falls in 2008, while the breadth is testing new highs again. This tells us that the recovery is broad based and therefore most stocks are rising.

Calculating Market Breadth does come with a health warning due to constituent changes. The top chart above represents all the constituents over time and will include stocks that are no longer in the index. Some companies will have been taken over and others will have fallen in value, such that they are no longer in the top 500. There will also be new comers, companies that have grown into the top 500 and stocks entering the stock market by way of a public offer. The bottom window, however, represents the changes historically in all the current 500 constituents, some of which weren’t in the index a few years ago.

Appendix 1 - Scanning

It is possible to scan and set alerts for Cloud Chart crosses on either price or the lagging line in Updata software system. This takes a few minutes for very large universes of stocks but may not be possible in other software products so it is covered in this appendix.

The screens below show how you set up the scan criteria. It is important to set criteria for crosses up through the cloud top (bullish) as well as the cloud base at an earlier date. This avoids results being returned where the lagging line entered the cloud from above and ensures we have a full cloud cross.

Figure A-1: Setting up cloud cross criteria

The scan typically runs in under a minute on very large instrument universes and a results screen like the one below is produced.

Figure A-2: Scan results for weekly cloud crosses in last three weeks for S&P 500 stocks
Index

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