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# Japanese Candlestick Charts

## - Maximum information from minimum data -

For centuries traditional Japanese design has been characterized by a minimalist approach. The lines are spare and the patterns border on the austere. These design elements represent the single most dominant characteristic of traditional Japanese poetry, art and architecture. The simplicity engendered by this minimalism is also rich with deeper meanings. Too much ornamentation can trivialize while a minimum of elaboration can hold the most profound truths. Less is done, but more is accomplished.

This principle of least action is a fundamental character of traditional Japanese technical market analysis, a system known as candlesticks. The input could not be more simple - open, high, low and close. The output is an elegant, sophisticated and profound system of analysis.

### Caveat

There is a huge difference between cherry picking the best examples of the various candlestick reversal patterns and having to interpret the candlestick patterns that the market creates each day and week and month. The truth is that while it would be far easier if every hammer bottom was a textbook perfect example, we are often forced to deal with borderline patterns. And then there are candlesticks that clearly reflect bottoming or peaking action but do not easily fit into any of the recognized categories and types of candlestick reversal patterns.

In cases of borderline candlestick patterns, as energy traders there is one very important consideration that may come to our rescue. The energy complex is not just one commodity. We have Brent, WTI, GasOil, 2Oil, Unleaded, Natgas, and also Propane. Furthermore, if we have access to any database of cash prices we can always convert that data to candlestick format. Even in instances of markets with very low liquidity there should still be enough data points for weekly and monthly charts. And it just so happens that weekly and monthly charts are more significant and important than daily charts anyway.

So if a WTI candlestick pattern is not very clear we can look to Brent for help sorting things out. And we can also look to Unleaded and 2Oil. And we can also look to candlestick differences between commodities for hints of spread opportunities.

### Contents

## Technical Analysis

Technical analysis aims to predict the future price of a market through the study of the price action. The basic principle of technical analysis is that when properly analyzed the price action of the market can reveal all that one needs to know about the relative strength of the fundamental forces of supply and demand. After all the market price is the point at which all the forces of supply and demand meet. Market fundamentals like inventory levels, production rates, weather forecasts and demand levels are simply not relevant to technical analysis because fundamental factors are already discounted in the market price.

A market technician has only one focus of study: the price action of the market. As the accuracy of the market forecasts that technical analysis yields are completely dependent on the study of the price action it is essential that one have as complete a picture of the price action as possible. The more information that can be extracted from the price action of the market, the more accurate and profitable the technical forecasts can be.

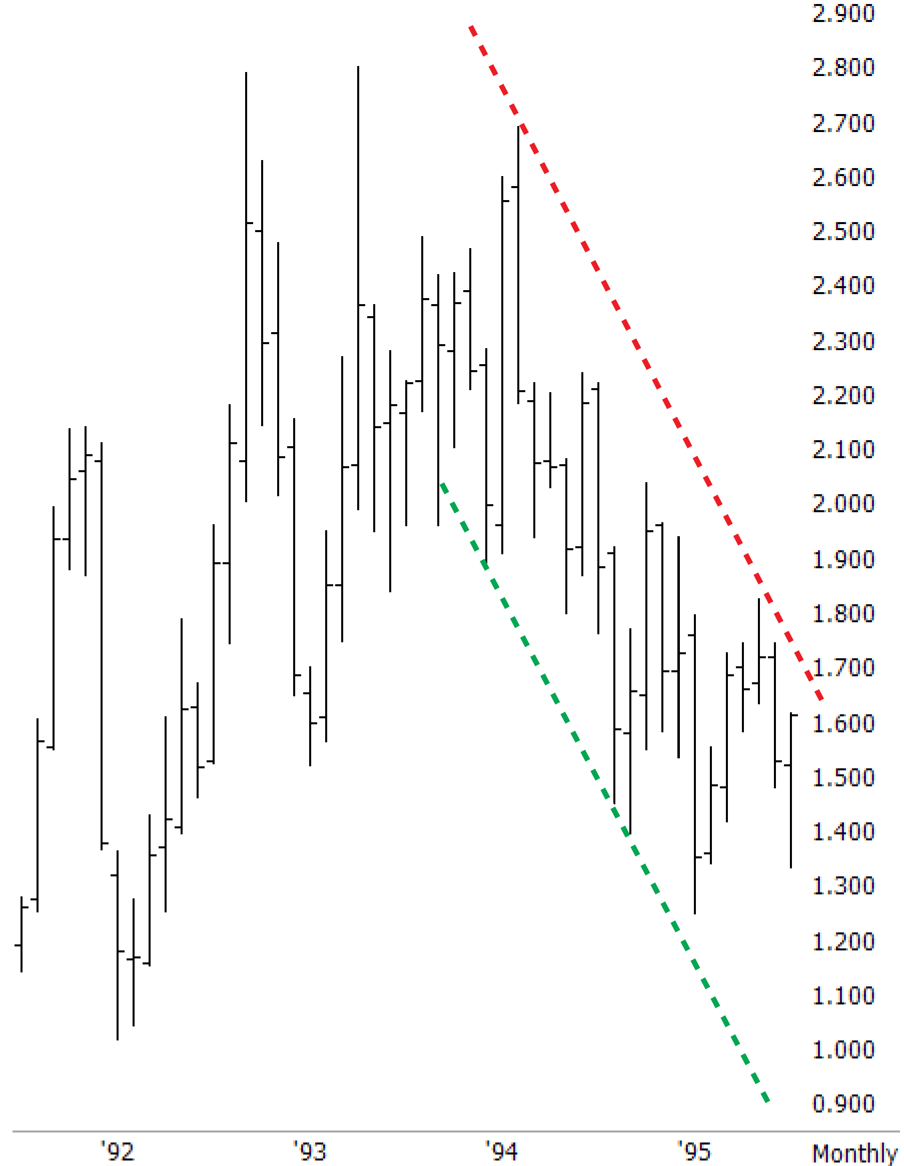
## Candlesticks - a superior analysis

We are all familiar with bar charts. See next page. However our first piece of advice for those intent on sharpening their skills of technical analysis is to never look at another bar chart again. The reason we give this advice is that a host of critically important peaking and bottoming patterns that are completely invisible on a simple bar chart are revealed by and strikingly evident through the charting technique of candlestick analysis.

Simply stated a candlestick plots the open, high, low, close in a way that reveals more much information about the price action than is avaiable through a bar chart. Given that time is the most precious commodity, the most valuable non-renewable resource, our advice is that if you have the time to look at a price chart make certain that it is a candlestick and not a bar chart. The time spent studying candllesticks is time much better spent.

Candlestick analysis is easy to learn. Only a few hours of study can yield many years of valuable insights into the market.

Bar Chart with Down Trend Channel




## Bar Charts

Unfortunately, the bar chart is still the most common method of representing the price action of a market. A chart is prepared where the x axis is time and the y axis is price. On this chart a vertical line is drawn connecting the high and low tick for a given time interval. A small right side notch is drawn off the vertical line to mark the last trade or closing price of the specified time interval. A small left side notch is drawn to mark the first trade or opening price the given time interval.

Price charts are a symbolic representation of a complex flow of events. They are a very simple model of a very turbulent phenomena. The bar chart model serves an investigative tool that is used to search for price patterns. Perhaps the most basic chart pattern is a trend channel. A trend channel is a multiple time period pattern of directional price movement where the support and resistance of the price trend can be represented as either ascending parallel lines in the case of an up trend channel or descending parallel lines in the case of a down trend channel.

In the down trend channel shown at right we employ a red line for the down trend channel resistance line and a green line for the channel support line. From this bar chart perspective the market has just failed at the resistance line and there is no reason to expect that the down trend will not continue.

### Candlesticks - history

The first nationally regulated commodity exchange in the world was the Dojima Rice Exchange in Osaka, Japan. It opened in the late 1600's. From its inception until 1710 the exchange traded only physical rice. In 1710 it began trading rice warehouse receipts. These receipts were called rice coupons and they became the worlds first futures contract. By 1750 over 100,000 bales of rice futures were traded each year even though the total harvest of the entire country of Japan was only 30,000 bales per year.

In 1724 Munehisa Homma was born to a wealthy family of rice merchants and in 1750 he began trading rice futures. His success at trading became legendary. He was reported at one point to have amassed over a hundred consecutive winning trades. He passed away in 1803 one of the wealthiest men in Japan. Over the course of his trading career he published several books on his trading system. His methods evolved into what is known today as candlesticks.

### Plotting A Candlestick

A candlestick is drawn from the same open, high, low and close used to make a bar chart. However a candlestick reveals much more information about the price action.

### Candlestick Body

In a candlestick a vertical line connects the high and low and a "real body" is drawn that connects the first or opening trade and last or closing trade. If the closing trade is higher than the opening trade then the real body is hollow, white, or in the case of the charts used here, green. If the last trade is lower than the first trade then the real body is solid, black, or in the case of the charts used here, red.

### Shadow Lines

The price action above and below the body are called shadows or tails and are drawn as simple lines. Candlestick analysis examines the various relationships between the body, the color of the body, and the shadows.

### A Candlestick Chart

The chart at right portrays the same exact data as the bar chart shown on page 3 however it clearly displays more information. If we are completely new to candlesticks it may not be clear what we are looking at, only that bar chart on page 3 looks barren and empty by comparison.

### Down Trend Channel

While this is the same down trend channel as outlined by the bar chart on page 3 the candlestick information brings us to a very different conclusion than the bar chart information.

### Hammer Bottom

The very last candlestick pattern on this chart, outlined by the blue box, is called a "hammer bottom." The hammer bottom is the most bullish of all possible candlestick patterns. A hammer bottom coming so soon after a test of the resistance line is definitely NOT a signal that the price action can be expected to continue to trend lower within the channel.

The long shadow below the small green body means trapped shorts. The market sold off over the course of this candlestick and then recovered all of its losses to close at the highs. So anyone who sold short over the duration of the formation of this candlestick is now holding a losing position. Anyone who bought over the course of this candlestick has a winner.

See next page.

### Candlestick Chart with Down Trend Channel

## Candlestick duration

We begin this point by re-quoting a couple sentences from the end of the discussion on the previous page but with italics added for emphasis.

> So anyone who sold short *over the duration of the formation of this candlestick* is now holding a losing position. Anyone who bought *over the course of this candlestick* has a winner.

The emphasis here is on the time frame that the candlestick pattern covers. A bullish candlestick pattern that measures sixty minutes of trading will not be even remotely as significant as a candlestick pattern that includes the entire trading day. And similarly the message of a weekly candlestick pattern will be much more important than the message of a daily candlestick.

In the commodity markets the most important candlestick pattern is the monthly candlestick. A candlestick reversal pattern on a monthly chart should be taken much more seriously than a candlestick reversal pattern on a weekly chart. And so on down to daily and hourly charts.

For equity markets where price trends are measured in years we should probably begin our candlestick analysis with quarterly charts. We do not recommend quarterly candlesticks in the energy futures markets. Too much price action will be lost to view.

## Candlestick Analysis: the steps

Our recommended steps for the candlestick analysis of a commodity futures market:

1. Start with a monthly spot continuation chart.
2. The next step is a weekly spot continuation chart.
3. For a week that contains a spot contract roll over in either a contango or a backwardated market be certain to also look to the weekly chart of the new spot month.

The logic here is that a spot contract roll over in a contango market may give a candlestick reversal pattern on the spot continuation chart. However if that candlestick reversal pattern is not confirmed on the weekly chart of the new spot month then that bullish reversal pattern on the spot continuation chart could well be only an artifact of the contract roll over and not an actual trend reversal pattern.

4. The next step of analysis is a review of the daily chart. This would be the final step if we are longer term traders
5. The final suggested step for shorter term traders is the sixty minute or hourly chart.

Given that the longer the time frame the candlestick includes the more significant the pattern, we do not suggest looking at candlestick patterns that cover less than an hour of trading.

## Candlesticks as a window to the fundamentals

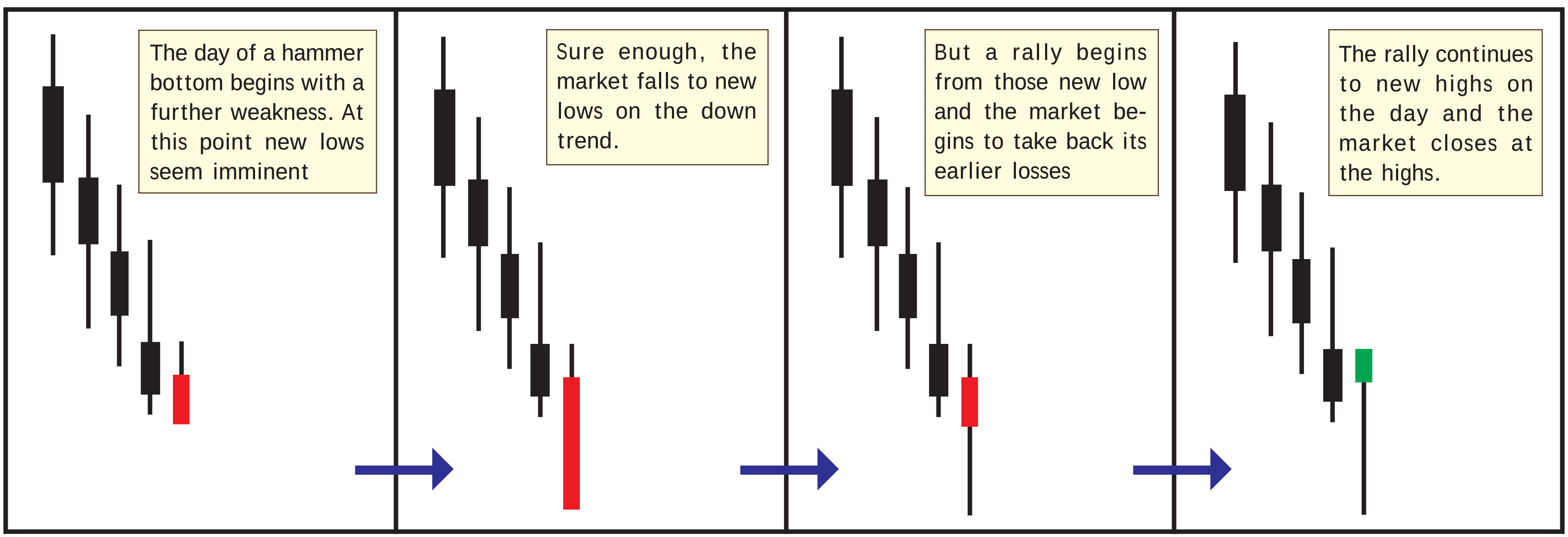
We have stated that the essential principle of technical analysis is that the price action of a free market can tell us all we need to know about the relative strength of the fundamental forces of supply and demand. Technical analysis maintains that the study of the price action is the most direct route to total knowledge of the fundamentals. The ability of the price action to act as a window through which we can view the relative strengths of supply and demand can perhaps best be seen through the development in the stages of the candlestick reversal patterns.

## The Emergence of a Hammer Bottom

Let us start by looking at the price action that creates what is know as a hammer bottom and explore why its implications are so very bullish. A hammer bottom comes at the end of a down trend. Price have already been working lower for some time. In the diagram below we explore the development of a hammer bottom.

On the next page we will discuss these diagrams in detail.

**Opens and Sells off** **Declines to New Lows** **Recovery Begins** **Rallies to New Highs**




**Box 1** **Box 2** **Box 3** **Box 4**

### Boxes 1 and 2

A hammer starts with like any other down day in a down trend and quickly makes new lows on the move. At this point ( the first two boxes on the previous page ) things look pretty grim for the bulls. The shorts are in complete control of the market.

### Box 3

But then prices begin to recover. At first it only look like another bear market rest stop but the rally continues. As the rally persists things start looking grim for the shorts. The tables are turning.

### Box 4

The rally continues on to new highs on the day going into the close and the market closes on the very high of the day. The shorts started off the day in control but they ended up getting hammered. The pun is completely intended. This is why Munehisa Homma called this pattern a hammer. The shorts lose control of the market and the bulls take over. This is the Waterloo of the shorts. The final score: Bulls One, Bears Zero.

What the sequence on the previous page really portrays are the forces of demand overcoming the forces of supply. The price falls low enough for reduced supply and increased demand to reverse the price movement from a down trend to an up trend. The picture of the price action is very clear. There is no room for the bears to debate the fact that the trend has reversed higher.

### Fundamentals versus Candlesticks

And here is a critical difference between fundamental analysis and candlestick analysis. In fundamental analysis there are always a wide range of variables that are having an active effect on the price action. However the relevance of each fundamental variable can always be debated.

A hammer bottom however leaves no room for debate or doubt. Over the course of the developement of this one candlestick we can see a complete and total reversal. The time period of a hammer bottom begins with supply overwhelming demand and prices being pressured to new lows on the down trend. The time period ends with insufficient supply and unfulfilled demand that rallies prices to new highs on the rebound.

How did this happen? The cause was simple. One critical thing happened. The price got low enough. It is the price that moderates the relative strength of the forces of supply and demand. This is why the study of the price action is the most direct route to total knowledge of the forces of supply and demand. And that is why candlesticks are so invaluable to any system of techncial analysis. In the hammer bottom example on the previous page we can see how immediate the battle between the forces and supply and demand become with candlesticks.

## Candlestick Pattern Analysis

One of the uncertainties involved in up trend and down trend channels is how to be certain that you have a genuine break out. Perhaps it is not really a break out. Maybe you just need to widen the channel lines a bit to better contain the price action.

In the chart at right we look at the next candlestick patterns in the sequence from the chart on page 5 and at this point we identify the chart that we are looking at. This is a monthly spot continuation chart of natgas. And what we now have is two very bullish hammer bottom patterns in a row at the upper edge of a down trend channel.

Regarding the question of whether natgas is breaking out to the upside or not, one thing is certain. A hammer bottom is not a peaking pattern. Two hammer bottoms in a row on any monthly chart is an extremely bullish development. The message of the candlesticks is very clear. This is definitely not peaking action. This is powerfully bullish bottoming action. And powerfully bullish bottoming action in natgas means it is an extremely dangerous time to be short.

Natgas is not known for giving second chances to get on-board at major trend reversals. While the outlook may be uncertain if we are looking at a bar chart of this price action the outlook is extremely clear from the candlestick perspective. The candlesticks here are giving a close your eyes and buy signal in the most volatile physical commodity that has ever been traded. At point in time we advised our clients that it looked like WWIII was about to break out in natgas and one had to be long.

### Natgas Spot Cntinuation Monthly Chart

### Candlestick Pattern Analysis

Here we see the result of back to back hammer bottoms on the monthly natgas chart. The result was an explosive rally over the entire fifteen month long course of which spot natgas rallied an impressive 245% from the low at 1.335 to the 4.600 high. The near term outcome was perhaps even more impressive. From the close of the second hammer bottom at 1.748 natgas rallied 113% in less than three months to a 3.720 high.

Munehisa Homma was very careful with the terms he used to describe each candlestick pattern. He called the hammer bottom a hammer bottom because this pattern signalled that the shorts were about to get hammered. It is the contention of technical analysis that when properly analyzed the price action can reveal all that one needs to know about the relative strength of the forces of supply and demand. Finding a hammer bottom on the monthly chart is using technical analysis to reveal the relative strength of the forces of supply and demand.

In this case what is revealed is a market where the forces of demand have completely overcome the forces of supply. It is a market where the bears had been in control for a long time but had just recently lost control. On the physical side demand for the actual natgas will drive prices higher. On the futures, shorts demanding to exit their positions will drive prices higher. Whether one views the phenomena from the physical side or the futures side it is the same demand viewed from different perspectives. The critical difference is that a fundamental analyst cannot see a hammer bottom by studying the fundamentals.

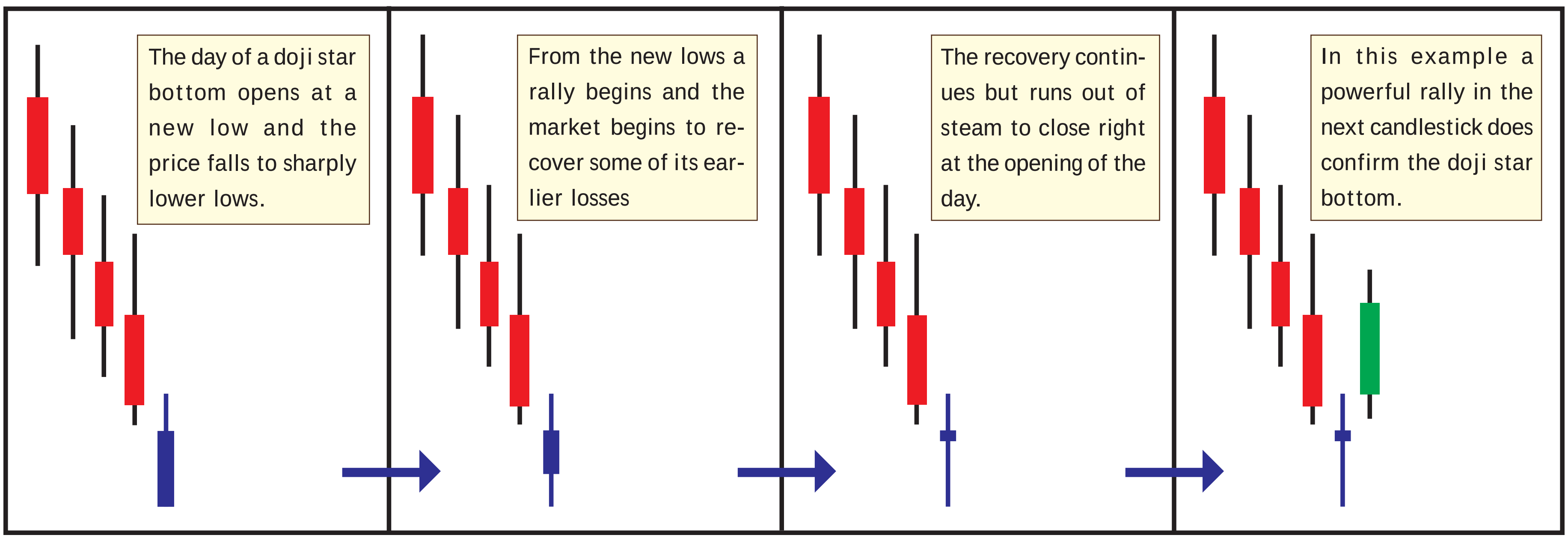
Natgas Spot Cntinuation Monthly Chart

### The Emergence of a Doji Morning Star Bottom

The early stages of a doji morning star bottom are similar to that of the more bullish hammer bottom. The difference arises into the later stage of the pattern development. The rally in a hammer bottom continues right into the close and makes new highs on the day into the close. The rally in a doji star does not have that same punch. It is not powerful enough to close at new highs. Instead the rally ends right where the market opened that day. There are two distinctive marks of a doji star bottom. There is a the long shadow below the open - close line and there is the absence of a “real body”.

As the doji star does not actually reverse higher to close above the opening it is not a conclusively bullish pattern. A decisive rally in the next candlestick is required to complete and confirm this reversal pattern. Without a decisive rally on next candlestick there is no doji star bottom. For this reason a doji star bottom is a three candlestick pattern. The first candlestick is another decline to another new low, the second candlestick is the actual doji star itself, and the third candlestick is the confirming rally.

**Opens at a New Low and then falls sharply** | **A recovery begins from the new lows** | **The recovery stalls and closes at the opening.** | **The next candlestick must rally to confirm.**

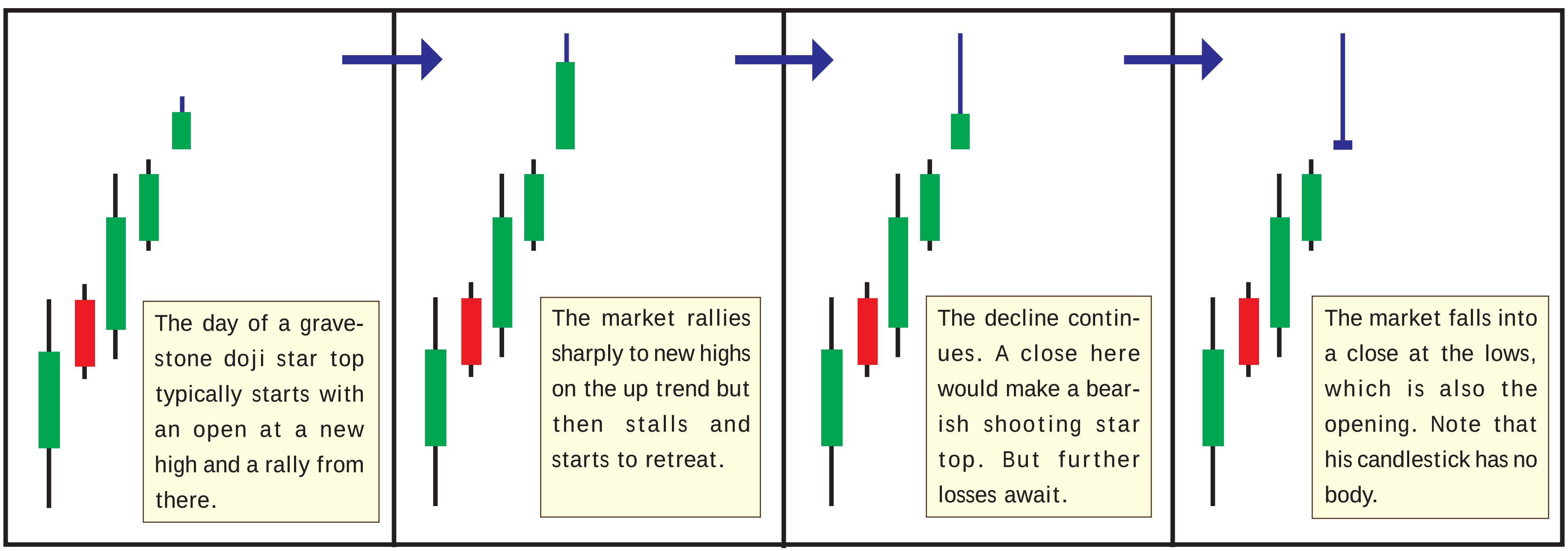


## The making of a Gravestone Doji Top

The hammer bottom is regarded as the most bullish of all candlestick bottom reversal patterns. What is the most bearish candlestick peaking pattern? It is arguably the "gravestone doji." Homma used the term gravestone because this candlestick marks the death of the up trend. Here is where the bulls die and are buried trying to defend an up trend that has ceased to exist. The gravestone doji is the Waterloo of the bulls. As such this pattern reveals the process by which the fundamental forces of supply overwhelm the forces of demand. And what sparks this reversal of fortune? The prices gets high enough to generate a drop in demand significant enough to increase supply to a degree that drowns the up trend in new selling pressure.

Once again we gain knowledge of the fundamentals through the technical window of candlestick analysis. The day or week or month of a candlestick every buyer ends with a loss and every seller ends with a gain. This creates a very unstable market. This instability typically expresses itself with a sharp decline in the next few candlesticks.

**Market opens at a new high and rallies further.** | **A retreat begins from the new highs** | **The retreat continues lower and lower.** | **The market drops to a close at the lows.**



### The Doji Star and the Fundamentals

What does the doji star reversal tell us about the market fundamentals? During the temporary triumph of the forces of supply that creates the new lows on the down trend early on in the doji star pattern the price falls low enough to stimulate renewed demand. This new demand brings the price back to the opening, evening up the score. The market begins with too much supply and ends up more balanced.

Will demand now continue to overwhelm supply and rally prices higher? The next candlestick will tell the story. If that next candlestick is a rally the doji star will have thereby accomplished in two days what a hammer bottom does in one day. Compared to a hammer the extra time required for a doji star bottom to reverse is a reflection of the lesser strength of the forces of demand compared to the forces of supply. This is why we rate the doji star as less bullish than a hammer bottom.

### Time Span and Candlesticks

One point should be reiterated here before we move on to review the different types of candlestick reversal patterns. The greater the time span a candlestick encompasses, the more significant the reversal. A reversal on a sixty minute chart will clearly be much less meaningful than a reversal pattern on a daily chart. And this brings up our next point.

### Importance of Weekly and Monthly Charts

A corollary of this time span related significance is that if other indicators suggest that the market has reversed trend but there is no candlestick reversal pattern on the weekly or monthly charts then it may well be that the other indicators are mistaken.

A look at the monthly Brent spot continuation chart on the next page underlines the significance of the monthly candlestick. *Every single* trend reversal is marked by a major candlestick reversal pattern on the monthly chart. By contrast a thirty minute chart will never be as densely populated by candlestick reversal patterns at minor turning points. The longer standing the trend the more likely its reversal will be marked by a candlestick reversal pattern.

We mention this point because candlesticks breath new life into weekly and monthly charts - charts that are hardly ever visited by technicians. The use of candlesticks justifies much more frequent visits to weekly and monthly charts, and to quarterly and yearly charts of equity prices.

### What's in a name?

A potential doji star top always requires that a decisive down day immediately follow for confirmation. And a potential doji star top always requires a decisive rally to immediately follow for confirmation. A confirmed doji star bottom reversal pattern is called a “morning star top” while a confirmed doji star top is called an “evening doji star.”

### Doji Star Power

The longer is the shadow line above the open - close in a doji star top, the more length is trapped in the market and therefore the greater is the downside risk. The longer is the shadow below the open-close line in a doji star bottom, the more shorts are trapped in the market and therefore the greater is the upside potential.

## Simple Reversal Patterns

**from MOST BULLISH**

- Abandoned Baby
- Hammer Bottom
- Inverted Hammer
- Doji Star Bottom
- Tower Bottom
- Bullish Engulfing
- Piercing Pattern
- Tri Star
- Harami Cross
- Harami

**to LEAST BULLISH**

**from MOST BEARISH**

- Gravestone Doji
- Shooting Star
- Doji Star Top
- Tri Star
- Abandoned baby
- Hanging Man
- Engulfing Pattern
- Dark Cloud Cover
- Harami Cross
- Harami
- Counter-attack line

**to LEAST BEARISH**

## Complex Reversal Patterns

**from MOST BULLISH**

- Inverted Three Buddhas
- Three Rivers Bottom
- Fry Pan Bottom

**to LEAST BULLISH**

**from MOST BEARISH**

- Three Buddhas
- Dumpling Top
- Three Mountains Top

**to LEAST BEARISH**

### Candlestick Ranking

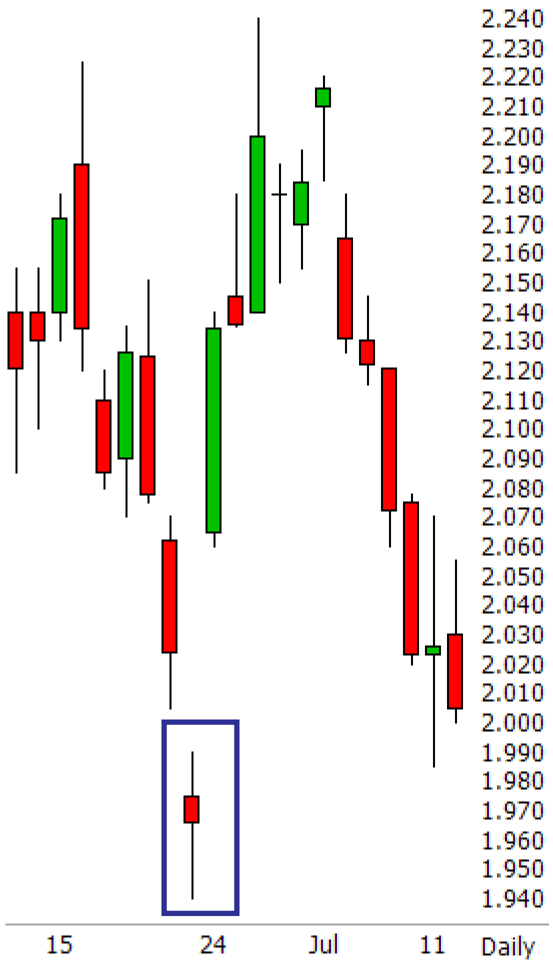
Some bullish candlestick reversal patterns are more bullish than other bullish reversal patterns. And some bearish candlestick reversal patterns are more bearish than others bearish reversals. Here we suggest a rating scale. For example a hammer bottom is a much more bullish reversal pattern than the harami cross. And a shooting star top is a much more bearish pattern than either an engulfing pattern or a dark cloud cover.

This suggested rating system is meant to be used as a relative guideline into which must be included considerations from the findings of other technical indicators.

**Description**

An abandoned baby is a very rare pattern in these days of 24 hour trading. An abandoned baby is the candlestick term for a gap island reversal, in this case a bottom from daily spot natgas futures in June of 1994.

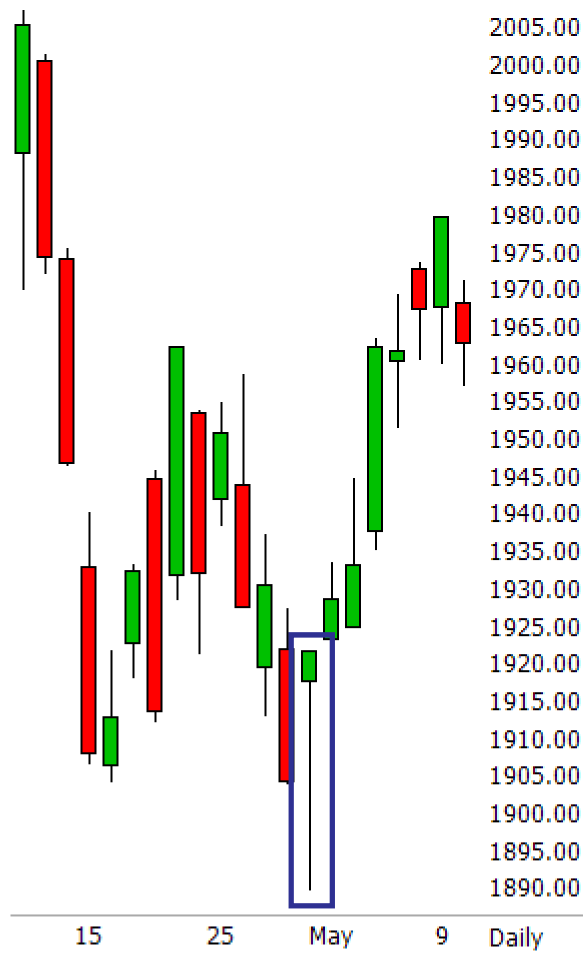
## Abandoned Baby




**Description**

The long shadow below is the handle and the small body at the top with no overhead shadow is the head. The pattern signals that the shorts are about to get hammered. This example is from the daily Nasdaq chart of 29th April 2005.

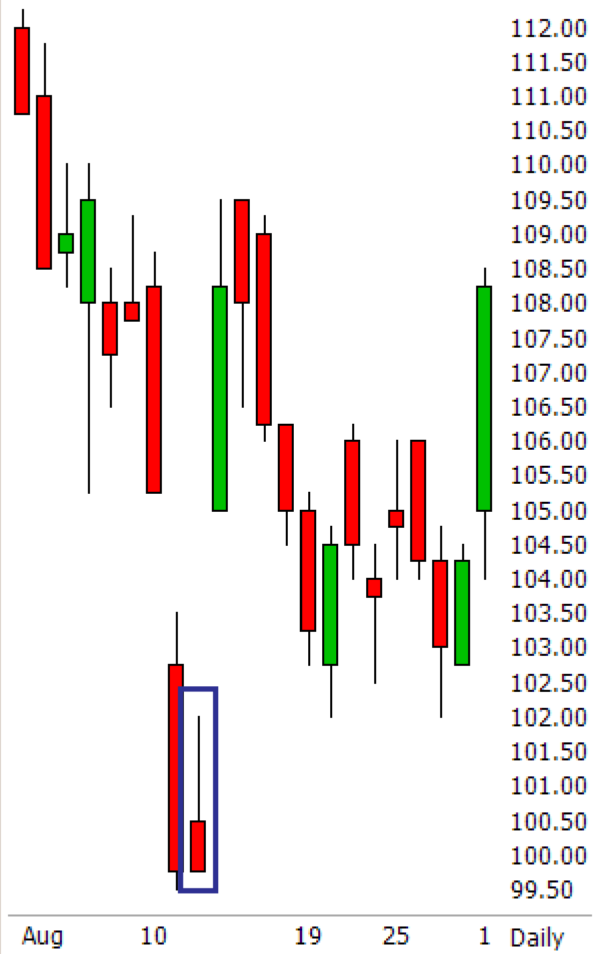
## Hammer Bottom




**Description**

As its name suggests this pattern is an upside down hammer. The buying power comes from the shorts who sold into the body the day of the low, the day of the inverted hammer. This is a daily GasOil chart from August 1998.

## Inverted Hammer

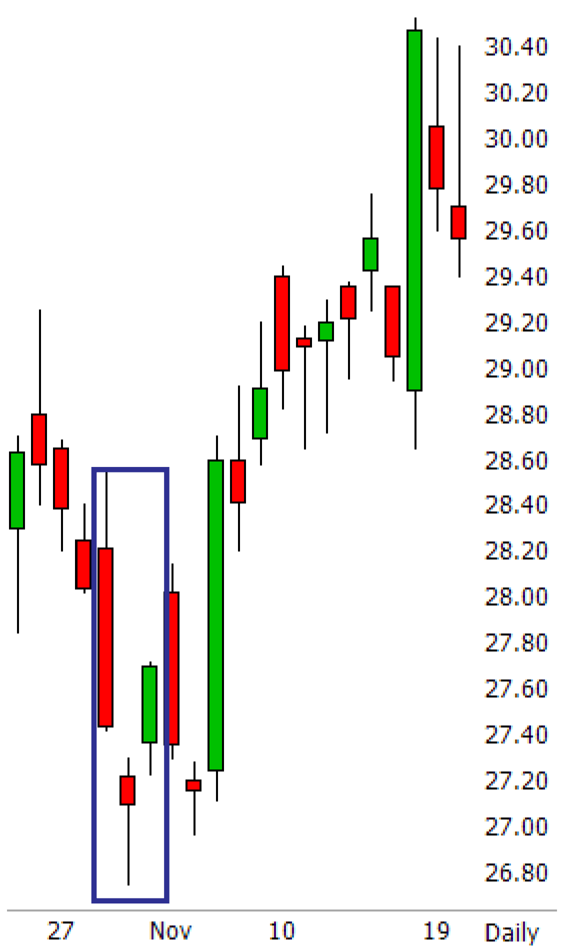


**Description**
Here is an example of this three candlestick pattern. The first candlestick is a sharp drop. The second is a gap down to the doji star itself. The third candlestick is the confirming rally. This is a daily Brent chart from Oct 2003.

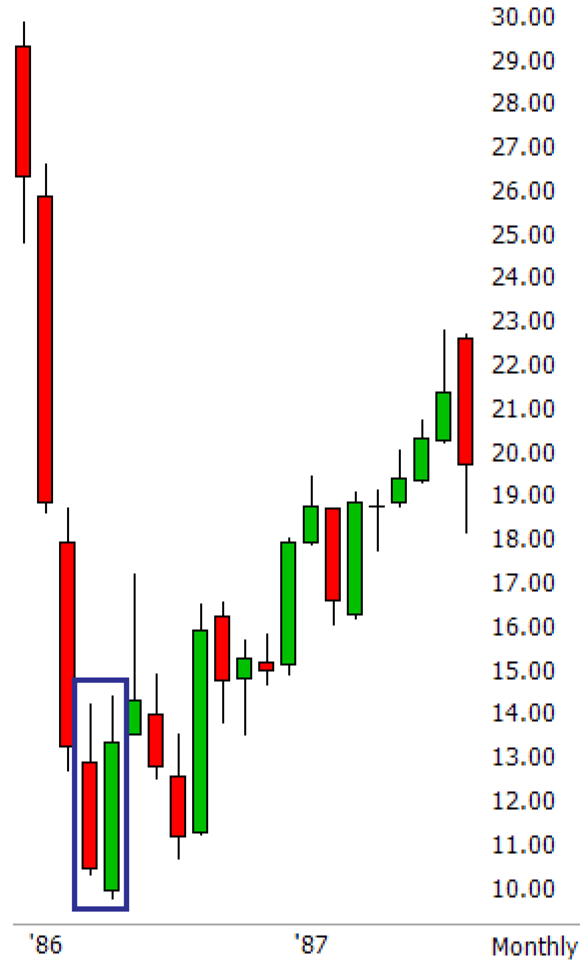
**Description**
The bullish engulfing pattern is a bottom reversal where the red body of the candlestick at the day or week or month of the low is "engulfed" by the green body of the next candlestick. This is a monthly WTI chart from the year 1986.

**Description**
The tower bottom is a pattern where the market races higher up in one candlestick through the same range that the market collapsed down through in one candlestick on its way to the lows. This is a weekly Nasdaq chart from 1986 - 1987.

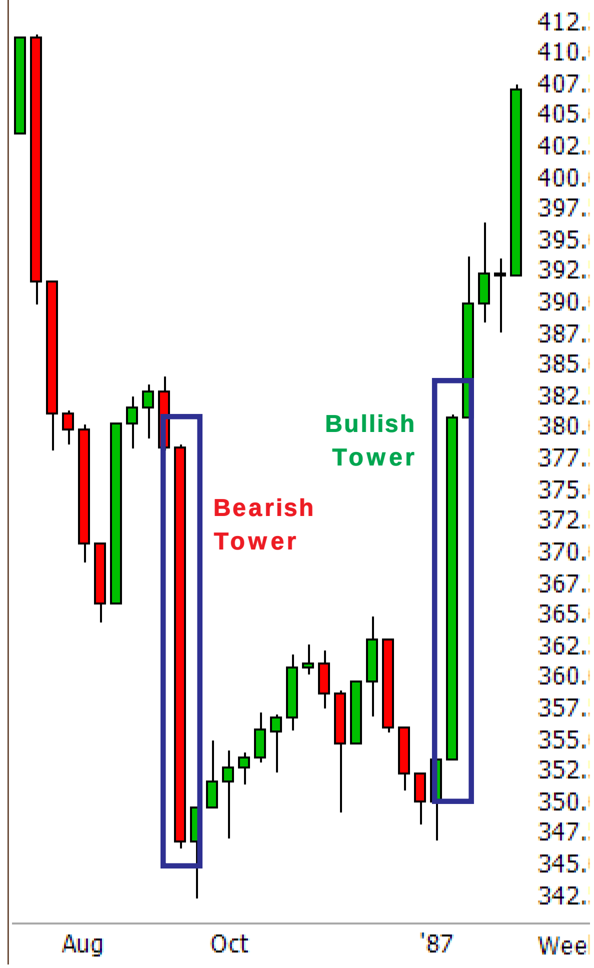
**Doji Morning Star**




**Bullish Engulfing**



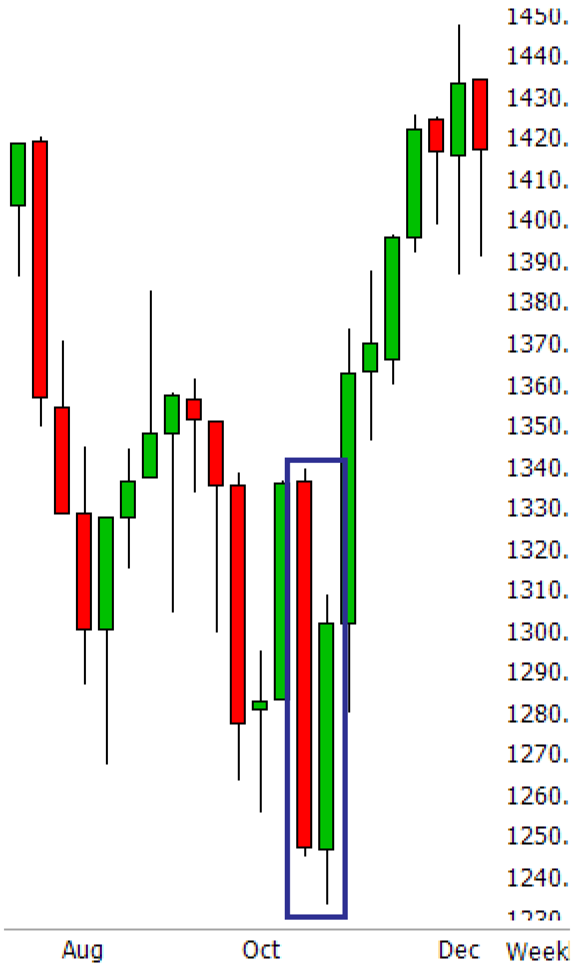

**Tower Bottom**



**Description**

In the bullish reversal that is the piercing pattern more than the lower half of the red body of the candlestick at the low is engulfed by the green body of the next candlestick. This is a weekly S&P 500 chart from October 1999.

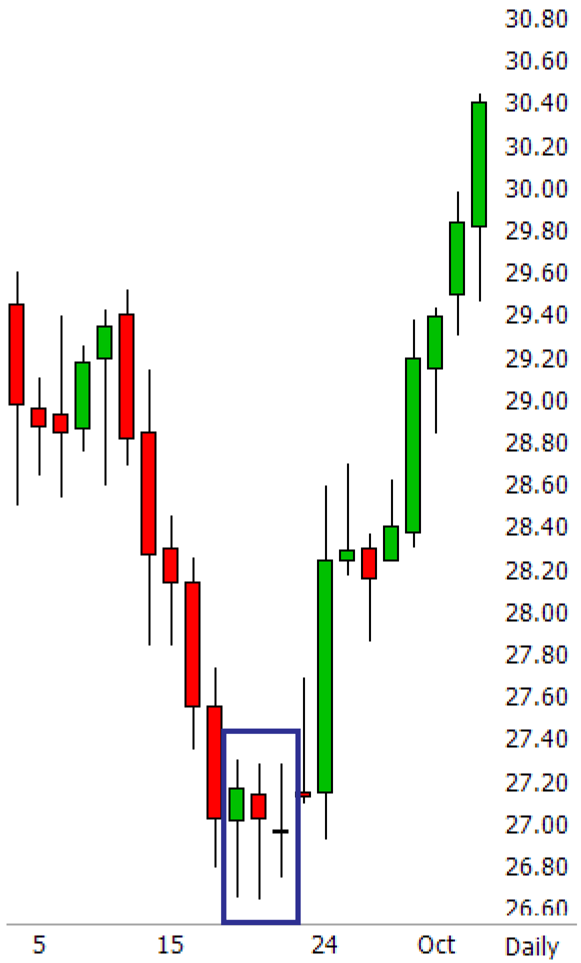
### Piercing Pattern




**Description**

An extremely rare pattern, the tri-star is composed of three consective doji stars - in this case three doji star bottoms. Confirmation of a tri-star bottom requires a rally on the next candlestick. Thi is a daily WTI chart from Sep 2003

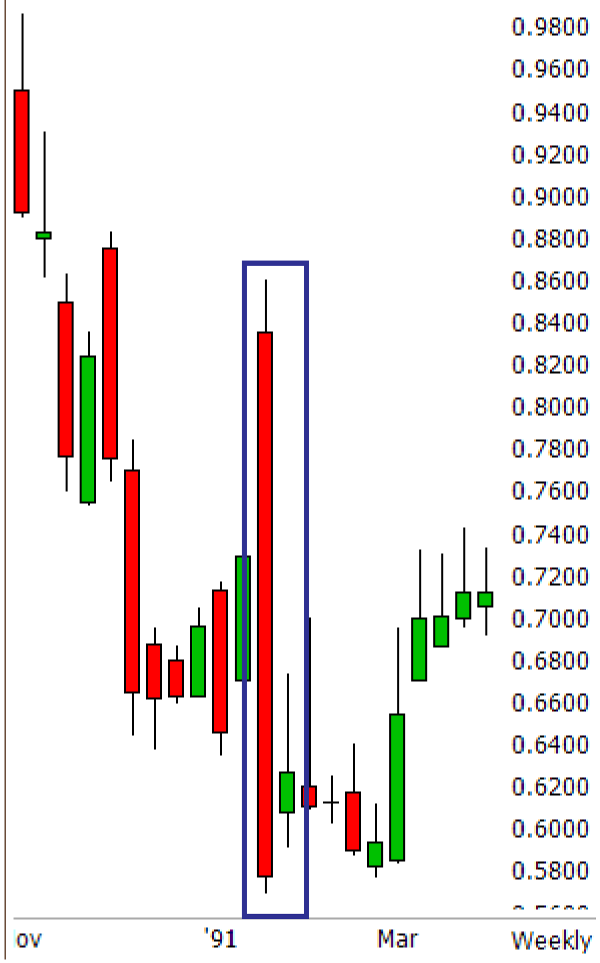
### Bullish Tri-Star




**Description**

In a harami ( cross ) a long red body is followed by a very narrow range day ( a doji star type pattern ). The narrow range day is near the lows of the prior day but within the red body. This is a spot weekly unleaded chart from January 1991.

### Harami ( Cross )



**Description**

A gravestone doji is a doji star top with a long overhead shadow, no body, and no shadow below the open - close line. This means that the open-close line is also the low of the day. This is a daily natgas chart from April 1999.

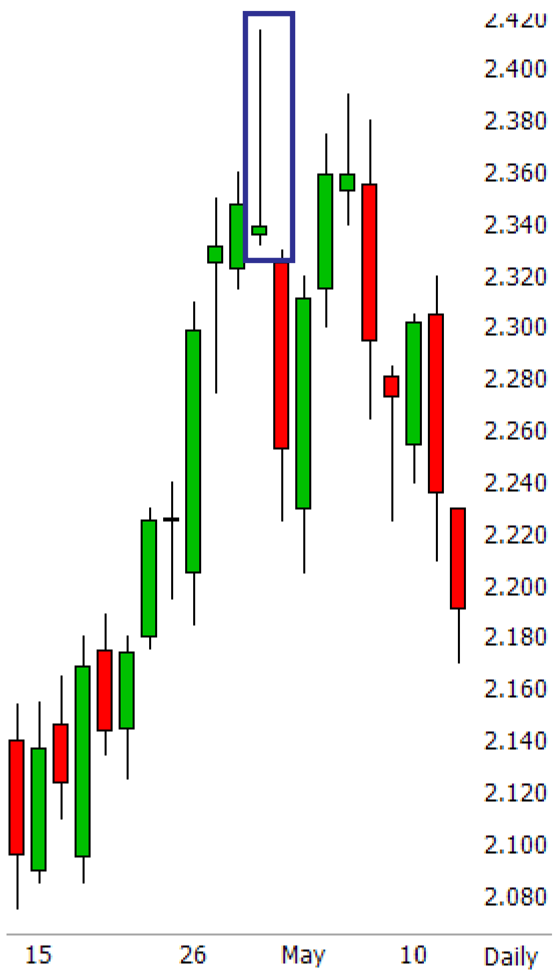
**Description**

The shooting star top is a very long shadow above a very small body at the lows, with no shadow below that body. This pattern vies with the gravestone doji for the most bearish candlestick. This is a weekly Euro chart from December 2004.

**Description**

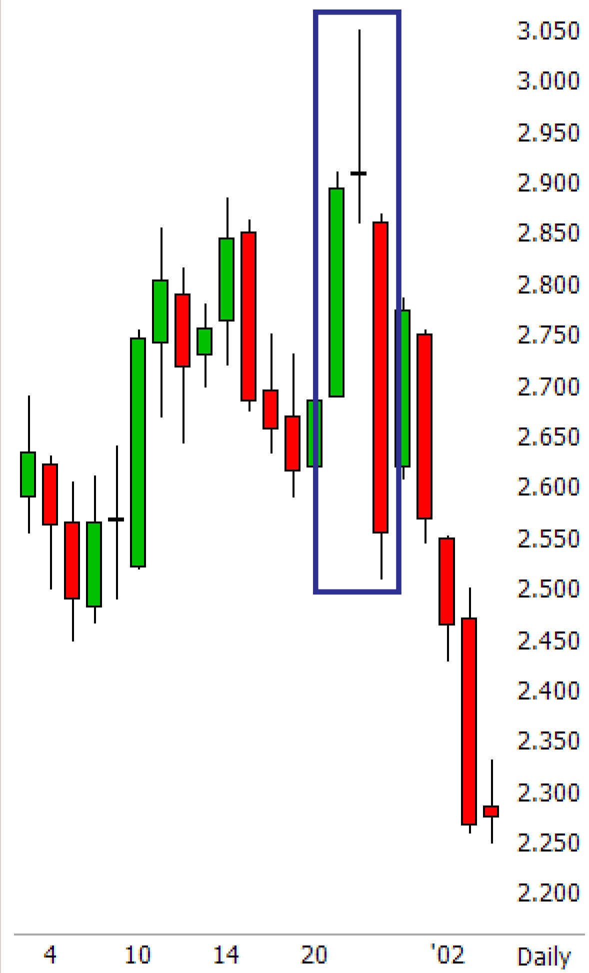
Here is a perfect specimen of this three candlestick pattern. The first candlestick is a sharp rally. The second is a pop up to the doji star. The third candlestick is the confirming decline. This is a daily Natgas chart from Dec 2001.

**Gravestone Doji**




**Shooting Star Top**


**Doji Star Top**



**Description**

A hanging man top has the same shape as a hammer bottom except it occurs after a major rally instead of after a major decline. Guess they hung people in medieval Japan. This example is a weekly spot Propane chart from October 1991.

## Hanging Man


**Description**

In the bearish engulfing pattern a long red body engulfs the prior days green body. In this weekly Canadian dollar chart from January 2000 note that the long red body engulfs the bodies of the previous three weeks of trading.

## Bearish Engulfing


**Description**

A dark cloud cover is an almost engulfing pattern. The rule is that more than the upper half of the prior candlesticks green body must be engulfed. This is a monthly chart of the Dow Jones Transportation Average from 1999.

## Dark Cloud Cover

**Description**

In Japanese temples a statute of the Buddha is often flanked on either side by smaller Buddhas. So the statue sequence is small Buddha, big Buddha, and then another small Buddha. The "Inverted Three Buddhas" pattern is the Japanese candlestick recognition of the head and shoulders bottom pattern. This is a weekly 2Oil chart from the 1986 lows.

## Inverted Three Buddhas


**Description**

There is a saying in the markets "triple bottoms never hold." The message here is that on the third test of support a market often breaks down to new lows. What does one call a triple bottom that holds and sparks a recovery? The candlestick term is "Three Rivers Bottom" and the image is of three river channels. This is a daily Brent chart from 1994.

## Three Rivers Bottom

**Description**

The chukanabe or Japanese frying pan ( or wok ) does not have the flat bottom of a western style frying pan. The wok has a rounded bottom. So Munehisa Homma called a market that bottoms very slowly and gradually a "Fry Pan Bottom" - the equivalent of a "rounded bottom" in western chart pattern terms. This is a monthly Canadian dollar chart from 2002.

**Description**

Perhaps is candlestick analysis originated in Italy instead of Japan the rounded top style of peaking action would be called a gnocchi or ravioli top instead of the "Dumpling Top" but the dynamic is the same by any other name. This is a slow moving reversal. This example is a daily chart of the U.S. dollar Index ( DXY ) from 1993.

**Fry Pan Bottom**


**Dumpling Top**

### Description

The “Three “Buddhas” pattern is the Japanese candlestick equivalent of the head and shoulders top pattern. The difference is that Munehisa Homma documented this peaking pattern about two hundred years before Edwards and Magee did in their so called “ground breaking” work Technical Analysis of Stock Trends. This is a daily Brent chart from 2005.

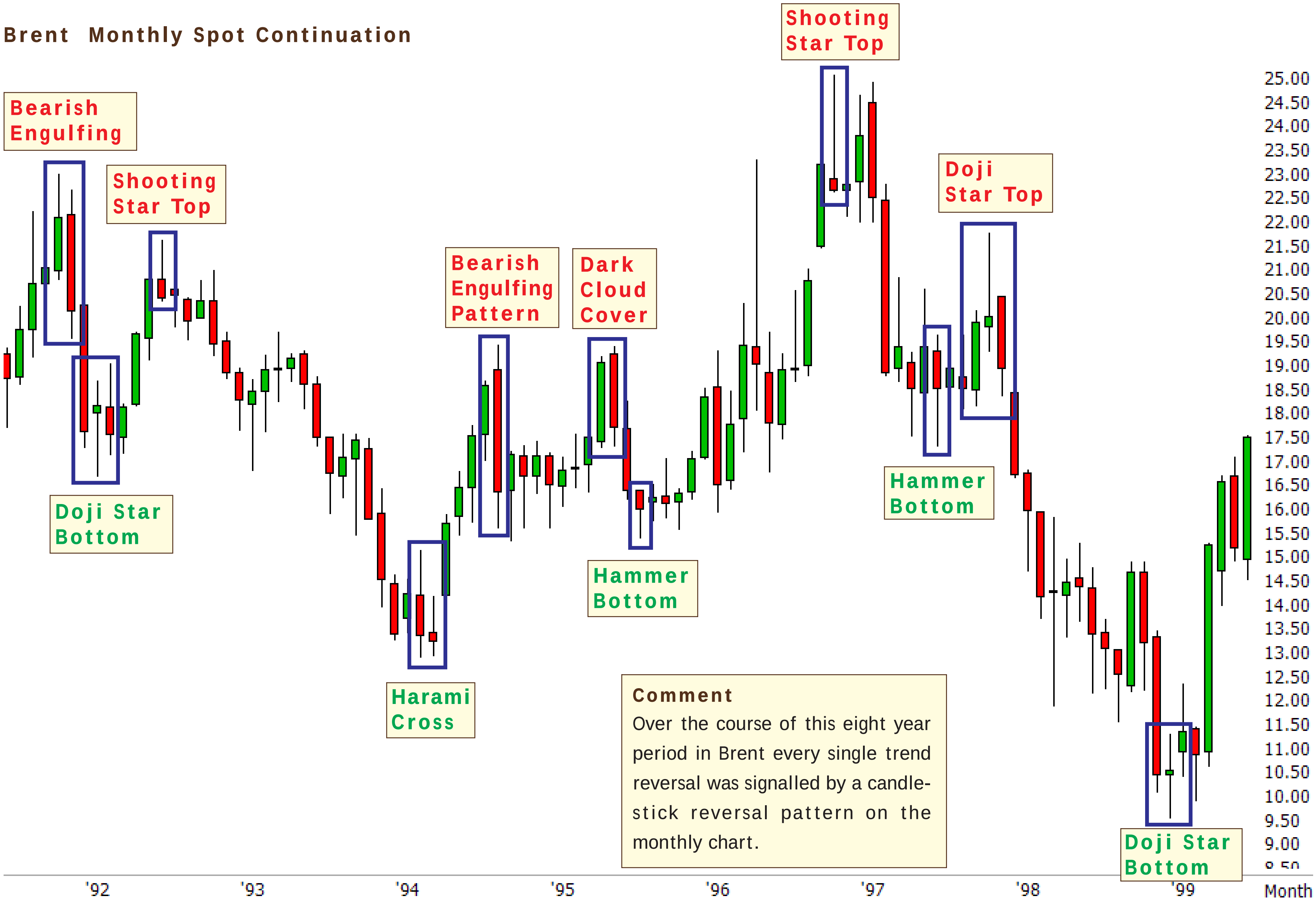
### Description

The “Three Mountains Top” is a sequence of three slightly higher highs where the third high is the final peak and the start of a down trend. An Elliott wave analysis might look here for evidence of a 3, 4, 3, 4, 5 type conclusion of a sub-dividing five wave rally. This is a weekly chart of the U.S. Dollar Index ( DXY ) from 1993.

**Three Buddhas**


**Three Mountains Top**

**Brent Monthly Spot Continuation**



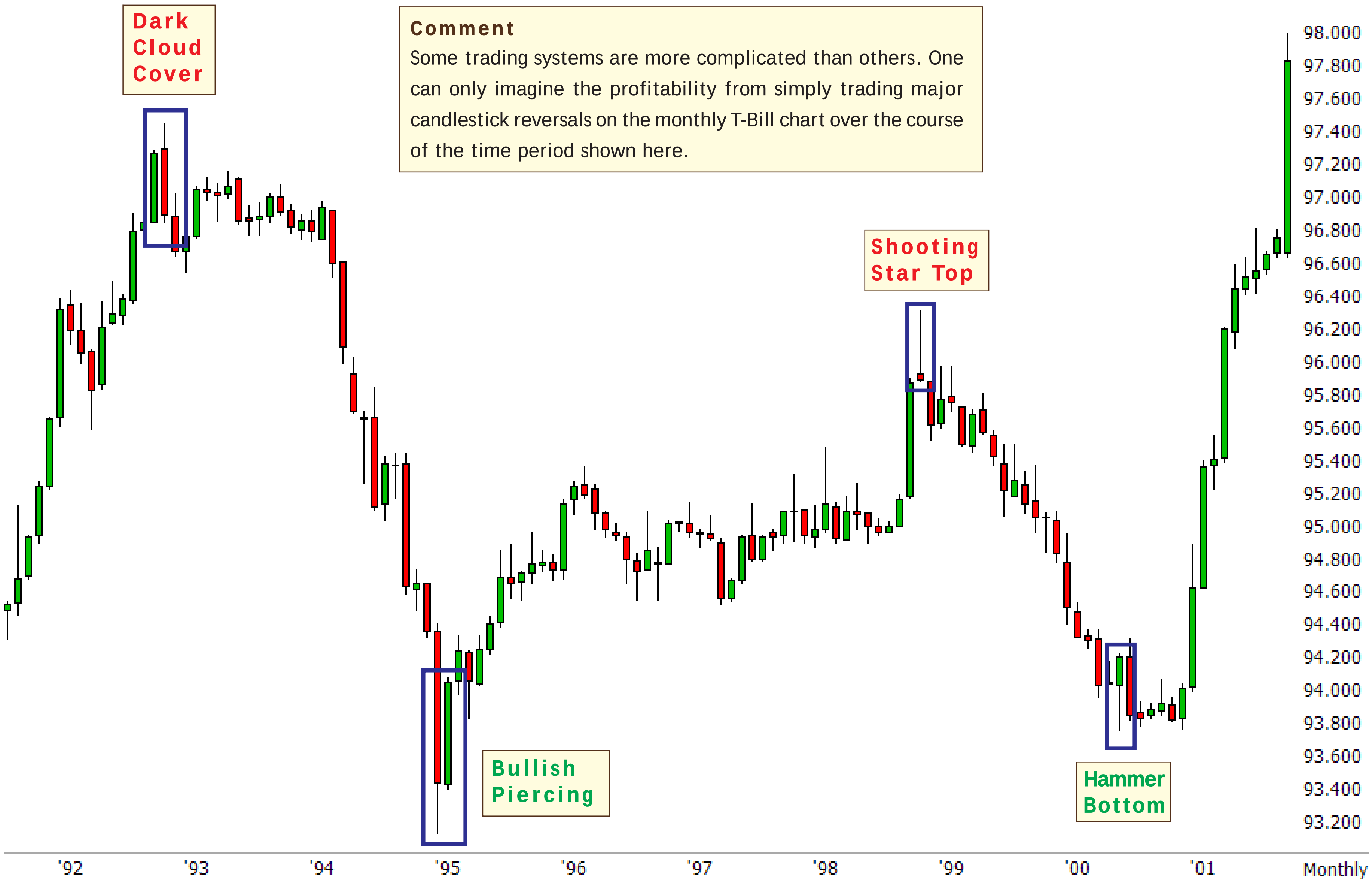

**Comment**

Over the course of this eight year period in Brent every single trend reversal was signalled by a candlestick reversal pattern on the monthly chart.

## Treasury Bills - Monthly Spot Continuation

**Comment**

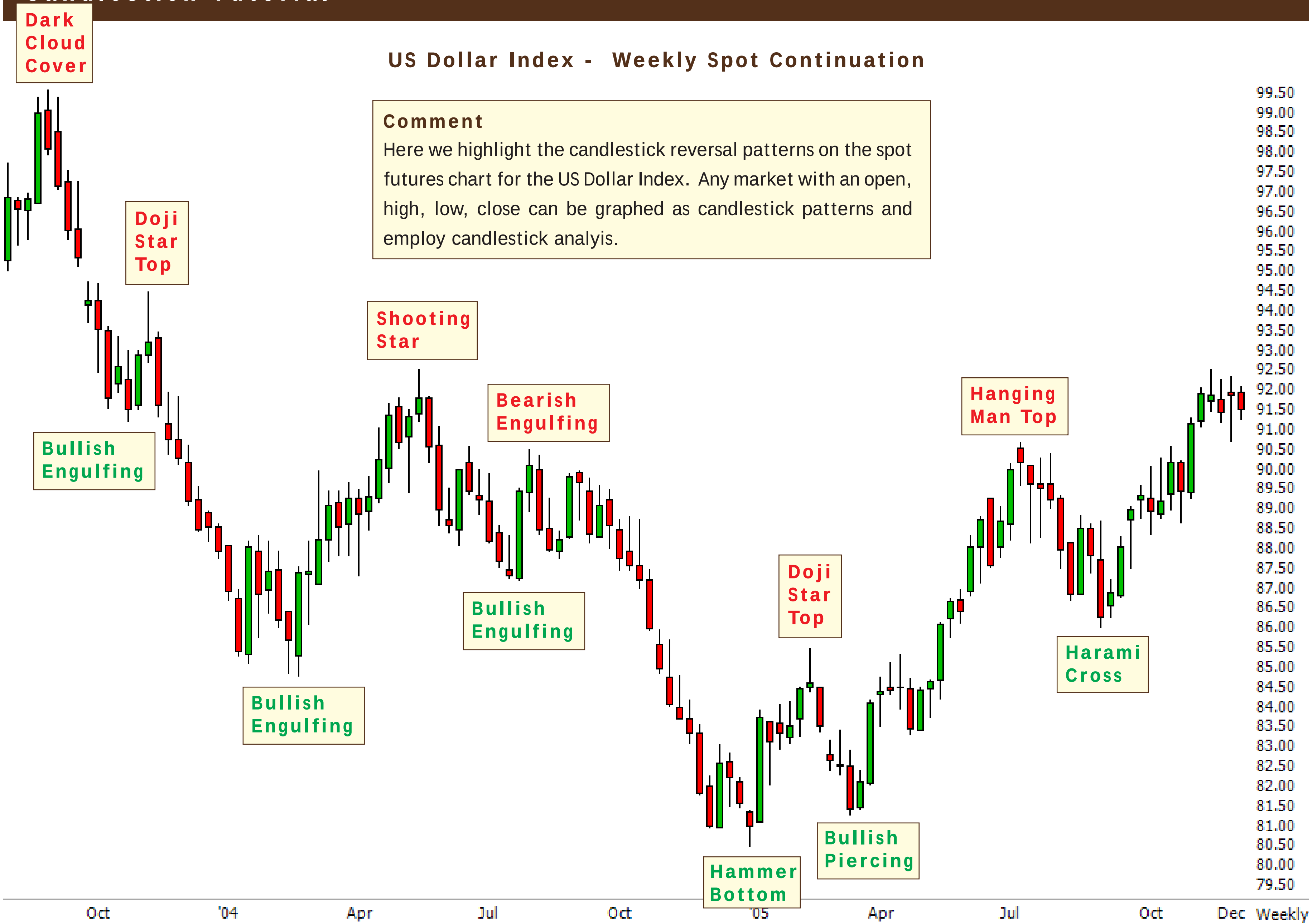
Some trading systems are more complicated than others. One can only imagine the profitability from simply trading major candlestick reversals on the monthly T-Bill chart over the course of the time period shown here.



US Dollar Index - Weekly Spot Continuation

**Comment**

Here we highlight the candlestick reversal patterns on the spot futures chart for the US Dollar Index. Any market with an open, high, low, close can be graphed as candlestick patterns and employ candlestick analyis.



## Propane - Weekly Spot Continuation

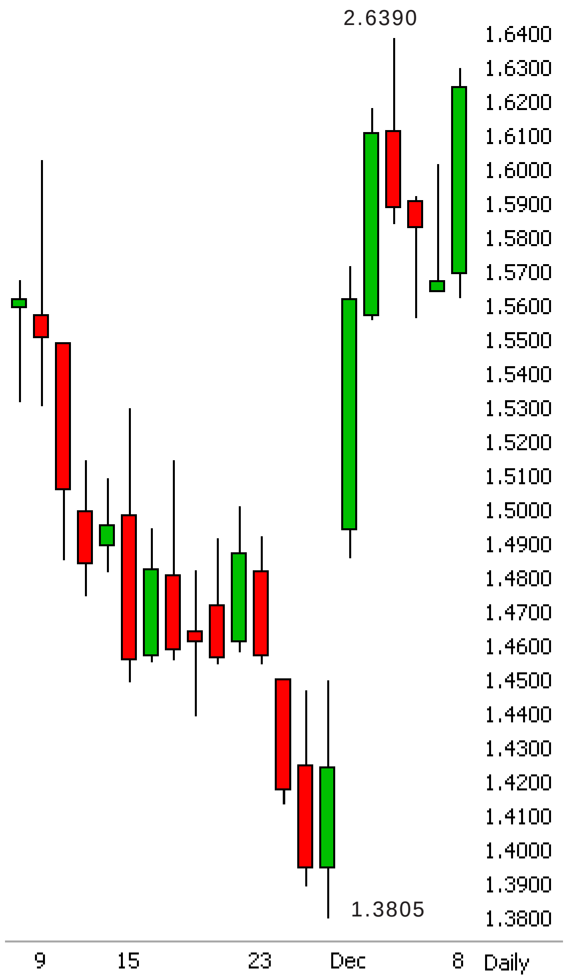
### Low Liquidity Markets

Many of the smaller niche markets are so lacking in liquidity that most of the normal tools of technical analysis cannot be employed. However there is one technical tool that can be used to great effect in such markets and that tool is candlestick analysis on weekly and monthly charts. Here we look at a weekly chart of propane. This approach has considerable value in other low liquidity markets like emissions and electricity.

## Candlestick Pattern Analysis

| Daily Chart | Weekly Chart | Monthly Chart |
|---|---|---|
| The 20 year average start of the unleaded pre-season rally is 1st December. Note the bullish engulfing pattern from the 30th November low and the break-away gap up from there. | The weekly unleaded chart features the most bearish shooting star top in the history of the world from the 2.9200 high. Last weeks candle-stick was a very bullish engulfing pattern. | It seems only appropriate to conclude this study with a bullish candlestick reversal that fits no category of bullish reversal pattern. Welcome back to the real time world. |

**Bullish**




**Bullish**


**Bearish**

## Further Study

The purpose of this tutorial is strictly introductory in nature. My intention here is only to introduce the candlestick system and note its importance. For further study of candlesticks we have two suggestions.

- Almost every software system designed to work with the tools of technical analysis include an option to switch from bar charts to candlesticks. We strongly suggest that you trigger that switch and become more acquainted with the various candlesticks patterns.

- For a comprehensive treatment of candlesticks we suggest Steve Nison's book:

Japanese Candlestick Charting Techniques: A Contemporary Guide to the Ancient Investment Techniques of the Far East
The New York Institute of Finance, New York, Simon and Schuster