First Edition

Trading with

Candlesticks

Candlestick Analysis For Professional Trader

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Introductions

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Introduction

If you knew the profit potential for over 25 chart patterns, what would you do with that information?

I've analysed 20 different markets, over 100 stocks and I've made thousands of historical trades to see which patterns produce the most profitable results. And the results are indeed surprising.

In fact, the results suggest that some patterns are not profitable at all and I present the results clearly for you to see.
If you want to learn how the professionals use financial charts and you want to take your candlestick trading to another level, just keep reading.

Candlestick Basics

My Story with Japanese Candlesticks

My first encounter with candlestick charts came when I was working as a futures trader in London, in an office filled with about 30 other traders.

We relied heavily on watching price charts and analysing price action and candlestick charts offered us the best way to quickly visualise our markets and make trade decisions. And candlestick charts were used by every single trader on the floor.

Sure, we listened to the news and paid attention to fundamental events as well, but, there is no doubt the benefit we got from watching the market through the lens of the candlestick chart.

However, even though we all used candlestick charts not many of us really understood their true power or the specific patterns to be on the lookout for. One day, the author of a well known

book on candlestick charts came into the office and gave us a presentation about what he had learnt and how to spot the various candlestick patterns and what they meant.

I won't lie. There were a few traders in the room who had serious doubts about candlestick patterns, especially when they contained these gimmicky sounding names like Hanging Man, shooting star or gravestone Doji.

In fact, I was also skeptical at first because I had always been taught to rely more heavily on the fundamentals of the market and not to get too involved with the technical side.

However, ever since I learnt about candlestick charts, I've used them in my trading. And I've realised that their power isn't necessarily in using them to make specific buy and sell decisions but to strengthen or weaken your overall trading view.

Simply, candlestick charts are the best way to gauge price action, really drill down into the market and candlesticks simplify what the chart is saying. Once you have learnt the basics, scanning the market becomes extremely quick and efficient.

Today, when I look over a price chart, I immediately see the candlestick patterns, I know what they mean, and they instantly help me form a picture of what is going on in the market.

However, one thing I've never done is to actually go back in time and test exactly which candlestick patterns are the best and which ones are relatively useless. Soon, we will look into 25

specific candlestick patterns, we will

test each one on a number of different markets over the last 16 years and we will be able to see which patterns are going to help us the most going forward.

But before we do that, let us go over some more basic information about Japanese candlestick charts and how to use them.

Different types of charts

When it comes to presenting financial price data, there are numerous options available to help investors and traders visualise the markets and make trade decisions. I would say that there are really three main types of charts that traders use but the candlestick chart is definitely the most widely used.

Line chart

So, the first and most basic chart is a simple line chart and this will usually just plot the closing prices of a security over a set time frame. So it's going to show you the general movement of the market.

However, this type of chart doesn't contain the open, the high, or the low prices so it doesn't show much information and it doesn't show the trading range for each bar. This makes it not a particularly useful chart for traders and it can even be dangerous because you're not going to be able to see the lowest or highest price/your maximum loss or profit that the market went to.

Bar chart

The bar chart adds to the line chart by incorporating more information into each data point so you can get a better idea of what is happening in the market.

A bar chart is made of a series of vertical lines representing the high and low of the trading period with horizontal dashes to show the open and close where the open will be shown on the left of the bar and the close will be shown on the right.

If the close price finishes higher than the open price, the bar will usually be coloured green or black, which shows the market has finished higher than it started. And if the close price finished below the open price, the bar will be coloured red.

Candlestick Chart

So, like the bar chart, a typical candlestick chart will show the four main price components: the open, high, low, and close for the trading period, which can span as short as a minute to as long as a month. But unlike the bar chart, the way the candlestick is drawn gives traders a little more information.

Various styles involving shading or the direction of the open and close bars serve as visual tools for a trader to easily grasp price behaviour in one quick glance.

For instance, a candlestick that is white or green means that the price closed higher than it opened for the period.
A black or red candlestick signifies that price closed lower than it opened for the period. The vertical lines above and below the

candlestick's main body notate the highs and lows for the period.

So if we break it down, each candlestick is made up of a body and a wick (which may or may not be present depending on where the market trades at).

The body represents the opening and closing price and the wick shows the high and the low. A wick that appears on top of the body is also called an upper shadow and a wick that appears on the bottom of the body is also called a lower shadow. So, the way the candlestick is drawn allows us to understand a bit more about the way price moved during the trading period. As you've probably guessed, there are also candlesticks where the open is equal to the high or the close is equal to the low, creating candles with no shadows or bodies.

If a candle has a long shadow it simply means that the market at one point moved a long way from the open or close. These are also important to take note of, as they can indicate whether trends are set to reverse or continue and we will look more closely into the different patterns later on.

In candlestick analysis, it is also helpful to look at nearby candlestick patterns in relation to a potential signal candle. These are often known as confirmation candles, giving the trader more clues as to whether a pattern will be completed or not.

Candlestick Building Blocks

Basic Candlestick Patterns

1. Doji

2.Spinning Top

3. Marubozu

I've mentioned the basics of the candlestick chart and what makes up one candlestick.

You've got a body which reveals where the security opened and closed and that will be either green or red depending on whether the security closes higher or lower than it opens.

And then you've got the wick, which can be below or above the body and that shows the lowest or highest price that the security traded at during the trading period. The wick can also be referred to as an upper or lower shadow depending on whether it is above or below the body.
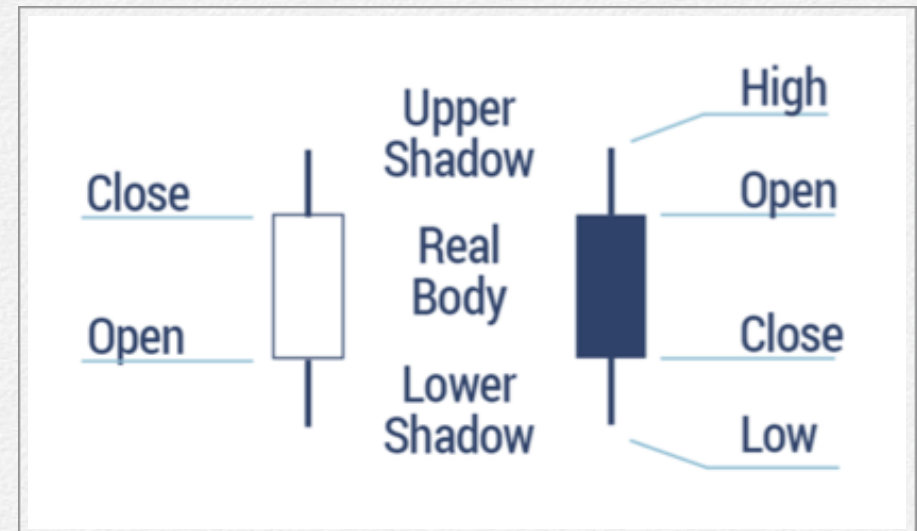
So once you know the candlestick formation, the next step is to identify the basic candlestick patterns and their names.

These patterns can be market neutral and they are not necessarily used in the trading decision process but they are the building blocks of the more advanced patterns.

Doji

One of the most popularly known and easiest to spot candlestick pattern is the **doji**, which typically has a thin horizontal line for a body, indicating that the open is equal to the close. Usually the top and bottom shadows will also be fairly long to show that price moved in both directions over the period.

This basically reflects indecision between buyers and sellers, as price spiked up and down but wound up ending right where it started.

Because it represents indecision, this type of formation is usually regarded as market neutral. However, it can also be interpreted as a weak reversal signal. If formed at the bottom of a downtrend, a doji signals indecision and therefore suggests that the downtrend
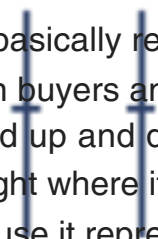
could be coming to an end. And the reverse is true for a doji in an uptrend.

Because this is a weak signal, traders will typically need confirmation from another candle or another indicator before jumping in any trades. A rule of thumb is to wait for the next candle to

close above the
high or below the low of the doji before making any trade decision.

Spinning Top

Another potential reversal candlestick signal is the **spinning top**, which contains a small body with relatively long top and bottom shadows. As a result, it looks just like...

Unlike the doji, the spinning top will have a slightly larger body and will be regarded as mildly bullish if the body is green and bearish if the candle is red. Again, this is a candle that suggests hesitation and uncertainty between buyers and sellers.
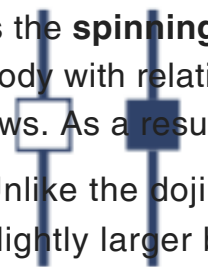
Marubozu

Marubozus are another basic type of candlestick pattern that provide weak signals of whether to go long or go short.
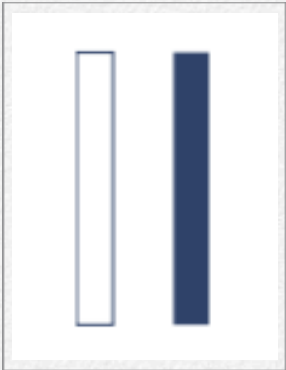
Unlike dojis and spinning tops, a marubozu has a large body with very small or no shadows at all. These are typically considered continuation patterns, as they indicate that one side of the market (buyers or sellers) are in control.

A bullish marubozu will be green or white and have its open price equal to the low and the close price equal to the high. This indicates that buyers were fully in control over the period and this is a bullish indication.

A bearish marubozu will be red or black and have its open price equal to the high and the close equal to the low. This indicates that sellers were fully in control during the period and this is a bearish indication.

So you can clearly see how a marubozu can be a good bullish or bearish indication. However, one marubozu candle on it's own is generally not enough to make a trading decision. So these are weak candlestick patterns that are best used in combination with other advanced patterns or indicators.

History: Who Was Munehisa Homma?

Munehisa Homma - The First Hedge Fund Manager

So we know that Japanese candlestick charts are extremely popular among traders. But just how did these charts first come about and why?

Well, most sources trace the development of candlestick charts to a Japanese rice trader in the 1700s called Munehisa Homma. As we shall see, Homma is somewhat of a legendary figure who has been credited by some with a number of incredible developments.

Who Was Munehisa Homma?

Munehisa Homma was also known as Sokyu Homma and in most technical analysis books, he is simply described as a rice merchant who took careful note of price ticks in predicting how future trade prices might behave.

The truth is that Munehisa Homma was more than just a simple rice trader. Apart from being known as the Father of Japanese Candlestick Analysis, he was also an excellent value investor and quite knowledgeable in futures trading, even fondly dubbed as the god of technical analysis and the first true contrarian trader.

and entrepreneur flourished. It"s said that he was able to create a large market of traders in Osaka to communicate market prices.

It is said that Munehisa's price analysis revolves around the concept of yin and yang, representing bear and bull markets respectively. He claims that within the instance of one market is the existence of another one, applying weather and volume data in predicting future price action. He started by recording the open,

high, low, and close of rice
prices in the market, observing patterns and repetitive signals and giving them names just like the ones we still use to this day, 250 years after Munehisa discovered them.

He was able to develop so many methods of understanding market price action that he eventually wrote a book titled "The Fountain of Gold', which is deemed as the first book on market psychology. In this book, he examines the role of traders' emotions in market action, adding that this can be used to position oneself against the crowds.

He summarised his candlestick patterns in a set of rules called "Sakata rules" that became the basis of modern candlestick charting. And according to several sources, he followed his first book up with a couple more books called "A Full Commentary on the Sakata Strategy" and "Tales of a Life Immersed in the Market".

Back in 1700, a futures market had emerged in the rice trading industry, as merchants also sold coupons guaranteeing trade prices at a future time. A secondary market for these coupons was born, and this was where Munehisa, the investor, trader

There are plenty of legendary stories on Munehisa Homma's trading performance, with some saying that he once made a string of 100 profitable trades in a row. At that time, he had a tremendous advantage over his fellow traders who were still unfamiliar with the concepts of market psychology and candlestick analysis.

By the 18th century, Munehisa Homma was already running a managed hedge fund while diversifying his family business to enable them to own huge tracts of land. It is said that his net worth in today's terms would be roughly $100 billion.

Aside from amassing plenty of profits from his hedge fund, Munehisa Homma was also an avid art collector and an adviser for the world's first sovereign wealth fund in Japan, even allowing him to attain the rank of an honorary Samurai.

So that pretty much sums up how Japanese candlesticks were born in the East and how they have developed over time. But how did candlestick charts get from there to here and how did they get from the East, over to us in the West?

Well, trader and author, Steve Nison, is credited with bringing candlestick charts to the western world and he's considered by some to be the modern father of candlestick charting. Nison and his books on Candlesticks are extremely influential and we will be referring to them later on in the eBook when we look at the more advanced patterns.

Test Procedure

3

Test Procedure: Setting Up

Defining The Candlesticks

So we've looked at some of the basics and we've looked at some history, the next step is to introduce the advanced candlestick patterns and then test them on our historical database to see which ones work.

And at this point, you might want to download or print out the Candlestick poster that comes up with the eBook so you can see which patterns we're going to look at.

But before we get into the test results, we need to clear a bit more of the boring stuff because we need to be clear about the test procedure and how we will be defining the candlestick patterns.

Pattern Definitions

First of all, it's important to address one of the quintessential problems with all candlestick patterns, which is subjectivity.

When researching this eBook I soon realised that nearly everyone has a different interpretation of what makes up a specific candlestick pattern.

For example, some authors say that a shooting star pattern must form in an uptrend, but how do you define an uptrend?

Also, some say that a hammer pattern must have a long lower shadow. But how long should it be exactly? There are numerous occasions like this where definitions are vague and it's difficult to be precise about what should make up a specific pattern.

In fact, look at any technical analysis book or blog post and you're going to come across different variations for nearly every candle pattern there is.

Because of this, I had to come up with some standardised definitions for each candlestick pattern. And, because I wanted to able to test each pattern on historical data, I needed a precise mathematical definition written down in code.

To cut a long story short, the formulas I've come up with are based upon three sources: Candlestick Charting Technique by Steve Nison, the Bloomberg Visual Guide For Candlesticks, and on a couple of occasions, I've also used Investopedia.
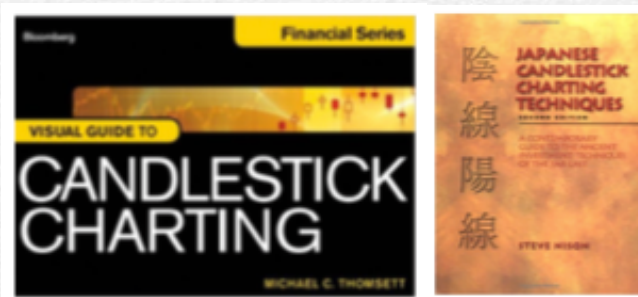
The reason why I needed more than one source is because sometimes I would program a candlestick pattern from one source and it would lead to virtually no trade signals. And sometimes the definition was simply too vague or too subjective.

Thus, I decided to use the pattern definition that gives either the most number of trading signals or the best performance overall. Having more signals gives us more confidence in the results of the pattern. So there isn't a great deal of use in testing candlestick patterns that result in hardly any trades.

On occasions though, you will see that some of the popular patterns are actually very rare signals and so I have kept them as they are defined.

As you will learn as we go through each pattern, some are useful, some are simply not worth looking at. And some actually work better in reverse.

Presentation of Results

Information for the testing process

So, as mentioned, I created precise formulas for each candlestick pattern and then I wrote them into Amibroker AFL so that I could test the patterns on historical data.

And each formula contains some abbreviations which are used to keep the code clean and easy to use.
Where you see the letter O, H, L, C, well that stands for the open, high, low, or close price.
And when there's a number after the corresponding letter, it means we are looking at a previous bar.
So O1 means we are looking at the open from the previous bar while H2 refers to the high from 2 bars ago, etc.
We need to reference these bars in order to be able to calculate the patterns properly.
Seeing as many candlestick patterns are meant to occur in uptrends and downtrends, I also had to come up with some objective definitions of what makes up an uptrend and what makes up a downtrend.
Most sources suggest that the up and down trends do not need to be very long. Therefore, I decided that an uptrend would be

defined as any time there is a new 10-day high. And a downtrend would be anytime there was a new 10-day low.

Since some candlestick patterns cannot feasibly occur at the same time as a new 10-day high or low, we also need to be able to move the uptrend or downtrend back one bar. For

example, the three white soldiers pattern consists of three white candles with higher lows, taking place in a downtrend. We need to reference the downtrend two bars back, because the third candle in the pattern needs to have a higher low and therefore it won't fit the definition of a downtrend! If that's confusing,

don't worry, it should make more sense later on. For now, just understand that the formulas have been created to identify the patterns objectively as closely as possible to the original sources. They may not always be perfect definitions because there is subjectivity by default, but now we have the formulas, we can test them on the data.

Analysis Presentation

So, the next section is pretty straightforward. We're going to look at each candlestick pattern, say how it's used, and then we are going to run the pattern on the data to see how it performs.

For this, I'll be conducting two tests on historical data and I'll be using my back-testing platform, Amibroker. Amibroker is an af-

fordable, flexible and powerful simulator that is perfect for testing trading ideas.

The first test will be run on a selection of 21 different futures and forex markets between the 1st January 2000 and the 1st January 2016.

This test will be run on daily data and we will be analysing the performance of each pattern based on a holding period of 1, 3, 5, and 10 days.

So, here you can see a list of the 21 different markets, we're going to look at in test one. We've got a range of stock index futures, commodity futures, bonds, and currencies.

1. 10-Year Note	11. FTSE 100
2. 5-Year Note	12. GBPUSD
3. AUDUSD	13. Gold
4. Copper	14. Live Cattle
5. Corn	15. Natural Gas
6. Crude Oil	16. Nikkei
7. E-Mini S&P 500	17. Silver
8. Euro Stoxx	18. Sugar
9. Euro-Bund	19. USDCAD
10. EURUSD	20. USDCHF
	21. USDJPY

And this data is all from Norgate Premium Data, which is imported directly into the back-tester, Amibroker.

Some of you will know that futures trade in separate contracts and the data requires a bit of work in order to make it suitable for back-testing.

And the futures data we are using here is back-adjusted, continuous contracts, meaning that each contract is adjusted in order for us to test it under realistic conditions.

It should be interesting to compare how well the candlesticks perform on the stock indices versus the currency pairs and if there is any real difference there.

The second test we are going to run will be exactly the same, but run only on stocks and we are going to focus on the S&P 100 universe.

Again, this data comes from Norgate Premium Data and is survivorship-bias free because it contains delisted securities and is amended for historical actions. That means the total number of stocks in the watch-list will actually be over 100 and in fact, it will be closer to 200.

So, the first test will show us how the candlestick pattern has performed on a variety of different futures and forex pairs over 1, 3, 5, and 10 days.

And the second test will show us how the candlestick pattern has performed on S&P 100 stocks. And remember that S&P 100 stocks are some of the largest, most liquid companies in the US.
So, let's take a look now at how the results will be presented.

This is going to show the results from each of our 21 markets with a 1-day holding period.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCE	137	0.32	59.12
Corn	C2___CCE	191	0.19	52.88
Silver	SI2__CCB	170	0.18	54.12
Live Cattle	LC___CCE	142	0.12	53.52
Nikkei 225	SNI__CCB	157	0.12	52.23
Euro-Bund	GBL__CCE	170	0.08	55.88
USDJPY	USDJPY	219	0.06	53.88
5-Year Note	FV2__CCE	188	0.05	58.51
10-Year Note	TY2__CCE	204	0.05	54.9
Gold	GC2__CCE	151	0.03	47.02
GBPUSD	GBPUSD	207	0.02	50.72
E-Mini S&P 500	ES___CCE	205	0.02	54.15
FTSE 100	LFT__CCE	121	0.01	52.89
USDCHF	USDCHF	209	-0.03	41.63
AUDUSD	AUDUSD	188	-0.03	50
EURUSD	EURUSD	236	-0.06	44.07
USDCAD	USDCAD	207	-0.07	43.48
Crude Oil	CL2__CCE	189	-0.09	47.62
Copper HG	HG2__CCE	160	-0.09	43.75
Natural Gas	NG2__CCE	151	-0.13	44.37
Euro Stoxx	ESX__CCE	152	-0.18	46.05
Average		**178.76**	**0.03**	**50.51**
Benchmark Results		83888	0.01	50.54

Universe		# Trades	Avg % P/L	% Winners
S&P100		**12742**	**0.09**	**49.47**
Benchmark Results		390557	0.04	50.26

And for each market we are choosing to show three things, the number of trades, the average profit/loss per trade and the percentage win rate.

The results from each market is listed individually and then the averages are shown at the bottom.
So, in this example, imagine that we just run a simulation where we bought the market after a particular candlestick pattern.
The results indicate that with a 1-day holding period the candlestick pattern worked best on Sugar.
The pattern produced 137 trades in total with an average profit of 0.32% per trade and a win rate of 59%.
And then you can see the next best performing market was corn, followed by silver. For the most part though, we are actually going to be looking at the averages.

So, here you can see that across all of our 21 markets the average result from the pattern was a profit of 0.03% with a win rate of 51%.

Directly underneath these numbers you will see our benchmark figures, which we can then use to compare our results.
And these benchmark numbers represent the 1-day return of all markets combined, before any pattern or selective buy rule is applied.

So here, the average 1-day return across all 21 markets was 0.01% per trade. Underneath these numbers we then have the results for our stock universe.

So in this example you can see that across the S&P 100 universe of stocks, the average result from buying this particular candlestick pattern and holding for one day was a profit of 0.09% per trade with an average win rate of 50%.
Again, we have the benchmark result underneath with which we can compare our findings. So this shows that the average profit from holding an S&P 100 stock for one day is 0.04% per trade. And remember these results are all before trading costs.
So those are the results for a 1-day holding period, we will then take a look at the results from a 3-day holding period, and then we'll look at 5-days and 10-days.

And that's basically how we will present the results of this study into candlesticks.
These tests should give us plenty of data to analyse and after we're done, we should be able to look back and see which candlestick patterns are the best and which candlestick patterns we need to forget.
So let's dive in now and get started with the first candlestick pattern.

Key Japanese Candlestick Patterns

Hanging Man

So the first candlestick we're going to look at is called the hanging man. Most sources say that this is a bearish candlestick that normally appears in an uptrend and indicates that a possible reversal could be on the cards.

Rules

The body of the hanging man must be small but the color can be neutral so it can be either black or white. A key component of the hanging man is that it has a long lower shadow. Most sources say that a hanging man must have a candle length more than twice the size of the body and that the lower shadow must be more than $^2/_3$ of the total candle length.

So this indicates that sellers have started to come into the market. They haven't been able to gain control but they are there and the uptrend may be slowing. So it suggests a possible reversal is near.

And when this pattern occurs in a downtrend, it's called a hammer.

Our Formula

Candle length must be more than twice as large as the body.
Lower shadow must be more than $\frac{2}{3}$ of the candle length.
Must be in a 10-day uptrend.

Hanging Man

$$(((H-L)>2*(O-C)) \text{ AND } ((C-L)/(H-L)>= 0.66) \text{ AND } ((O-L)/(H-L)>= 0.66)) \text{ AND Uptrend}$$

Results

So, first up, here you can see the full results from shorting the hanging man with a 1-day holding period and a 3-day holding period.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Natural Gas	NG2__CCB	16	0.71	81.25
Sugar	SB2__CCB	17	0.53	70.59
Silver	SI2__CCB	12	0.51	50
Euro Stoxx	ESX__CCB	20	0.4	55
Nikkei 225	SNI__CCB	21	0.22	61.9
GBPUSD	GBPUSD	6	0.12	50
USDCHF	USDCHF	8	0.1	75
USDCAD	USDCAD	8	0.08	62.5
Crude Oil	CL2__CCB	23	0.07	47.83
Gold	GC2__CCB	15	0.06	53.33
AUDUSD	AUDUSD	12	0.04	41.67
EURUSD	EURUSD	13	0.03	61.54
Euro-Bund	GBL__CCB	19	0.01	52.63
Live Cattle	LC___CCB	29	-0.05	51.72
5-Year Note	FV2__CCB	17	-0.05	52.94
Copper HG	HG2__CCB	13	-0.09	46.15
USDJPY	USDJPY	15	-0.11	40
10-Year Note	TY2__CCB	16	-0.18	31.25
Corn	C2___CCB	4	-0.46	75
E-Mini S&P 500	ES___CCB	17	-0.49	35.29
FTSE 100	LFT__CCB	20	-0.65	25
Average		**15.29**	**0.04**	**53.36**
Benchmark Results		83888	-0.01	48.19

Universe		# Trades	Avg % P/L	% Winners
S&P100		**2326**	**0.15**	**53.44**
Benchmark Results		390556	-0.04	48.66

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	20	1.5	75
Natural Gas	NG2__CCB	16	1.32	87.5
Nikkei 225	SNI__CCB	21	0.76	57.14
AUDUSD	AUDUSD	11	0.54	81.82
Corn	C2___CCB	4	0.42	50
Crude Oil	CL2__CCB	21	0.42	42.86
Copper HG	HG2__CCB	12	0.41	58.33
FTSE 100	LFT__CCB	19	0.39	63.16
USDJPY	USDJPY	15	0.37	73.33
USDCAD	USDCAD	6	0.1	66.67
Sugar	SB2__CCB	17	0.08	41.18
5-Year Note	FV2__CCB	16	-0.06	50
10-Year Note	TY2__CCB	16	-0.07	37.5
Euro-Bund	GBL__CCB	19	-0.08	47.37
Live Cattle	LC___CCB	29	-0.1	48.28
Silver	SI2__CCB	11	-0.15	45.45
EURUSD	EURUSD	13	-0.17	38.46
Gold	GC2__CCB	14	-0.23	50
USDCHF	USDCHF	8	-0.28	50
GBPUSD	GBPUSD	6	-0.36	50
E-Mini S&P 500	ES___CCB	17	-0.43	41.18
Average		**14.81**	**0.21**	**55.01**
Benchmark Results		27971	-0.02	47.47

Universe		# Trades	Avg % P/L	% Winners
S&P100		**2211**	**0.22**	**49.75**
Benchmark Results		130414	-0.11	47.58

The top part shows the results on each of our 21 different markets and I've chosen to show three things. The number of trades per market, the average profit or loss and then the percentage of winners. Then in orange at the bottom, we've taken the average of those numbers.

Underneath that, we've got our all trades benchmark result, which shows the average return from shorting each market on every bar and holding for one day. This allows us to compare the pattern to the average return.
Then underneath that we have the same results, but for our 100 stocks, and I've chosen just to show the averages here instead of showing each individual result, as I think that will give us plenty to work from.
You can see that with a 1-day holding period the average profit from shorting a hanging man candlestick on our selection of 21 markets was only 0.04%. So that basically means that if you short a hanging man on the close you can expect the market to fall around 0.04% on average according to the historical data.

This is slightly better than the average return from shorting the market every day, which was - 0.01%, shown by the benchmark result.

And below that you can see that we had also had a positive result on our stock universe containing S&P 100 stocks.

Shorting stocks on a hanging man worked 53% of the time and produced an average profit of 0.15% per trade. And this is based on 2300 trades so this is a fairly frequent signal.

OK, so what do these first results tell us?

Well, quite simply, you can see that shorting a hanging man on a daily chart and holding the trade for one day is not a very strong signal. It only produced a small average profit per trade (which was slightly larger in stocks) and once you incorporate trading commissions into that you will most likely be losing money.
Looking at the 3-day holding period now, you can see that shorting the hanging man does slightly better with a longer time frame. Across our 21 markets we saw an average profit of 0.21%

per
trade with a win rate of 55% and in stocks we saw an average profit of 0.22% per trade with a win rate of 50%. These numbers are much better than the benchmark returns.
Looking at the 5-day holding period, you can see that shorting the hanging man scored an average profit of 0.24% in futures and forex and 0.25% in stocks, again beating the benchmark return.

Finally, looking at the 10-day holding period, you can see that the average profit and win rate has dropped for both our tests.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCE	20	2.29	75
Sugar	SB2__CCE	16	1.89	50
Natural Gas	NG2__CCE	16	1.05	75
USDCHF	USDCHF	7	0.56	57.14
USDJPY	USDJPY	15	0.33	53.33
AUDUSD	AUDUSD	11	0.33	63.64
Nikkei 225	SNI__CCB	20	0.32	60
Crude Oil	CL2__CCE	21	0.32	52.38
Copper HG	HG2__CCE	12	0.3	41.67
FTSE 100	LFT__CCB	19	0.26	57.89
USDCAD	USDCAD	6	0.15	83.33
Corn	C2___CCE	4	0.07	75
10-Year Note	TY2__CCB	16	-0.04	37.5
Gold	GC2__CCE	14	-0.1	42.86
Live Cattle	LC___CCE	29	-0.14	55.17
5-Year Note	FV2__CCB	16	-0.16	37.5
Euro-Bund	GBL__CCE	18	-0.23	33.33
E-Mini S&P 500	ES___CCE	17	-0.32	41.18
EURUSD	EURUSD	13	-0.37	30.77
Silver	SI2__CCB	11	-0.69	27.27
GBPUSD	GBPUSD	6	-0.73	50
Average		**14.62**	**0.24**	**52.38**
Benchmark Results		16784	-0.04	47.58

Universe	# Trades	Avg % P/L	% Winners
S&P100	**2155**	**0.25**	**50.21**
Benchmark Results	78332	-0.18	46.58

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	20	2.52	80
Sugar	SB2__CCB	15	2.19	66.67
FTSE 100	LFT__CCB	18	1.72	66.67
USDCAD	USDCAD	6	0.77	66.67
Natural Gas	NG2__CCE	16	0.66	56.25
Gold	GC2__CCE	14	0.49	50
AUDUSD	AUDUSD	11	0.42	45.45
USDCHF	USDCHF	7	0.18	57.14
USDJPY	USDJPY	15	0.14	53.33
Crude Oil	CL2__CCB	19	0.07	42.11
10-Year Note	TY2__CCB	16	0.04	43.75
Nikkei 225	SNI__CCB	18	-0.05	50
5-Year Note	FV2__CCB	14	-0.16	42.86
GBPUSD	GBPUSD	6	-0.17	50
Live Cattle	LC___CCB	25	-0.26	52
EURUSD	EURUSD	13	-0.53	38.46
Euro-Bund	GBL__CCB	17	-0.55	35.29
Copper HG	HG2__CCE	12	-0.77	33.33
E-Mini S&P 500	ES___CCB	17	-1	23.53
Corn	C2___CCB	4	-1.82	75
Silver	SI2__CCB	11	-2.5	27.27
Average		**14.00**	**0.07**	**50.28**
Benchmark Results		8396	-0.07	46.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**2078**	**0.14**	**49.04**
Benchmark Results	39258	-0.32	45.71

Overall, what do these results tell us? Well, it's quite clear that

the hanging man candle is not a wildly
profitable pattern though it did ok with a 3-day and 5-day hold-
ing period and it outperformed the benchmark return on every
test.
Once trading costs are introduced, a lot of these profits would
be wiped out but even so, because we have seen this candle
beat the benchmark consistently, this still might be a useful
short pattern to keep an eye on.
Next up, we'll look at the hanging man's opposite, the hammer.

Hammer

The hammer candlestick is essentially the same as the hanging man, but it must appear in a downtrend.

This is a bullish one candle pattern that indicates a possible reversal.

So the hammer, just like the hanging man, must have a small body which can be black or white and it must have a long lower shadow. The longer the lower shadow the stronger the signal.

So this pattern shows that sellers have taken the market down but buyers have bought it back up and the market has finished near to where it started. So this indicates that momentum is slowing and a new uptrend may be about to take place. It suggests the market may be hammering out a bottom.

Rules

Bullish candlestick that indicates reversal

Appears in a downtrend

Small body can be black or white

Long lower shadow

Longer the lower shadow, stronger the signal

Stronger when found at level of support

Our Formula

Candle length must be more than twice as large as the body.
Lower shadow must be more than $\frac{2}{3}$ of the candle length.
Must be in a 10-day downtrend.

Hammer
$(((H-L)>2*(O-C))$ AND
$((C-L)/(H-L)>0.66)$ AND
$((O-L)/(H-L)>0.66))$ and
Downtrend

Results

So now that we have the hammer candle pattern written down in code, we can run it through the Amibroker simulator and see how it gets on.

In this instance we will be buying the market on the close whenever there is a hammer and the market is in a downtrend (defined by a new 10-day low) and we will then close the trade after 1, 3, 5, or 10 days.

Looking at this first table, you can see the results from buying the hammer and closing the trade after 1 full day and you can see that this was a losing strategy overall.

On our 21 markets, the signal produced an average loss of -0.10% with an average win rate of 46%. This was worse than the average 1 day return for each market combined, shown by the benchmark.

On our 100 stocks, the signal did even worse with an average loss of -0.17% per trade. Again this was lower than the benchmark daily return of 0.04%.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro-Bund	GBL__CCB	37	0.09	62.16
Silver	SI2__CCB	39	0.09	58.97
10-Year Note	TY2__CCB	36	0.06	47.22
AUDUSD	AUDUSD	49	0.06	53.06
USDCAD	USDCAD	42	0.01	47.62
E-Mini S&P 500	ES___CCB	55	-0.02	43.64
Corn	C2___CCB	40	-0.03	40
EURUSD	EURUSD	43	-0.04	37.21
Live Cattle	LC___CCB	31	-0.04	54.84
5-Year Note	FV2__CCB	41	-0.05	36.59
Copper HG	HG2__CCB	45	-0.08	46.67
Natural Gas	NG2__CCB	44	-0.08	45.45
Crude Oil	CL2__CCB	48	-0.09	43.75
Nikkei 225	SNI__CCB	44	-0.11	54.55
GBPUSD	GBPUSD	52	-0.14	46.15
Euro Stoxx	ESX__CCB	44	-0.17	45.45
Sugar	SB2__CCB	33	-0.18	45.45
FTSE 100	LFT__CCB	41	-0.19	48.78
USDJPY	USDJPY	48	-0.21	39.58
USDCHF	USDCHF	42	-0.34	21.43
Gold	GC2__CCB	23	-0.64	39.13
Average		**41.76**	**-0.10**	**45.60**
Benchmark Results		83888	0.01	50.54

Universe	# Trades	Avg % P/L	% Winners
S&P100	**4618**	**-0.17**	**46.15**
Benchmark Results	390557	0.04	50.26

Combining the hammer with a 3-day holding period lost money again in our 21 markets but it produced an average profit of 0.09% per trade in stocks with a win rate of 52%.

Buying the hammer with a 5-day holding period was a very similar story. We saw an average loss in futures and forex and an average profit of 0.09% per trade in stocks.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	44	0.89	50
AUDUSD	AUDUSD	47	0.48	68.09
USDCAD	USDCAD	42	0.12	50
Nikkei 225	SNI__CCB	43	0.12	44.19
10-Year Note	TY2__CCB	35	0.1	48.57
USDJPY	USDJPY	47	0.1	59.57
Euro-Bund	GBL__CCB	36	0.07	41.67
Silver	SI2__CCB	36	0.07	50
USDCHF	USDCHF	40	0.03	50
Copper HG	HG2__CCB	43	0.02	51.16
5-Year Note	FV2__CCB	39	-0.04	51.28
E-Mini S&P 500	ES___CCB	53	-0.05	47.17
GBPUSD	GBPUSD	48	-0.05	47.92
FTSE 100	LFT__CCB	40	-0.08	40
EURUSD	EURUSD	43	-0.09	55.81
Live Cattle	LC___CCB	30	-0.17	43.33
Crude Oil	CL2__CCB	47	-0.19	44.68
Natural Gas	NG2__CCB	44	-0.41	50
Gold	GC2__CCB	23	-0.43	39.13
Corn	C2___CCB	40	-0.48	40
Sugar	SB2__CCB	33	-0.57	30.3
Average		**40.62**	**-0.03**	**47.76**
Benchmark Results		27971	0.02	51.93

Universe	# Trades	Avg % P/L	% Winners
S&P100	**4444**	**0.09**	**52.09**
Benchmark Results	130417	0.11	51.88

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	43	1.27	60.47
Silver	SI2__CCB	36	0.46	61.11
FTSE 100	LFT__CCB	38	0.44	52.63
AUDUSD	AUDUSD	45	0.42	68.89
USDJPY	USDJPY	45	0.42	66.67
Euro-Bund	GBL__CCB	34	0.25	55.88
10-Year Note	TY2__CCB	35	0.25	57.14
Copper HG	HG2__CCB	41	0.21	51.22
USDCAD	USDCAD	41	0.08	41.46
USDCHF	USDCHF	40	0.05	40
5-Year Note	FV2__CCB	39	0	46.15
Nikkei 225	SNI__CCB	42	-0.08	42.86
GBPUSD	GBPUSD	46	-0.18	41.3
Live Cattle	LC___CCB	29	-0.18	44.83
E-Mini S&P 500	ES___CCB	52	-0.2	46.15
Crude Oil	CL2__CCB	47	-0.21	61.7
EURUSD	EURUSD	42	-0.45	42.86
Gold	GC2__CCB	23	-0.46	43.48
Natural Gas	NG2__CCB	43	-0.68	37.21
Corn	C2___CCB	38	-0.83	31.58
Sugar	SB2__CCB	33	-1.1	39.39
Average		**39.62**	**-0.02**	**49.19**
Benchmark Results		16784	0.04	51.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**4299**	**0.09**	**53.62**
Benchmark Results	78331	0.18	52.98

With a 10-day holding period, the results are still not great. We saw an average loss of -0.01% in our 21 markets and an average gain of 0.19% in stocks.

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	40	1.06	57.5
Silver	SI2__CCB	34	0.78	52.94
FTSE 100	LFT__CCB	36	0.55	63.89
Copper HG	HG2__CCE	39	0.55	58.97
AUDUSD	AUDUSD	43	0.47	65.12
10-Year Note	TY2__CCB	31	0.35	61.29
USDJPY	USDJPY	44	0.34	65.91
Euro-Bund	GBL__CCB	32	0.32	59.38
5-Year Note	FV2__CCB	37	0.09	56.76
USDCAD	USDCAD	39	0.06	48.72
USDCHF	USDCHF	38	-0.02	44.74
Gold	GC2__CCE	23	-0.05	56.52
GBPUSD	GBPUSD	44	-0.07	40.91
E-Mini S&P 500	ES___CCB	49	-0.15	53.06
Live Cattle	LC___CCB	28	-0.19	39.29
Crude Oil	CL2__CCB	47	-0.2	51.06
EURUSD	EURUSD	40	-0.27	42.5
Nikkei 225	SNI__CCB	39	-0.36	51.28
Corn	C2___CCB	37	-0.67	45.95
Natural Gas	NG2__CCE	40	-0.95	35
Sugar	SB2__CCB	32	-1.95	40.63
Average		**37.71**	**-0.01**	**51.97**
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	4072	0.19	52.65
Benchmark Results	39257	0.32	54.03

Overall, these results are not good. The hammer pattern does not seem to show any profitable edge in the markets we tested and we underperformed the benchmark result in every test.

In other words, we would be better off buying the market randomly than waiting for a hammer! Let's move on to the inverted hammer.

Inverted Hammer

The inverted hammer, as you would expect, is simply an upside down hammer pattern.

This is a bullish candlestick that indicates reversal and appears in a downtrend. It must have a small body that can be black or white, have a long upper shadow and contain little or no lower shadow.
And an inverted hammer in an uptrend is called a shooting star.

So this candle is said to be a reversal indicator in a downtrend because it shows that buyers have started to come in. They haven't been able to take control yet but they are there so momentum could be slowing.

Generally, the inverted hammer must have a candle length that is more than twice as large as the body and the upper shadow should be more than $2/3$ of the total candle length.

Rules

Bullish candlestick that indicates reversal

Appears in a downtrend

Small body can be black or white

Long upper shadow (in a uptrend this is a shooting star)

Small or no lower shadow

Our Formula

Candle length must be more than twice as large as the body.
Upper shadow must be more than ⅔ of the candle length.
Must be in a 10-day downtrend.

Inverted Hammer
$(((H-L)>2*(O-C))$ AND
$((H-C)/(H-L)>0.66)$ AND
$((H-O)/(H-L)>0.66))$ AND
Downtrend

Results

We have the inverted hammer written down in code so we can test the pattern on our watchlist of markets. So in this case, we will go long on the close of the inverted hammer and we will hold the trade for 1, 3, 5 or 10 days. First, we will test the pat-

tern on a watchlist of 21 different markets and then we will test it on a watchlist of 100 US stocks.

1 DAY HOLDING PERIOD				
Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	6	1.97	66.67
Gold	GC2__CCB	10	1.07	70
Copper HG	HG2__CCB	7	0.68	71.43
Nikkei 225	SNI__CCB	17	0.61	88.24
FTSE 100	LFT__CCB	13	0.44	61.54
Euro-Bund	GBL__CCB	19	0.18	52.63
USDJPY	USDJPY	10	0.16	70
Silver	SI2__CCB	16	0.15	62.5
Corn	C2___CCB	19	0.14	42.11
Sugar	SB2__CCB	21	0.12	52.38
GBPUSD	GBPUSD	11	0.1	36.36
Live Cattle	LC___CCB	21	0.05	52.38
EURUSD	EURUSD	11	0.05	63.64
5-Year Note	FV2__CCB	7	0.05	57.14
USDCHF	USDCHF	9	0.05	55.56
Natural Gas	NG2__CCB	22	0.01	50
10-Year Note	TY2__CCB	8	-0.04	75
USDCAD	USDCAD	15	-0.09	60
AUDUSD	AUDUSD	11	-0.09	54.55
E-Mini S&P 500	ES___CCB	4	-0.91	25
Crude Oil	CL2__CCB	8	-1.08	12.5
Average		12.62	0.17	56.17
Benchmark Results		83888	0.01	50.54

Universe		# Trades	Avg % P/L	% Winners
S&P100		1574	0.25	55.34
Benchmark Results		390557	0.04	50.26

So as you can see from the first table, buying the inverted hammer on the close and holding the trade for one day produced a profit on both tests.

We got an average profit of 0.17% across our 21 markets with a win rate of 56% and an average profit of 0.25% on our S&P 100 stocks with a win rate of 55%.

Both results are better than our benchmark.

The inverted hammer pattern was also a profitable signal using a 3-day holding period.
Buying the inverted hammer and holding for 3 days produced an average profit of 0.18% with a win rate of 54% on our 21 markets and an average gain of 0.65% in stocks with a win rate of 56%. And this average is based on over 1500 trades.

Looking at the 5-day holding period, the inverted hammer, performed less well in futures and forex but again did well in stocks.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	6	2.56	50
Nikkei 225	SNI__CCB	17	1.64	58.82
Silver	SI2__CCB	16	0.63	56.25
Copper HG	HG2__CCB	7	0.54	57.14
5-Year Note	FV2__CCB	7	0.4	71.43
EURUSD	EURUSD	11	0.39	72.73
FTSE 100	LFT__CCB	12	0.35	66.67
Corn	C2___CCB	17	0.34	47.06
Euro-Bund	GBL__CCB	16	0.29	56.25
Sugar	SB2__CCB	20	0.23	45
Natural Gas	NG2__CCB	22	0.18	45.45
USDJPY	USDJPY	10	0.11	70
GBPUSD	GBPUSD	11	0.08	63.64
USDCHF	USDCHF	7	0.03	57.14
10-Year Note	TY2__CCB	8	-0.04	50
USDCAD	USDCAD	15	-0.04	40
Live Cattle	LC___CCB	19	-0.24	57.89
AUDUSD	AUDUSD	11	-0.29	36.36
Gold	GC2__CCB	9	-0.51	66.67
E-Mini S&P 500	ES___CCB	4	-0.73	25
Crude Oil	CL2__CCB	8	-2.07	37.5
Average		**12.05**	**0.18**	**53.86**
Benchmark Results		27971	0.02	51.93

Universe		# Trades	Avg % P/L	% Winners
S&P100		**1511**	**0.65**	**55.46**
Benchmark Results		130417	0.11	51.88

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Nikkei 225	SNI__CCB	17	1.21	58.82
EURUSD	EURUSD	11	0.76	72.73
Copper HG	HG2__CCB	7	0.62	28.57
Natural Gas	NG2__CCB	20	0.51	45
GBPUSD	GBPUSD	11	0.51	63.64
Silver	SI2__CCB	16	0.51	62.5
5-Year Note	FV2__CCB	7	0.43	57.14
Sugar	SB2__CCB	19	0.38	52.63
Euro-Bund	GBL__CCB	16	0.3	56.25
Corn	C2___CCB	17	0.21	47.06
USDCAD	USDCAD	15	0.21	46.67
Gold	GC2__CCB	9	0.06	66.67
FTSE 100	LFT__CCB	12	0.01	50
Euro Stoxx	ESX__CCB	6	-0.04	50
USDJPY	USDJPY	8	-0.2	25
Live Cattle	LC___CCB	19	-0.31	47.37
USDCHF	USDCHF	7	-0.47	42.86
10-Year Note	TY2__CCB	8	-0.68	25
AUDUSD	AUDUSD	10	-0.71	30
E-Mini S&P 500	ES___CCB	4	-0.83	50
Crude Oil	CL2__CCB	8	-1.51	37.5
Average		**11.76**	**0.05**	**48.35**
Benchmark Results		16784	0.04	51.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**1489**	**1.00**	**57.09**
Benchmark Results		78331	0.18	52.98

We saw an average gain of 1% in stocks with a 57% win rate. This compares to the benchmark average return of 0.18% for a 5 day holding period.

Lastly, the inverted hammer also did well with a 10-day holding period.
We saw an average gain of 0.44% in our 21 markets with a win rate of 54% and an average gain of 1.21% in stocks with a win rate of 60%.

Overall, these results are actually pretty good.

We have seen the benchmark on every test and produced some good numbers from a healthy number of trades.
The results suggest that the inverted hammer really might be a good buy signal. Even after commissions, there should be enough profit left over.

The nice thing is that the average profit is consistent across all the tests and it only gets stronger when the holding period is increased. The win percentage is also strong.

So, the inverted hammer might just be a good pattern to look out for. Next up we will look at the shooting star.

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Copper HG	HG2__CCB	6	3.05	50
Silver	SI2__CCB	16	1.79	81.25
Sugar	SB2__CCB	19	1.56	63.16
Euro Stoxx	ESX__CCB	6	1.39	50
Gold	GC2__CCB	9	1.09	77.78
Natural Gas	NG2__CCB	19	1.08	57.89
USDCAD	USDCAD	15	1	73.33
Nikkei 225	SNI__CCB	16	0.9	50
Euro-Bund	GBL__CCB	15	0.78	66.67
AUDUSD	AUDUSD	10	0.77	50
EURUSD	EURUSD	10	0.21	50
USDJPY	USDJPY	8	0.08	37.5
Crude Oil	CL2__CCB	8	0.07	50
Live Cattle	LC___CCB	19	0.04	63.16
Corn	C2___CCB	16	0.04	37.5
FTSE 100	LFT__CCB	12	0	50
GBPUSD	GBPUSD	11	-0.05	54.55
5-Year Note	FV2__CCB	7	-0.22	28.57
USDCHF	USDCHF	6	-0.45	50
10-Year Note	TY2__CCB	8	-0.99	37.5
E-Mini S&P 500	ES___CCB	4	-2.96	50
Average		**11.43**	**0.44**	**53.76**
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	1456	1.21	59.89
Benchmark Results	39257	0.32	54.03

Shooting Star

The shooting star pattern occurs when a security opens strongly, moves higher, but then falls back and ends up closing near or lower than the opening price.

The candle should have a long upper shadow, close near it's lows and it should occur in an uptrend.

So, the shooting star is a signal that buyers have bought the market up but they've then been overpowered by sellers. When this occurs in an uptrend, it's a signal that momentum is waning and a reversal could be about to begin. Thus, when a shooting star occurs it's a signal to sell the market or go short. It's a potential signal of a market top.

In a downtrend, the shooting star is an inverted hammer so it should be interesting to see how it performs.

Rules

Bearish candlestick that indicates reversal

Appears in an uptrend

Small body can be black or white

Long upper shadow

Small or no lower shadow

(In downtrend this is an inverted hammer)

Signal is stronger if candle opens with a gap up
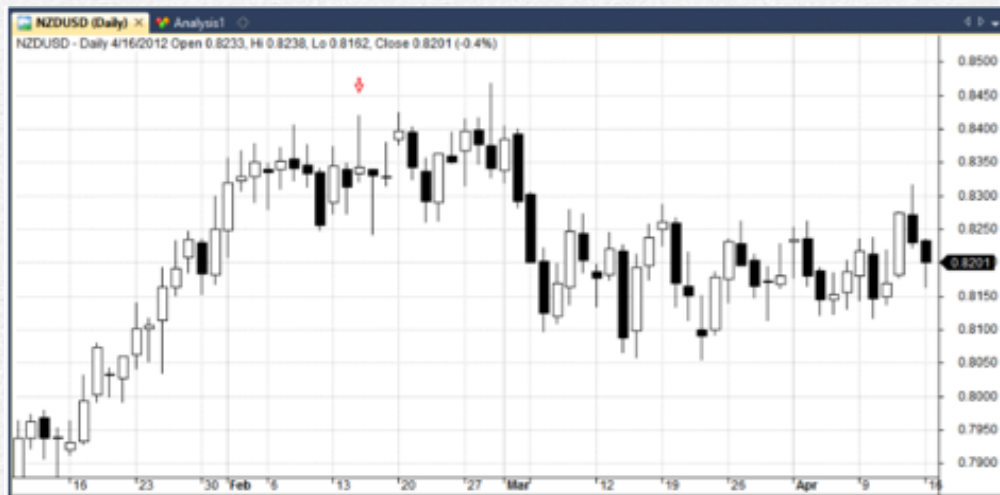
Our Formula

Candle length must be more than twice as large as the body.
Upper shadow must be more than $\frac{2}{3}$ of the candle length.
Must be in a 10-day uptrend.

Shooting Star

$$(((H-L)>2*(O-C)) \text{ AND } ((H-C)/(H-L)>= 0.66) \text{ AND } ((H-O)/(H-L)>= 0.66)) \text{ AND Downtrend}$$

Results

Looking at the first table of results we can see the average profit or loss from shorting a shooting star candle and holding the trade for one whole day.

Name	Ticker	# Trades	Avg % P/L	% Winners
Crude Oil	CL2__CCE	36	0.35	52.78
USDCAD	USDCAD	54	0.14	61.11
USDJPY	USDJPY	34	0.07	55.88
Gold	GC2__CCE	24	0.07	50
GBPUSD	GBPUSD	48	0.01	47.92
10-Year Note	TY2__CCB	57	-0.01	40.35
5-Year Note	FV2__CCB	54	-0.01	38.89
Euro-Bund	GBL__CCE	51	-0.07	45.1
Copper HG	HG2__CCE	44	-0.08	45.45
USDCHF	USDCHF	46	-0.11	39.13
AUDUSD	AUDUSD	48	-0.13	35.42
E-Mini S&P 500	ES___CCE	49	-0.15	51.02
EURUSD	EURUSD	46	-0.16	32.61
Live Cattle	LC___CCE	54	-0.17	38.89
FTSE 100	LFT__CCE	46	-0.19	47.83
Sugar	SB2__CCE	40	-0.28	42.5
Silver	SI2__CCB	38	-0.36	44.74
Euro Stoxx	ESX__CCE	32	-0.42	34.38
Natural Gas	NG2__CCE	33	-0.44	45.45
Nikkei 225	SNI__CCB	84	-0.47	38.1
Corn	C2___CCE	41	-0.53	41.46
Average		**45.67**	**-0.14**	**44.24**
Benchmark Results		83888	-0.01	48.19

Universe		# Trades	Avg % P/L	% Winners
S&P100		**4949**	**-0.09**	**45.12**
Benchmark Results		390556	-0.04	48.66

So you can see that this pattern has lost money overall. Shorting a shooting star produced an average loss of -0.14% across our 21 markets with a 44% win rate and an average loss of -0.09% on stocks with a win rate of 45%.

These results were not much better with a 3-day holding period where we saw losses for both tests.

Name	Ticker	# Trades	Avg % P/L	% Winners
Crude Oil	CL2__CCB	34	0.25	44.12
Gold	GC2__CCE	24	0.15	58.33
Sugar	SB2__CCB	39	0.1	51.28
GBPUSD	GBPUSD	47	0.08	65.96
USDCAD	USDCAD	54	0.08	50
AUDUSD	AUDUSD	44	0.06	47.73
5-Year Note	FV2__CCB	52	-0.07	34.62
Euro-Bund	GBL__CCB	51	-0.07	45.1
USDJPY	USDJPY	32	-0.08	37.5
10-Year Note	TY2__CCB	55	-0.12	36.36
EURUSD	EURUSD	44	-0.17	40.91
USDCHF	USDCHF	45	-0.2	40
Live Cattle	LC___CCB	51	-0.3	41.18
Copper HG	HG2__CCE	44	-0.31	43.18
E-Mini S&P 500	ES___CCB	47	-0.37	42.55
FTSE 100	LFT__CCB	46	-0.38	28.26
Silver	SI2__CCB	36	-0.56	41.67
Nikkei 225	SNI__CCB	78	-0.69	37.18
Corn	C2___CCB	39	-0.82	43.59
Natural Gas	NG2__CCE	33	-0.89	30.3
Euro Stoxx	ESX__CCB	31	-0.95	25.81
Average		**44.10**	**-0.25**	**42.17**
Benchmark Results		27971	-0.02	47.47

Universe		# Trades	Avg % P/L	% Winners
S&P100		**4737**	**-0.12**	**45.54**
Benchmark Results		130414	-0.11	47.58

So shorting a shooting star and holding the trade for 3-days does not produce very good results as is clearly shown.

And this is repeated with a 5-day holding period and the results are in fact at their worst with a 10-day holding period.

Shorting a shooting star pattern on the close and holding the trade for 10 days produced an average loss of -0.28% across our 21 markets and an average loss of -0.34% in stocks with a win rate of 44%. And this was from over 4000 separate signals.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCB	39	0.38	48.72
Crude Oil	CL2__CCB	33	0.23	42.42
GBPUSD	GBPUSD	46	0.17	54.35
Gold	GC2__CCB	24	0.13	45.83
Live Cattle	LC___CCB	48	0.03	47.92
AUDUSD	AUDUSD	40	0.01	47.5
USDJPY	USDJPY	31	-0.02	58.06
Euro-Bund	GBL__CCB	51	-0.03	43.14
USDCAD	USDCAD	53	-0.04	43.4
10-Year Note	TY2__CCB	54	-0.18	40.74
5-Year Note	FV2__CCB	52	-0.21	34.62
Silver	SI2__CCB	34	-0.32	44.12
EURUSD	EURUSD	43	-0.37	44.19
FTSE 100	LFT__CCB	44	-0.38	29.55
USDCHF	USDCHF	43	-0.42	32.56
Corn	C2___CCB	37	-0.45	43.24
E-Mini S&P 500	ES___CCB	45	-0.47	42.22
Euro Stoxx	ESX__CCB	28	-0.64	28.57
Copper HG	HG2__CCB	43	-0.67	34.88
Nikkei 225	SNI__CCB	73	-0.87	35.62
Natural Gas	NG2__CCB	29	-1.13	41.38
Average		**42.38**	**-0.25**	**42.05**
Benchmark Results		16784	-0.04	47.58

Universe	# Trades	Avg % P/L	% Winners
S&P100	**4577**	**-0.09**	**44.94**
Benchmark Results	78332	-0.18	46.58

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Crude Oil	CL2__CCB	31	0.7	51.61
Gold	GC2__CCB	24	0.55	45.83
Sugar	SB2__CCB	36	0.51	55.56
GBPUSD	GBPUSD	42	0.31	66.67
USDCAD	USDCAD	48	0.17	54.17
USDJPY	USDJPY	29	0.03	51.72
Euro-Bund	GBL__CCB	48	-0.06	43.75
10-Year Note	TY2__CCB	50	-0.08	44
AUDUSD	AUDUSD	39	-0.12	51.28
USDCHF	USDCHF	41	-0.2	46.34
FTSE 100	LFT__CCB	40	-0.27	35
EURUSD	EURUSD	42	-0.32	45.24
Live Cattle	LC___CCB	46	-0.41	50
5-Year Note	FV2__CCB	47	-0.43	29.79
Nikkei 225	SNI__CCB	62	-0.55	35.48
Silver	SI2__CCB	33	-0.63	42.42
E-Mini S&P 500	ES___CCB	42	-0.69	42.86
Euro Stoxx	ESX__CCB	28	-0.8	28.57
Natural Gas	NG2__CCB	26	-0.91	34.62
Corn	C2___CCB	35	-1.17	40
Copper HG	HG2__CCB	38	-1.47	31.58
Average		**39.38**	**-0.28**	**44.12**
Benchmark Results		8396	-0.07	46.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**4282**	**-0.34**	**43.55**
Benchmark Results	39258	-0.32	45.71

So, the results are pretty conclusive.

Shorting the shooting star pattern (on a daily chart) is clearly a losing signal. It lost money across all timeframes and most markets.

You wouldn't really expect the shooting star to do that well in stocks, especially with a 10-day timeframe because stocks tend to go up and short trades are never as profitable as long.

But anyway, the results are not good for the shooting star. Let's move on.

Morning Star

The morning star candlestick pattern is different from what we've seen so far because this is a three candle pattern.

The morning star should appear in a downtrend and it indicates a potential bullish reversal.

The first candle in a morning star should be a long black down candle. The second candle can be either black or white and the third candle should be a white up candle which closes above the second candle and into or above the first candle.

So this is the opposite of an evening star. And according to most sources, the signal is stronger if the second candle opens on a gap down. However, that makes this signal extremely rare, because you hardly ever get gaps in some liquid markets like forex.

Rules

Three candle pattern that indicates reversal

Appears in a downtrend

First candle is long black down

Second candle can be black or white

Third candle is white and closes above candle two and into or above candle one

Signal is stronger if the second candle opens on a gap down (but very few trades)

Opposite of the evening star

Our Formula

Morning Star
(O2>C2*1.01) AND (C>H1) AND C>O
AND C>(((O2-C2)/2)+C2) AND
Downtrend1

Results

So after analysing the morning star pattern that is mentioned in most sources, I discovered that the pattern results in hardly any trading signals when including the gap.

Because of this, our formula doesn't include the gap and I think it's much better this way. So we've got the code written down and in this instance O2 and C2 refer to the first candle in our 3 candle pattern and H1 refers to the second candle in the pattern.

And our downtrend formula has been put back one candle because it would be wrong to see the third candle make a new 10-day low and then reverse above the second candle.

Anyway by putting this code into Amibroker we can identify morning stars and run a simulation to see how buying this candle performs over time.

So, buying a morning star on the close and exiting the trade one day later produced an average loss of -0.13% across our 21 markets. You can see that our best market was the 5-year note while our worst was sugar.

In stocks, we recorded a loss of -0.04% with a win rate of 48% across 4297 trades.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
5-Year Note	FV2__CCB	1	0.51	100
Euro Stoxx	ESX__CCB	51	0.19	43.14
Euro-Bund	GBL__CCB	2	0.19	100
FTSE 100	LFT__CCB	32	0.17	56.25
Nikkei 225	SNI__CCB	57	0.16	49.12
Corn	C2___CCB	30	0.08	46.67
Live Cattle	LC___CCB	11	0.04	45.45
USDCAD	USDCAD	6	0.02	33.33
AUDUSD	AUDUSD	17	-0.03	41.18
EURUSD	EURUSD	19	-0.08	57.89
GBPUSD	GBPUSD	9	-0.11	33.33
Silver	SI2__CCB	29	-0.13	44.83
USDCHF	USDCHF	10	-0.2	40
Gold	GC2__CCB	25	-0.2	40
Crude Oil	CL2__CCB	35	-0.21	48.57
E-Mini S&P 500	ES___CCB	63	-0.27	49.21
10-Year Note	TY2__CCB	11	-0.44	18.18
Copper HG	HG2__CCB	36	-0.48	33.33
Natural Gas	NG2__CCB	47	-0.51	29.79
USDJPY	USDJPY	7	-0.66	42.86
Sugar	SB2__CCB	33	-0.8	33.33
Average		**25.29**	**-0.13**	**46.97**
Benchmark Results		83888	0.01	50.54

Universe	# Trades	Avg % P/L	% Winners
S&P100	**4297**	**-0.04**	**48.17**
Benchmark Results	390557	0.04	50.26

With a three day holding period, the morning star is still a losing pattern across our 21 markets and it just about broke even in stocks.

Results improve slightly with a 5-day holding period where we recorded an average profit of 0.08% per trade in futures and forex and 0.22% in stocks with a win rate of 52%. Both results better than the benchmark 5-day return.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
AUDUSD	AUDUSD	17	0.99	70.59
Euro-Bund	GBL__CCB	2	0.55	100
5-Year Note	FV2__CCB	1	0.53	100
USDCAD	USDCAD	6	0.41	66.67
GBPUSD	GBPUSD	9	0.2	55.56
Silver	SI2__CCB	28	0.12	60.71
Nikkei 225	SNI__CCB	56	0.1	48.21
Live Cattle	LC___CCB	11	-0.05	36.36
Gold	GC2__CCB	25	-0.15	52
Corn	C2___CCB	30	-0.2	53.33
EURUSD	EURUSD	19	-0.21	36.84
E-Mini S&P 500	ES___CCB	62	-0.23	58.06
USDJPY	USDJPY	7	-0.33	57.14
10-Year Note	TY2__CCB	11	-0.36	45.45
Crude Oil	CL2__CCB	34	-0.38	38.24
FTSE 100	LFT__CCB	31	-0.41	48.39
Natural Gas	NG2__CCB	47	-0.42	42.55
Sugar	SB2__CCB	33	-0.43	45.45
USDCHF	USDCHF	10	-0.45	50
Euro Stoxx	ESX__CCB	51	-0.71	49.02
Copper HG	HG2__CCB	36	-1.15	38.89
Average		**25.05**	**-0.12**	**54.93**
Benchmark Results		27971	0.02	51.93

Universe		# Trades	Avg % P/L	% Winners
S&P100		**4257**	**0.01**	**51.30**
Benchmark Results		130417	0.11	51.88

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
5-Year Note	FV2__CCB	1	1.97	100
AUDUSD	AUDUSD	17	1.06	82.35
Euro-Bund	GBL__CCB	2	0.94	100
Gold	GC2__CCB	25	0.66	64
Silver	SI2__CCB	28	0.45	60.71
Natural Gas	NG2__CCB	46	0.37	52.17
USDCAD	USDCAD	6	0.36	50
Corn	C2___CCB	29	0.3	41.38
Live Cattle	LC___CCB	11	0.26	54.55
GBPUSD	GBPUSD	9	0.18	44.44
Nikkei 225	SNI__CCB	54	0.11	48.15
E-Mini S&P 500	ES___CCB	59	-0.12	50.85
EURUSD	EURUSD	19	-0.19	42.11
Crude Oil	CL2__CCB	34	-0.31	41.18
Euro Stoxx	ESX__CCB	49	-0.36	46.94
USDCHF	USDCHF	10	-0.45	40
10-Year Note	TY2__CCB	11	-0.48	36.36
USDJPY	USDJPY	7	-0.52	71.43
Sugar	SB2__CCB	33	-0.78	42.42
Copper HG	HG2__CCB	36	-0.8	47.22
FTSE 100	LFT__CCB	30	-0.97	50
Average		**24.57**	**0.08**	**55.54**
Benchmark Results		16784	0.04	51.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**4170**	**0.22**	**52.16**
Benchmark Results		78331	0.18	52.98

Finally, with a 10-day hold, the pattern saw an average gain of 0.13% across our 21 markets but it lost money in stocks.

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
5-Year Note	FV2__CCB	1	1.6	100
USDCAD	USDCAD	6	1.13	50
Gold	GC2__CCE	25	1.01	68
Natural Gas	NG2__CCE	42	0.99	50
AUDUSD	AUDUSD	16	0.95	56.25
10-Year Note	TY2__CCB	11	0.88	63.64
Euro-Bund	GBL__CCB	2	0.7	50
USDJPY	USDJPY	7	0.53	71.43
Nikkei 225	SNI__CCB	50	0.42	54
FTSE 100	LFT__CCB	27	0.15	55.56
Silver	SI2__CCB	28	0.09	57.14
Live Cattle	LC___CCB	11	0.04	72.73
Euro Stoxx	ESX__CCB	44	0.03	52.27
USDCHF	USDCHF	10	-0.06	50
Crude Oil	CL2__CCB	32	-0.23	40.63
Sugar	SB2__CCB	31	-0.35	48.39
EURUSD	EURUSD	19	-0.45	42.11
Corn	C2___CCB	28	-0.82	42.86
E-Mini S&P 500	ES___CCB	53	-0.98	47.17
Copper HG	HG2__CCE	36	-1.32	50
GBPUSD	GBPUSD	9	-1.65	44.44
Average		**23.24**	**0.13**	**55.55**
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	**3952**	**-0.15**	**51.87**
Benchmark Results	39257	0.32	54.03

So, the morning star pattern has given us us some mixed results. Overall, the pattern is not very consistent and there is no evidence here that it"s a profitable signal.

Next, we will look at the evening star.

Evening Star

The evening star pattern is another three candle pattern which indicates a reversal. This time, the pattern must appear in an uptrend so it's a bearish signal.

For a pattern to be an evening star, the first candle should be white. The second candle must open on a gap up and the second and third candles must both be black.

The third candle should also close below the second candle so that it fills some or all of the gap.

And the longer this third candle the stronger the signal. As well, if the second candle is a doji this is often called a bear doji star.

Rules

Three candle pattern that indicates reversal

Appears in a uptrend

First candle is white

Second candle opens on a gap up (but very few signals)

Second and third candles are both black

Third candle closes below the second candle filling some or all of the gap

Longer the third candle, stronger the signal

If second candle is a doji, this is a bear doji star and is even stronger

Opposite of morning star

Our Formula

Evening Star

$$(C2>O2) \text{ AND } ((O1>H2) \text{ AND } (C1>H2)) \text{ AND } (C1<O1) \text{ AND } (C<L1) \text{ AND } (C<O) \text{ AND } Uptrend1$$

Results

So we have the formula set up to identify the evening star we can run our simulator and test the pattern.

The tables of results will show us the profit potential of this particular pattern.

So, straight away you can see that one problem with this pattern is that it's extremely rare.

In fact, we have 8 symbols where the evening star pattern didn't even occur once in 16 years.

And this is mainly because of the gap. Because very liquid markets like forex, hardly ever gap, they just keep trading 24/7.

So if we look through these results, you can see that the signal is rare. It doesn't produce a lot of signals, but even so it does give us some quite profitable results.

With a holding period of 1-day, measured from the close of the evening star to the next day's close, we saw an average profit of 0.31% across 13 markets with a win rate of 57%.

In stocks, we recorded an average profit of 0.02% with a 47% win rate.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Silver	SI2__CCB	2	2.61	50
Nikkei 225	SNI__CCB	5	1.01	80
Sugar	SB2__CCB	7	0.47	57.14
FTSE 100	LFT__CCB	6	0.46	66.67
10-Year Note	TY2__CCB	2	0.45	50
Crude Oil	CL2__CCB	6	0.35	66.67
Euro Stoxx	ESX__CCB	4	0.31	50
Natural Gas	NG2__CCB	7	0.07	28.57
E-Mini S&P 500	ES___CCB	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
Corn	C2___CCB	0	N/A	N/A
USDJPY	USDJPY	0	N/A	N/A
5-Year Note	FV2__CCB	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
Euro-Bund	GBL__CCB	3	-0.05	66.67
Gold	GC2__CCB	6	-0.1	33.33
AUDUSD	AUDUSD	2	-0.19	0
Live Cattle	LC___CCB	5	-0.31	0
Copper HG	HG2__CCB	8	-1.09	25
Average		**3.00**	**0.31**	**44.16**
Benchmark Results		83888	-0.01	48.19

Universe	# Trades	Avg % P/L	% Winners
S&P100	**694**	**0.02**	**46.69**
Benchmark Results	390556	-0.04	48.66

The results were mixed with a 3-day holding period where we saw an average loss of -0.17% in our 13 markets and a small profit in stocks.

You can see that the results are better with a 5-day and 10-day holding period.

With a 5-day hold, we have recorded a 0.44% average gain across 13 markets with a 57% win rate. And in stocks we saw an average gain of 0.41%.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Nikkei 225	SNI__CCB	5	1.93	80
Crude Oil	CL2__CCB	6	0.46	33.33
Euro Stoxx	ESX__CCB	4	0.44	75
Sugar	SB2__CCB	7	0.43	42.86
Euro-Bund	GBL__CCB	3	0.36	33.33
Live Cattle	LC___CCB	5	0.04	60
Natural Gas	NG2__CCE	7	0.02	71.43
5-Year Note	FV2__CCB	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
USDJPY	USDJPY	0	N/A	N/A
Corn	C2___CCB	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
Gold	GC2__CCE	6	-0.24	33.33
FTSE 100	LFT__CCB	6	-0.61	33.33
AUDUSD	AUDUSD	2	-0.72	0
10-Year Note	TY2__CCB	2	-0.76	50
Copper HG	HG2__CCE	8	-1.3	25
Silver	SI2__CCB	2	-2.26	50
Average		**3.00**	**-0.17**	**45.20**
Benchmark Results		27971	-0.02	47.47

Universe		# Trades	Avg % P/L	% Winners
S&P100		**694**	**0.08**	**47.84**
Benchmark Results		130414	-0.11	47.58

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Silver	SI2__CCB	2	3.7	100
Euro Stoxx	ESX__CCB	4	1.27	75
Nikkei 225	SNI__CCB	5	1.03	60
Euro-Bund	GBL__CCB	3	0.95	66.67
Sugar	SB2__CCB	7	0.61	57.14
AUDUSD	AUDUSD	2	0.32	50
Crude Oil	CL2__CCB	6	0.24	66.67
Gold	GC2__CCB	6	0.12	50
USDJPY	USDJPY	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
5-Year Note	FV2__CCB	0	N/A	N/A
Corn	C2___CCB	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
10-Year Note	TY2__CCB	2	-0.07	50
Live Cattle	LC___CCB	5	-0.26	20
Natural Gas	NG2__CCB	7	-0.3	57.14
FTSE 100	LFT__CCB	6	-0.57	50
Copper HG	HG2__CCB	8	-1.38	37.5
Average		**3.00**	**0.44**	**56.93**
Benchmark Results		16784	-0.04	47.58

Universe		# Trades	Avg % P/L	% Winners
S&P100		**691**	**0.41**	**47.03**
Benchmark Results		78332	-0.18	46.58

With a 10-day holding period we recorded an average gain of 0.68% in futures and forex and an an average gain of 0.14% in S&P 100 stocks, both figures better than the benchmarks.

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Silver	SI2__CCB	2	7.93	100
Euro Stoxx	ESX__CCB	4	2.98	100
Euro-Bund	GBL__CCB	3	0.58	66.67
Nikkei 225	SNI__CCB	5	0.45	20
AUDUSD	AUDUSD	2	0.38	50
FTSE 100	LFT__CCB	6	0.14	33.33
Crude Oil	CL2__CCB	6	0.1	66.67
GBPUSD	GBPUSD	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
USDJPY	USDJPY	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
Corn	C2___CCB	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
5-Year Note	FV2__CCB	0	N/A	N/A
10-Year Note	TY2__CCB	2	-0.11	50
Natural Gas	NG2__CCB	7	-0.29	42.86
Sugar	SB2__CCB	6	-0.37	33.33
Gold	GC2__CCB	6	-0.54	16.67
Live Cattle	LC___CCB	5	-0.97	20
Copper HG	HG2__CCB	8	-1.48	37.5
Average		**2.95**	**0.68**	**49.00**
Benchmark Results		8396	-0.07	46.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**680**	**0.14**	**47.06**
Benchmark Results	39258	-0.32	45.71

So, the evening star does seem to be a relatively profitable short pattern.

However, because this signal is quite rare, it is difficult to make too many conclusions and we might want to use some caution. As an aside, I also looked into the evening star pattern but this time without the gap, in order to make it more frequent I altered the formula slightly. However, the evening star without a gap performs poorly.

Gravestone Doji

We spoke about how the doji is a signal of indecision and the gravestone doji is actually a bearish type of doji candlestick that indicates a downside reversal.

It should appear in an uptrend, which we have defined as the presence of a 10-day high. It should have an extremely narrow body with long upper shadow and a very small or non-existent lower shadow. And the longer the upper shadow, the stronger the reversal signal is.

So, this candle shows that the market has gone to new highs with a fair amount of strength but it's been brought back down by the sellers and close right where it started. So this is an indication that the market is losing momentum and could reverse.

Rules

Bearish candlestick that indicates reversal

Appears in an uptrend

Extremely small body

Long upper shadow

Very small or no lower shadow

Longer the upper shadow, stronger the signal

Can sometimes be bullish if in a downtrend

Our Formula

Body should be less than 20% of candle length and occur near bottom of candle

Gravestone Doji

$(abs(O-C))/(H-L) < 0.2$ AND
$C <= (L+((H-L)*0.2))$ AND
$O <= (L+((H-L))*0.2)$ AND Uptrend

Results

So using the formula we created, we can identify the gravestone doji and see how it performs as a short signal.

In this first table we see the results of shorting a gravestone doji pattern on the close and holding the trade for one whole day.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Crude Oil	CL2__CCE	8	0.18	37.5
Gold	GC2__CCE	7	0.17	71.43
USDCAD	USDCAD	16	0.16	62.5
GBPUSD	GBPUSD	14	0.11	35.71
USDJPY	USDJPY	7	0.11	71.43
Euro-Bund	GBL__CCE	10	0.1	60
Silver	SI2__CCB	7	0.08	57.14
Natural Gas	NG2__CCE	5	0.07	80
5-Year Note	FV2__CCB	17	0.03	41.18
10-Year Note	TY2__CCB	13	-0.1	38.46
USDCHF	USDCHF	11	-0.15	36.36
FTSE 100	LFT__CCB	8	-0.16	50
E-Mini S&P 500	ES___CCE	13	-0.2	61.54
AUDUSD	AUDUSD	14	-0.21	28.57
Live Cattle	LC___CCE	12	-0.36	50
EURUSD	EURUSD	10	-0.45	30
Copper HG	HG2__CCE	6	-0.47	50
Nikkei 225	SNI__CCB	26	-0.5	34.62
Sugar	SB2__CCE	12	-0.9	8.33
Euro Stoxx	ESX__CCE	8	-1.22	12.5
Corn	C2___CCE	8	-1.95	25
Average		**11.05**	**-0.27**	**44.87**
Benchmark Results		83888	-0.01	48.19

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1242**	**-0.18**	**42.91**
Benchmark Results	390556	-0.04	48.66

As you can see, the pattern produced an average loss of -0.27% in our 21 markets with a win- rate of 45%. And it produced an average loss of -0.18% in stocks. Both figures much worse than the benchmark return.

With a 3-day holding period, the pattern also did poorly recording an average loss of -0.52% across our 21 markets.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
GBPUSD	GBPUSD	14	0.42	71.43
AUDUSD	AUDUSD	14	0.39	50
USDCAD	USDCAD	16	0.3	68.75
Gold	GC2__CCE	7	0.15	71.43
Natural Gas	NG2__CCE	5	0.14	60
Euro-Bund	GBL__CCE	10	0.05	50
5-Year Note	FV2__CCB	17	-0.03	47.06
10-Year Note	TY2__CCB	13	-0.11	30.77
E-Mini S&P 500	ES___CCB	13	-0.22	53.85
EURUSD	EURUSD	9	-0.24	55.56
USDJPY	USDJPY	6	-0.36	33.33
Crude Oil	CL2__CCB	8	-0.41	37.5
Live Cattle	LC___CCB	12	-0.45	25
USDCHF	USDCHF	11	-0.7	36.36
Sugar	SB2__CCB	12	-0.71	33.33
Copper HG	HG2__CCE	6	-0.78	50
FTSE 100	LFT__CCB	8	-0.89	12.5
Silver	SI2__CCB	7	-1.03	42.86
Nikkei 225	SNI__CCB	26	-1.28	30.77
Corn	C2___CCB	8	-2.54	25
Euro Stoxx	ESX__CCB	8	-2.7	0
Average		**10.95**	**-0.52**	**42.17**
Benchmark Results		27971	-0.02	47.47

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1226**	**-0.31**	**44.21**
Benchmark Results	130414	-0.11	47.58

And it did just as bad with a 5-day holding period and a 10-day holding period.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
GBPUSD	GBPUSD	13	0.71	69.23
E-Mini S&P 500	ES___CCB	13	0.66	38.46
Gold	GC2__CCB	7	0.36	57.14
Natural Gas	NG2__CCB	5	0.14	60
Crude Oil	CL2__CCB	7	0.12	28.57
USDCAD	USDCAD	16	-0.03	43.75
AUDUSD	AUDUSD	13	-0.04	46.15
5-Year Note	FV2__CCB	17	-0.05	52.94
Live Cattle	LC___CCB	11	-0.08	45.45
Euro-Bund	GBL__CCB	10	-0.09	40
10-Year Note	TY2__CCB	13	-0.27	38.46
USDJPY	USDJPY	6	-0.28	33.33
EURUSD	EURUSD	9	-0.39	44.44
Sugar	SB2__CCB	12	-0.75	33.33
Euro Stoxx	ESX__CCB	8	-0.81	25
USDCHF	USDCHF	11	-1.01	27.27
FTSE 100	LFT__CCB	8	-1.17	12.5
Silver	SI2__CCB	7	-1.17	42.86
Copper HG	HG2__CCB	6	-1.4	33.33
Nikkei 225	SNI__CCB	26	-1.45	23.08
Corn	C2___CCB	8	-1.95	25
Average		**10.76**	**-0.43**	**39.06**
Benchmark Results		16784	-0.04	47.58

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1212**	**-0.16**	**44.31**
Benchmark Results	78332	-0.18	46.58

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Crude Oil	CL2__CCB	7	0.72	42.86
E-Mini S&P 500	ES___CCB	13	0.69	61.54
GBPUSD	GBPUSD	12	0.66	75
Sugar	SB2__CCB	12	0.61	41.67
Gold	GC2__CCB	7	0.47	42.86
USDJPY	USDJPY	6	0.14	50
Euro-Bund	GBL__CCB	9	0.12	44.44
EURUSD	EURUSD	9	0	55.56
AUDUSD	AUDUSD	12	-0.05	50
USDCAD	USDCAD	15	-0.06	33.33
5-Year Note	FV2__CCB	17	-0.16	41.18
10-Year Note	TY2__CCB	12	-0.18	58.33
Silver	SI2__CCB	7	-0.48	57.14
Live Cattle	LC___CCB	11	-0.54	45.45
USDCHF	USDCHF	11	-0.74	36.36
FTSE 100	LFT__CCB	8	-0.74	12.5
Nikkei 225	SNI__CCB	24	-1.63	20.83
Natural Gas	NG2__CCB	4	-1.65	25
Euro Stoxx	ESX__CCB	8	-2.12	25
Corn	C2___CCB	8	-2.36	37.5
Copper HG	HG2__CCB	6	-3.48	0
Average		**10.38**	**-0.51**	**40.79**
Benchmark Results		8396	-0.07	46.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1185**	**-0.34**	**44.89**
Benchmark Results	39258	-0.32	45.71

In fact, you can see that shorting a gravestone doji pattern is not a profitable pattern to look out for. The strategy has a low win rate and lost money on every test.

Next, we will look at the dragonfly doji.

Dragonfly Doji

The dragonfly doji is a bullish candlestick that indicates possible reversal in a down-trend. Like the gravestone doji, the dragonfly doji has an extremely small body. But this time it has a very long lower shadow and hardly any upper shadow.
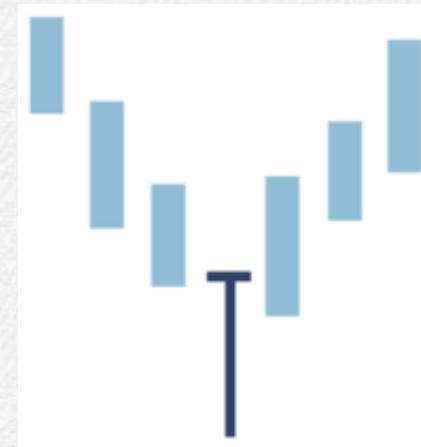
So this candle indicates how sellers have taken the market down to new lows with a lot of strength, but buyers have come back in, overpowered the shorts, and taken the market back to where it started. And this is an indication that the down-trend could be coming to an end because buyers are stepping in and taking the market higher.

In fact, the dragonfly doji looks similar to the hammer but because this is a doji the body should be thinner.

Rules

Bullish candlestick that indicates reversal

Appears in a downtrend

Extremely small body

Long lower shadow

Very small or no upper shadow

Notes

Longer the lower shadow, stronger the signal

Can sometimes be bearish if in an uptrend

Likelihood of reversal is strongest if downtrend has been underway for sometime and momentum is slowing
Similar to the hammer

Our Formula

Body should be less than 20% of candle length and occur near top of candle

Dragonfly Doji
$(abs(O-C))/(H-L) < 0.2$ AND
$C>=(H-((H-L)*0.2))$ AND
$O>=(H-((H-L))*0.2)$ AND

Downtrend

Results

So our formula for the dragonfly doji says that the body should be less than 20% of the candle length. This makes sure that the body is very narrow.

1 DAY HOLDING PERIOD				
Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCE	5	0.56	100
Gold	GC2__CCE	3	0.47	66.67
Copper HG	HG2__CCE	5	0.3	60
Silver	SI2__CCB	3	0.3	100
AUDUSD	AUDUSD	10	0.22	60
Euro-Bund	GBL__CCE	10	0.08	60
Corn	C2___CCE	8	0.05	12.5
USDCAD	USDCAD	5	0	40
Nikkei 225	SNI__CCB	9	-0.03	44.44
USDJPY	USDJPY	11	-0.09	54.55
EURUSD	EURUSD	8	-0.11	25
Crude Oil	CL2__CCE	12	-0.12	41.67
5-Year Note	FV2__CCE	10	-0.14	20
10-Year Note	TY2__CCE	7	-0.21	28.57
E-Mini S&P 500	ES___CCE	14	-0.32	35.71
Natural Gas	NG2__CCE	4	-0.35	0
GBPUSD	GBPUSD	14	-0.37	35.71
USDCHF	USDCHF	6	-0.44	33.33
FTSE 100	LFT__CCE	8	-1.22	25
Live Cattle	LC___CCE	7	-1.37	28.57
Euro Stoxx	ESX__CCE	10	-2.72	10
Average		**8.05**	**-0.26**	**41.99**
Benchmark Results		83888	0.01	50.54

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1245**	**-0.25**	**44.74**
Benchmark Results	390557	0.04	50.26

Looking at this first table you can see that buying the market at the close of a dragonfly doji and holding for one day loses money overall.

Our 21 markets produced an average loss of -0.21% with a win rate of 42%. Our worst performing market was the Euro Stoxx which saw 10 trades and just 1 winner.

On stocks, the signal produced an average loss of -0.25% with a win rate of 45%.

With a 3-day holding period, you can see that buying a dragon-fly doji produced an average loss of -0.48% per trade in our 21 markets and just about broke even in stocks.

Results are also sketchy with a 5-day holding period and with a 10-day holding period, especially in our 21 futures and forex markets.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCB	3	1.67	100
Copper HG	HG2__CCB	5	1.02	80
Euro-Bund	GBL__CCB	10	0.22	50
AUDUSD	AUDUSD	10	0.14	60
USDJPY	USDJPY	10	0.12	60
EURUSD	EURUSD	8	0.07	50
Crude Oil	CL2__CCB	12	0.03	50
Nikkei 225	SNI__CCB	9	-0.01	55.56
Natural Gas	NG2__CCB	4	-0.05	50
10-Year Note	TY2__CCB	7	-0.09	28.57
GBPUSD	GBPUSD	13	-0.22	46.15
5-Year Note	FV2__CCB	10	-0.4	40
USDCAD	USDCAD	5	-0.5	0
USDCHF	USDCHF	5	-0.7	60
E-Mini S&P 500	ES___CCB	14	-0.95	50
Silver	SI2__CCB	3	-1.09	0
FTSE 100	LFT__CCB	8	-1.3	25
Euro Stoxx	ESX__CCB	10	-1.65	40
Corn	C2___CCB	8	-1.73	12.5
Live Cattle	LC___CCB	6	-1.93	16.67
Sugar	SB2__CCB	5	-2.66	20
Average		**7.86**	**-0.48**	**42.59**
Benchmark Results		27971	0.02	51.93

Universe		# Trades	Avg % P/L	% Winners
S&P100		**1231**	**0.01**	**52.23**
Benchmark Results		130417	0.11	51.88

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCB	3	1.5	66.67
AUDUSD	AUDUSD	10	0.82	70
FTSE 100	LFT__CCB	8	0.63	62.5
Euro-Bund	GBL__CCB	10	0.44	80
Copper HG	HG2__CCB	5	0.42	40
Natural Gas	NG2__CCB	4	0.42	50
Silver	SI2__CCB	3	0.3	33.33
USDJPY	USDJPY	10	0.12	60
10-Year Note	TY2__CCB	7	-0.2	42.86
Crude Oil	CL2__CCB	12	-0.23	58.33
5-Year Note	FV2__CCB	10	-0.25	40
GBPUSD	GBPUSD	13	-0.38	30.77
EURUSD	EURUSD	8	-0.41	50
USDCAD	USDCAD	5	-0.67	20
USDCHF	USDCHF	5	-0.99	60
Nikkei 225	SNI__CCB	9	-1.71	33.33
E-Mini S&P 500	ES___CCB	14	-1.86	35.71
Live Cattle	LC___CCB	6	-2.09	16.67
Corn	C2___CCB	8	-2.11	12.5
Euro Stoxx	ESX__CCB	9	-2.45	44.44
Sugar	SB2__CCB	5	-3.61	0
Average		**7.81**	**-0.59**	**43.20**
Benchmark Results		16784	0.04	51.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**1218**	**-0.06**	**53.78**
Benchmark Results		78331	0.18	52.98

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCE	3	3.63	100
Copper HG	HG2__CCE	5	1.93	80
FTSE 100	LFT__CCB	8	1.07	50
AUDUSD	AUDUSD	10	0.95	80
Silver	SI2__CCB	3	0.61	33.33
Euro-Bund	GBL__CCB	10	0.6	80
Natural Gas	NG2__CCE	4	0.54	50
USDJPY	USDJPY	10	0.43	70
USDCAD	USDCAD	5	0.2	60
10-Year Note	TY2__CCB	7	0	42.86
5-Year Note	FV2__CCB	10	-0.05	60
Euro Stoxx	ESX__CCB	9	-0.27	66.67
GBPUSD	GBPUSD	13	-0.28	38.46
EURUSD	EURUSD	8	-0.4	50
Crude Oil	CL2__CCB	12	-0.69	33.33
USDCHF	USDCHF	5	-1.09	40
E-Mini S&P 500	ES___CCB	13	-2.3	30.77
Live Cattle	LC___CCB	6	-2.46	0
Nikkei 225	SNI__CCB	9	-2.91	33.33
Corn	C2___CCB	8	-4.26	12.5
Sugar	SB2__CCB	5	-6.39	0
Average		**7.76**	**-0.53**	**48.15**
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1193**	**0.17**	**53.39**
Benchmark Results	39257	0.32	54.03

Overall these results are not compelling. They do not give enough confidence to buy a security when this pattern occurs.

Next up, we will look at the bullish kicker pattern.

Bullish Kicker

The bullish kicker pattern is a two candle pattern that is a bullish indication and I know this a favourite among some technical stock traders.

The first candle should be a long down candle or black marubozu while the second candle should be a long up candle or white marubozu. The second candle must open above the prior

candle's open
and the second candle low must be higher than the prior candle's high. In other words, a gap must be formed.

According to most sources, the bullish kicker is most powerful near areas of support or during a downtrend. Unfortunately I've found that this is actually quite a rare signal in futures and forex markets because of the gap. Nevertheless, the bullish kicker is powerful when it occurs because it shows one side of the market (the bulls) are taking over control.

Here's an example in WBA. The stock opens on a gap up and that strength continues over the next few days.

WBA - Daily 5/29/2015 Open 84.7405, Hi 85.7769, Lo 84.4247, Close 84.7307 (-0.2%)

Rules

Two candle pattern that is bullish

First candle is long down candle or black marubozu

Second candle is long up candle or white marubozu

Second candle must open above prior candle's open

Second candle low must be higher than prior candle's high (gap)

Notes

Most bullish at areas of support

Signal is strongest during a downtrend, but can also appear during uptrend
Rare signal especially in futures and forex markets on daily timeframes.

Our Formula

Bullish Kicker
$(O1>C1 \text{ AND } (O1-C1)/(H1-L1)>.5)$
$\text{AND } ((C>O) \text{ AND } ((C-O)/(H-L)>.5))$

$\text{AND } L>H1$

Results

Using the formula for the bullish kicker pattern we can scan and back-test the database to see what happens when trading the signal.

This first table shows the results from buying a bullish kicker pattern on the close and holding the trade for one full day.

As you can see from the results, this is actually a very rare pattern because of the gap and because it requires two opposing candles that have very little shadow.

In fact, in 14 of our chosen markets, there was no bullish kicker pattern over the last 16 years. And this is a big problem because it means we can't draw many conclusions from these results because of the smaller sample size.

So perhaps the bullish kicker is better suited to shorter time-frames like intraday charts or maybe it should only be used for less liquid securities.

Either way, you can see from these results, that the bullish kicker is not worth looking for on liquid forex pairs but it did ok in stocks, albeit with a very low sample size.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	1	1.88	100
Live Cattle	LC___CCB	4	0.79	50
USDJPY	USDJPY	0	N/A	N/A
10-Year Note	TY2__CCB	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
5-Year Note	FV2__CCB	0	N/A	N/A
Euro-Bund	GBL__CCB	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
AUDUSD	AUDUSD	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
FTSE 100	LFT__CCB	0	N/A	N/A
Crude Oil	CL2__CCB	0	N/A	N/A
Sugar	SB2__CCB	0	N/A	N/A
Silver	SI2__CCB	0	N/A	N/A
Natural Gas	NG2__CCB	5	-0.15	40
Copper HG	HG2__CCB	4	-0.15	25
Gold	GC2__CCB	1	-0.65	0
Nikkei 225	SNI__CCB	1	-0.76	0
Corn	C2___CCB	3	-1.06	33.33
Average		**0.90**	**-0.01**	**35.48**
Benchmark Results		83888	0.01	50.54

Universe	# Trades	Avg % P/L	% Winners
S&P100	**222**	**0.15**	**54.05**
Benchmark Results	390557	0.04	50.26

For example, buying a bullish kicker and holding it for 3-days produced an average gain of 0.79% across S&P 100 stocks with a healthy win rate of 60%.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	1	2.06	100
Live Cattle	LC___CCB	4	1.87	50
Copper HG	HG2__CCB	4	0.8	75
Corn	C2___CCB	3	0.38	66.67
Gold	GC2__CCB	1	0.23	100
EURUSD	EURUSD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
Euro-Bund	GBL__CCB	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
Crude Oil	CL2__CCB	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
5-Year Note	FV2__CCB	0	N/A	N/A
FTSE 100	LFT__CCB	0	N/A	N/A
AUDUSD	AUDUSD	0	N/A	N/A
Sugar	SB2__CCB	0	N/A	N/A
Silver	SI2__CCB	0	N/A	N/A
USDJPY	USDJPY	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
10-Year Note	TY2__CCB	0	N/A	N/A
Natural Gas	NG2__CCB	5	-0.03	60
Nikkei 225	SNI__CCB	1	-2.17	0
Average		**0.90**	**0.45**	**64.52**
Benchmark Results		27971	0.02	51.93

Universe	# Trades	Avg % P/L	% Winners
S&P100	**222**	**0.79**	**60.36**
Benchmark Results	130417	0.11	51.88

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Live Cattle	LC___CCB	4	2.37	75
Copper HG	HG2__CCB	4	1.53	75
Corn	C2___CCB	3	0.8	33.33
10-Year Note	TY2__CCB	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
5-Year Note	FV2__CCB	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
Crude Oil	CL2__CCB	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
USDJPY	USDJPY	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
FTSE 100	LFT__CCB	0	N/A	N/A
Euro-Bund	GBL__CCB	0	N/A	N/A
Sugar	SB2__CCB	0	N/A	N/A
Silver	SI2__CCB	0	N/A	N/A
AUDUSD	AUDUSD	0	N/A	N/A
Gold	GC2__CCB	1	-0.13	0
Natural Gas	NG2__CCB	5	-0.87	20
Euro Stoxx	ESX__CCB	1	-2.24	0
Nikkei 225	SNI__CCB	1	-5.03	0
Average		**0.90**	**-0.51**	**29.05**
Benchmark Results		16784	0.04	51.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**222**	**0.91**	**66.22**
Benchmark Results	78331	0.18	52.98

Holding for 5-days produced an average gain of 0.91% with an even higher win rate of 66% while holding for 10-days produced an average gain of 0.44% per trade. And this was on a sample size of 220 trades.

Even though there were very few trades, these are good results which may require some further research.

As I said, it might be worth testing this pattern on smaller cap companies. It might also be worth loosening the formula somewhat to get more signals and I do this later on in the eBook when I introduce another pattern that I've called, the Loose Kicker.

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Copper HG	HG2__CCE	4	5.77	75
Corn	C2___CCB	3	3.49	33.33
Live Cattle	LC___CCB	4	2.11	75
10-Year Note	TY2__CCB	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
5-Year Note	FV2__CCB	0	N/A	N/A
Crude Oil	CL2__CCB	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
USDJPY	USDJPY	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
FTSE 100	LFT__CCB	0	N/A	N/A
Euro-Bund	GBL__CCB	0	N/A	N/A
Sugar	SB2__CCB	0	N/A	N/A
Silver	SI2__CCB	0	N/A	N/A
AUDUSD	AUDUSD	0	N/A	N/A
Natural Gas	NG2__CCE	5	-0.47	40
Gold	GC2__CCE	1	-0.61	0
Euro Stoxx	ESX__CCB	1	-2.78	0
Nikkei 225	SNI__CCB	1	-6.2	0
Average		**0.90**	**0.19**	**31.90**
Benchmark Results		8396	0.07	52.73

Universe		# Trades	Avg % P/L	% Winners
S&P100		**220**	**0.44**	**53.64**
Benchmark Results		39257	0.32	54.03

Bearish Kicker

The bearish kicker pattern is a two candle pattern that is bearish.

To be a bearish kicker, the first candle is a long up candle or white marubozu.
The second candle is a long down candle or black marubozu and it must open below the first candle open.
As well the second candle high must be lower than the previous candle's low. Thus, just like the bullish kicker, a gap is formed.

So this pattern is another rare one because of the gap and also because the candles need to be strong up or down candles with only a small wick.

It really shows a complete switch of momentum in the market from strongly bullish to strongly bearish and that is the power of

the pattern itself as it suggest bears have just completely over-powered the bulls.

Rules

WFC (Daily) × Analysis1
WFC - Daily 12/12/2012 Open 30.5318, Hi 30.9793, Lo 30.4679, Close 30.5958 (0.6%)

Two candle pattern that is bearish

First candle is long up candle or white marubozu

Second candle is long down candle or black marubozu

Second candle must open below prior candle's open

Second candle high must be lower than prior candle's low (gap)

Notes

Most bearish at areas of resistance

Signal is strongest during a downtrend, but can also appear during uptrend
Rare signal especially in futures and forex markets on daily timeframes.

Our Formula

Bearish Kicker
$((C1>O1) \text{ AND } ((C1-O1)/(H1-L1)>.5))$
$\text{AND } (O>C \text{ AND } (O-C)/(H-L)>.5)$

$\text{AND } H<L1$

Results

Name	Ticker	# Trades	Avg % P/L	% Winners
Copper HG	HG2__CCE	8	0.93	87.5
Euro Stoxx	ESX__CCE	2	0.65	50
Natural Gas	NG2__CCE	2	0.3	100
Silver	SI2__CCB	2	0.05	50
Nikkei 225	SNI__CCB	0	N/A	N/A
10-Year Note	TY2__CCB	0	N/A	N/A
E-Mini S&P 500	ES___CCE	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
USDJPY	USDJPY	0	N/A	N/A
5-Year Note	FV2__CCB	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
AUDUSD	AUDUSD	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
Sugar	SB2__CCE	0	N/A	N/A
Corn	C2___CCE	1	-0.11	0
Live Cattle	LC___CCE	1	-0.12	0
Gold	GC2__CCE	2	-0.34	0
Euro-Bund	GBL__CCE	1	-0.39	0
Crude Oil	CL2__CCE	2	-0.51	0
FTSE 100	LFT__CCB	3	-1.44	0
Average		**1.14**	**-0.10**	**28.75**
Benchmark Results		83888	-0.01	48.19

Universe	# Trades	Avg % P/L	% Winners
S&P100	**152**	**0.31**	**59.87**
Benchmark Results	390556	-0.04	48.66

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	2	6.9	100
Natural Gas	NG2__CCE	2	0.33	50
USDJPY	USDJPY	0	N/A	N/A
10-Year Note	TY2__CCB	0	N/A	N/A
Nikkei 225	SNI__CCB	0	N/A	N/A
AUDUSD	AUDUSD	0	N/A	N/A
Sugar	SB2__CCB	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
Copper HG	HG2__CCE	8	0	50
E-Mini S&P 500	ES___CCB	0	N/A	N/A
5-Year Note	FV2__CCB	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
Gold	GC2__CCE	2	-0.26	0
Silver	SI2__CCB	2	-0.34	50
Corn	C2___CCB	1	-0.69	0
Crude Oil	CL2__CCB	2	-0.81	50
Euro-Bund	GBL__CCB	1	-0.91	0
Live Cattle	LC___CCB	1	-1.83	0
FTSE 100	LFT__CCB	3	-2.04	33.33
Average		**1.14**	**0.04**	**33.33**
Benchmark Results		27971	-0.02	47.47

Universe	# Trades	Avg % P/L	% Winners
S&P100	**152**	**0.40**	**54.61**
Benchmark Results	130414	-0.11	47.58

As mentioned, the bearish kicker in it's purest form doesn't occur very often. That's because of the gap and because the

bearish kicker requires two opposing candles with very little shadow, or wick.

You can see that the pattern didn't occur for any of these 11 markets during the 16 year period. And we only recorded 152 bearish kicker signals in our stock universe during that time frame.

Because of this, I don't think we can really draw too many conclusions from these results, which is a shame because we have some good results here in stocks.

For example, shorting a bearish kicker pattern and holding for 5 days produced an average profit of 0.40% in S&P 100 stocks with a win rate of 55%. In fact, it was profitable in every test and stronger than the benchmark.

So there might be something to this pattern and we might want to do a bit more work to see how significant these results are. Overall, this is one of the best short patterns that I found.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCE	2	3.6	50
Natural Gas	NG2__CCE	2	1.44	100
USDJPY	USDJPY	0	N/A	N/A
10-Year Note	TY2__CCB	0	N/A	N/A
Nikkei 225	SNI__CCB	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
Sugar	SB2__CCE	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
AUDUSD	AUDUSD	0	N/A	N/A
E-Mini S&P 500	ES___CCE	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
5-Year Note	FV2__CCE	0	N/A	N/A
Corn	C2___CCE	1	-0.22	0
Gold	GC2__CCE	2	-0.33	50
Silver	SI2__CCB	2	-0.54	50
Euro-Bund	GBL__CCE	1	-1	0
Crude Oil	CL2__CCE	2	-1.07	0
Copper HG	HG2__CCE	8	-1.13	50
FTSE 100	LFT__CCB	3	-1.59	33.33
Live Cattle	LC___CCE	1	-3.31	0
Average		**1.14**	**-0.42**	**33.33**
Benchmark Results		16784	-0.04	47.58

Universe	# Trades	Avg % P/L	% Winners
S&P100	**152**	**0.29**	**57.24**
Benchmark Results	78332	-0.18	46.58

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	2	3.45	50
Natural Gas	NG2__CCE	2	2.64	100
Corn	C2___CCB	1	2.39	100
Silver	SI2__CCB	2	0.24	50
USDJPY	USDJPY	0	N/A	N/A
Nikkei 225	SNI__CCB	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
AUDUSD	AUDUSD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
5-Year Note	FV2__CCB	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
10-Year Note	TY2__CCB	0	N/A	N/A
Sugar	SB2__CCB	0	N/A	N/A
Copper HG	HG2__CCE	8	-0.32	37.5
Crude Oil	CL2__CCB	2	-1.03	0
Gold	GC2__CCE	2	-1.63	0
Live Cattle	LC___CCB	1	-1.64	0
Euro-Bund	GBL__CCB	1	-1.85	0
FTSE 100	LFT__CCB	3	-3.02	33.33
Average		**1.14**	**-0.08**	**37.08**
Benchmark Results		8396	-0.07	46.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**152**	**0.48**	**51.97**
Benchmark Results	39258	-0.32	45.71

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Bullish Engulfing

The next candlestick pattern we're going to look at is called the bullish engulfing pattern. This is said to be one of the stronger candlestick patterns, so it should be interesting to test.

This is a two candle pattern that is supposed to predict a bullish continuation or reversal.

To be a bullish engulfing pattern, the first candle should be a small black down candle. The second candle should open lower than the first candle's close and then close higher than the first candle's open.

So this basically results in a small black candle which is then completely eclipsed (or engulfed) by a much larger white candle. And in some cases, the first candle can even be a doji.

So this suggests that any downward momentum is finally over and that the bulls have completely overpowered the bears. So it's a very bullish signal.

Rules

Two candle reversal pattern that is bullish

First candle is small black candle

Second candle opens lower than prior candle's close and closes higher than prior candle's open
Forms when a small black candle is completely eclipsed by a larger white candle.
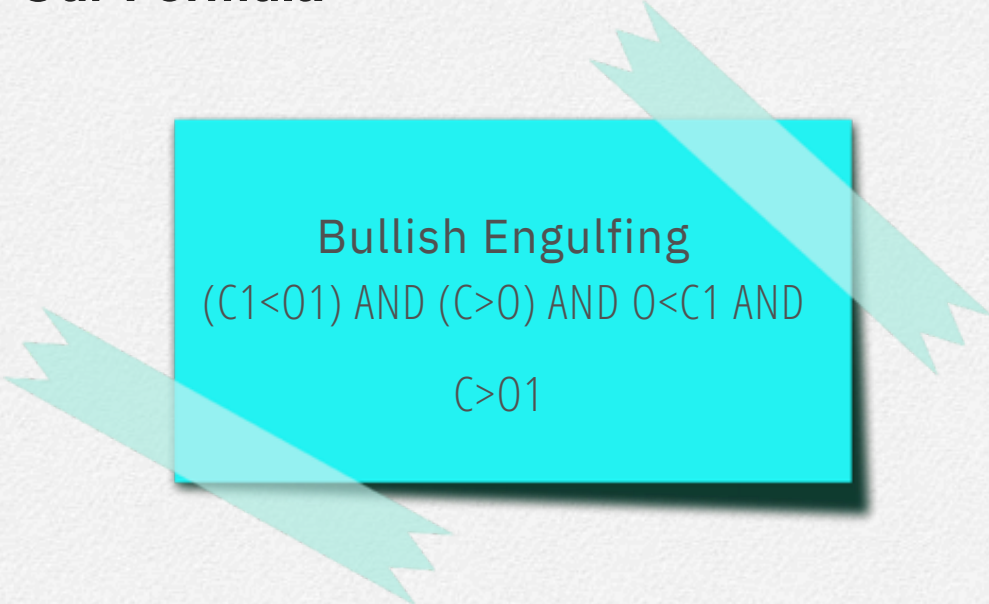
Notes

Confirmation may come from failed test of support or gapping price action.

First candle can be small even a doji

Our Formula

Bullish Engulfing
(C1<O1) AND (C>O) AND O<C1 AND

C>O1

Results

So, using our formula and running the bullish engulfing pattern on the data produced some modest results.

Buying the market on the close of a bullish engulfing pattern and exiting the trade one day later produced an average profit of 0.03% per trade and a win rate of 50% over our selection of 21 markets. Here, our best performing symbol was sugar.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCB	137	0.32	59.12
Corn	C2___CCB	191	0.19	52.88
Silver	SI2__CCB	170	0.18	54.12
Live Cattle	LC___CCB	142	0.12	53.52
Nikkei 225	SNI__CCB	157	0.12	52.23
Euro-Bund	GBL__CCB	170	0.08	55.88
USDJPY	USDJPY	219	0.06	53.88
5-Year Note	FV2__CCB	188	0.05	58.51
10-Year Note	TY2__CCB	204	0.05	54.9
Gold	GC2__CCB	151	0.03	47.02
GBPUSD	GBPUSD	207	0.02	50.72
E-Mini S&P 500	ES___CCB	205	0.02	54.15
FTSE 100	LFT__CCB	121	0.01	52.89
USDCHF	USDCHF	209	-0.03	41.63
AUDUSD	AUDUSD	188	-0.03	50
EURUSD	EURUSD	236	-0.06	44.07
USDCAD	USDCAD	207	-0.07	43.48
Crude Oil	CL2__CCB	189	-0.09	47.62
Copper HG	HG2__CCB	160	-0.09	43.75
Natural Gas	NG2__CCB	151	-0.13	44.37
Euro Stoxx	ESX__CCB	152	-0.18	46.05
Average		178.76	0.03	50.51
Benchmark Results		83888	0.01	50.54

Universe	# Trades	Avg % P/L	% Winners
S&P100	12742	0.09	49.47
Benchmark Results	390557	0.04	50.26

On stocks, the average profit was slightly more at 0.09% and the win rate was 50%

With a 3-day holding period, the results were also fairly modest with an average gain of 0.07% on our 21 markets with a win rate of 53%.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCB	133	0.42	54.14
Nikkei 225	SNI__CCB	150	0.41	58
Copper HG	HG2__CCB	156	0.29	51.28
Silver	SI2__CCB	161	0.27	57.76
Live Cattle	LC___CCB	138	0.21	55.8
Gold	GC2__CCB	141	0.19	56.74
Corn	C2___CCB	180	0.16	48.33
5-Year Note	FV2__CCB	181	0.07	57.46
Euro-Bund	GBL__CCB	164	0.04	56.71
10-Year Note	TY2__CCB	195	0.03	55.9
USDCHF	USDCHF	194	0.03	52.58
GBPUSD	GBPUSD	201	-0.01	51.24
AUDUSD	AUDUSD	184	-0.01	52.17
USDJPY	USDJPY	205	-0.01	53.66
E-Mini S&P 500	ES___CCB	193	-0.02	50.78
Natural Gas	NG2__CCB	145	-0.03	43.45
USDCAD	USDCAD	198	-0.06	50
EURUSD	EURUSD	221	-0.07	51.13
Crude Oil	CL2__CCB	183	-0.14	50.27
Euro Stoxx	ESX__CCB	145	-0.17	52.41
FTSE 100	LFT__CCB	119	-0.17	49.58
Average		170.81	0.07	52.83
Benchmark Results		27971	0.02	51.93

Universe	# Trades	Avg % P/L	% Winners
S&P100	12331	0.12	51.38
Benchmark Results	130417	0.11	51.88

Results did not improve much with a 5-day holding period but they do look better with a slightly longer holding period of 10 days.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCE	124	0.58	50
Silver	SI2__CCB	149	0.42	55.7
Live Cattle	LC___CCE	126	0.34	63.49
Gold	GC2__CCE	131	0.33	58.78
Nikkei 225	SNI__CCB	140	0.22	52.86
Corn	C2___CCE	163	0.1	46.63
5-Year Note	FV2__CCB	165	0.1	60
Euro Stoxx	ESX__CCE	135	0.09	56.3
Copper HG	HG2__CCE	146	0.09	47.95
USDJPY	USDJPY	184	0.08	55.43
Euro-Bund	GBL__CCE	155	0.07	54.19
10-Year Note	TY2__CCB	176	0.05	52.84
GBPUSD	GBPUSD	185	0.03	49.73
USDCHF	USDCHF	172	-0.02	48.84
E-Mini S&P 500	ES___CCE	166	-0.04	51.2
AUDUSD	AUDUSD	163	-0.04	50.92
EURUSD	EURUSD	202	-0.14	50
USDCAD	USDCAD	182	-0.18	48.9
FTSE 100	LFT__CCB	114	-0.18	46.49
Crude Oil	CL2__CCE	168	-0.21	52.38
Natural Gas	NG2__CCE	137	-0.41	45.26
Average		**156.33**	**0.06**	**52.28**
Benchmark Results		16784	0.04	51.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**11546**	**0.14**	**52.82**
Benchmark Results		78331	0.18	52.98

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Silver	SI2__CCB	119	1.03	57.98
Sugar	SB2__CCB	103	0.84	57.28
Nikkei 225	SNI__CCB	119	0.39	57.14
10-Year Note	TY2__CCB	144	0.35	63.89
Copper HG	HG2__CCE	128	0.34	47.66
E-Mini S&P 500	ES___CCB	138	0.29	52.17
5-Year Note	FV2__CCB	133	0.28	64.66
Live Cattle	LC___CCB	104	0.26	54.81
Euro Stoxx	ESX__CCB	119	0.25	50.42
Corn	C2___CCB	132	0.24	49.24
Euro-Bund	GBL__CCB	130	0.19	62.31
Gold	GC2__CCE	106	0.14	52.83
USDJPY	USDJPY	141	0.12	54.61
AUDUSD	AUDUSD	137	0.03	51.09
GBPUSD	GBPUSD	156	0.03	50.64
EURUSD	EURUSD	158	-0.02	52.53
USDCHF	USDCHF	152	-0.15	44.74
USDCAD	USDCAD	145	-0.2	46.9
FTSE 100	LFT__CCB	102	-0.2	51.96
Crude Oil	CL2__CCB	139	-0.26	56.12
Natural Gas	NG2__CCE	122	-0.69	45.08
Average		**129.86**	**0.16**	**53.53**
Benchmark Results		8396	0.07	52.73

Universe		# Trades	Avg % P/L	% Winners
S&P100		**10030**	**0.35**	**54.05**
Benchmark Results		39257	0.32	54.03

With a 10-day holding period, the bullish engulfing pattern led to an average gain of 0.16% in our selection of 21 markets with a

win rate of 54%. And in stocks, the average gain per trade was 0.35% with a win rate of 54%. This result was only slightly better than the benchmark 10-day return across all S&P 100 stocks.

Overall, these results are not particularly consistent or encouraging. One good thing you can say about this pattern is that it does result in a lot of signals and that makes these numbers more significant. However, it's not clear that this is pattern has any real edge. Next up, we will look at the bearish engulfing

pattern.

Bearish Engulfing

As you would expect, the bearish engulfing pattern is the opposite of the bullish engulfing pattern.

So this is a two candle reversal pattern that signals a bearish reversal or continuation of a downward move.
The first candle in a bearish engulfing pattern should be a small white up candle (and this can even be a thin doji candle).
The second candle should open higher than the previous candle's close and then close lower than the previous candle's open.

In other words, we have a small white candle which is then completely eclipsed by a larger black candle. So this shows bears are really taking control of the market after a small initial up move.

Rules

Two candle reversal pattern that is bearish

First candle is small white up candle

Second candle opens higher than prior candle's close and closes lower than prior candle's open

Forms when a small white candle is completely eclipsed by a larger black candle.

Our Formula

Bearish Engulfing
$(C1>O1)$ AND $(C<O)$ AND $O>C1$

AND $C<O1$

Results

Shorting the market on the close of a bearish engulfing pattern and then closing the trade one day later is not shown to be any better than random across our 21 markets or universe of S&P 100 stocks.

Notes

Confirmation may come from failed test of support or gapping price action.

First candle can be small even a doji

Unfortunately, as you can see from these tables, the bearish engulfing pattern only gets worse with longer holding periods and it did not produce a single profitable run.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Corn	C2___CCE	76	0.29	56.58
Sugar	SB2__CCE	156	0.18	50
Gold	GC2__CCE	127	0.05	51.18
GBPUSD	GBPUSD	175	0.05	52.57
EURUSD	EURUSD	196	0.04	45.92
5-Year Note	FV2__CCB	160	0.01	49.38
USDJPY	USDJPY	202	0	48.02
10-Year Note	TY2__CCB	156	0	46.79
Live Cattle	LC___CCE	186	0	45.16
Copper HG	HG2__CCE	146	-0.02	45.21
USDCHF	USDCHF	212	-0.03	48.11
Nikkei 225	SNI__CCB	147	-0.03	51.02
Natural Gas	NG2__CCE	217	-0.03	50.23
USDCAD	USDCAD	211	-0.04	45.97
Euro-Bund	GBL__CCE	151	-0.07	43.71
Crude Oil	CL2__CCE	186	-0.09	41.94
FTSE 100	LFT__CCB	171	-0.1	44.44
Euro Stoxx	ESX__CCE	176	-0.1	44.32
AUDUSD	AUDUSD	190	-0.11	38.95
Silver	SI2__CCB	145	-0.26	40.69
E-Mini S&P 500	ES___CCE	185	-0.26	41.62
Average		**170.05**	**-0.02**	**46.75**
Benchmark Results		83888	-0.01	48.19

Universe	# Trades	Avg % P/L	% Winners
S&P100	**13729**	**-0.05**	**47.59**
Benchmark Results	390556	-0.04	48.66

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Natural Gas	NG2__CCE	203	0.18	54.19
Sugar	SB2__CCB	150	0.15	50
Euro Stoxx	ESX__CCB	169	0.12	50.3
Live Cattle	LC___CCB	176	0.12	55.11
GBPUSD	GBPUSD	171	0.11	54.39
USDJPY	USDJPY	190	0.1	51.05
USDCHF	USDCHF	202	0.09	55.45
EURUSD	EURUSD	184	0.02	48.91
Gold	GC2__CCE	126	0.02	42.86
Copper HG	HG2__CCE	138	0.01	47.83
USDCAD	USDCAD	201	-0.02	50.25
5-Year Note	FV2__CCB	158	-0.07	40.51
Euro-Bund	GBL__CCB	143	-0.08	40.56
Nikkei 225	SNI__CCB	141	-0.09	46.1
Corn	C2___CCB	73	-0.09	53.42
10-Year Note	TY2__CCB	151	-0.11	43.71
FTSE 100	LFT__CCB	165	-0.12	51.52
E-Mini S&P 500	ES___CCB	174	-0.19	44.25
Crude Oil	CL2__CCB	174	-0.2	37.36
AUDUSD	AUDUSD	185	-0.21	39.46
Silver	SI2__CCB	140	-0.47	45.71
Average		**162.57**	**-0.03**	**47.76**
Benchmark Results		27971	-0.02	47.47

Universe	# Trades	Avg % P/L	% Winners
S&P100	**13260**	**-0.23**	**45.66**
Benchmark Results	130414	-0.11	47.58

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Copper HG	HG2__CCE	128	0.29	48.44
Natural Gas	NG2__CCE	184	0.28	53.26
Sugar	SB2__CCE	142	0.26	55.63
Euro Stoxx	ESX__CCE	151	0.18	49.67
FTSE 100	LFT__CCE	145	0.17	50.34
Live Cattle	LC___CCE	157	0.17	56.69
GBPUSD	GBPUSD	152	0.16	57.89
EURUSD	EURUSD	166	0.14	52.41
Nikkei 225	SNI__CCB	137	0.12	44.53
USDJPY	USDJPY	169	0.11	52.66
Gold	GC2__CCE	118	0.09	51.69
USDCHF	USDCHF	183	0.06	50.27
USDCAD	USDCAD	185	-0.01	51.35
Euro-Bund	GBL__CCE	134	-0.09	41.04
5-Year Note	FV2__CCB	143	-0.1	40.56
10-Year Note	TY2__CCB	137	-0.17	43.8
Crude Oil	CL2__CCE	163	-0.21	42.33
AUDUSD	AUDUSD	169	-0.25	42.01
E-Mini S&P 500	ES___CCE	161	-0.25	44.1
Corn	C2___CCE	69	-0.3	47.83
Silver	SI2__CCB	133	-0.77	43.61
Average		**148.86**	**-0.01**	**48.58**
Benchmark Results		16784	-0.04	47.58

Universe	# Trades	Avg % P/L	% Winners
S&P100	**12369**	**-0.28**	**45.31**
Benchmark Results	78332	-0.18	46.58

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Natural Gas	NG2__CCE	142	0.63	53.52
Nikkei 225	SNI__CCB	112	0.42	47.32
USDCHF	USDCHF	145	0.41	60.69
Live Cattle	LC___CCB	125	0.35	56
Sugar	SB2__CCB	119	0.32	50.42
GBPUSD	GBPUSD	123	0.17	52.03
USDJPY	USDJPY	139	0.11	55.4
Copper HG	HG2__CCE	111	0.1	47.75
USDCAD	USDCAD	144	0.07	52.08
Euro Stoxx	ESX__CCB	129	0.03	44.19
EURUSD	EURUSD	139	0.01	46.76
FTSE 100	LFT__CCB	130	-0.01	44.62
Gold	GC2__CCE	100	-0.12	48
Euro-Bund	GBL__CCB	121	-0.15	43.8
5-Year Note	FV2__CCB	116	-0.22	37.07
Crude Oil	CL2__CCB	137	-0.23	45.99
Corn	C2___CCB	62	-0.3	41.94
AUDUSD	AUDUSD	139	-0.33	44.6
10-Year Note	TY2__CCB	118	-0.41	42.37
Silver	SI2__CCB	110	-0.55	46.36
E-Mini S&P 500	ES___CCB	131	-0.69	42.75
Average		**123.43**	**-0.02**	**47.79**
Benchmark Results		8396	-0.07	46.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**10742**	**-0.46**	**44.14**
Benchmark Results	39258	-0.32	45.71

Thus, we can make a clear conclusion about this pattern. The bearish engulfing pattern (as we defined it) occurs frequently, but it is not a winning pattern to look out for.

Bullish Harami

The word "harami" means pregnant in Japanese. In this context the word is used to signify the protrusion of the second candle.

So this is a two candle pattern that is bullish.

The first candle should be a large black candle and the second candle should be a small white candle. The second candle body should be completely engulfed by the body of the first candle and the pattern should come in a downtrend.

Of course, as always there are different definitions of the bullish harami, but I think this is the one that works best. And one thing to note is that the bullish harami should never be used in a market that is going sideways.

Some traders might also call this an inside bar pattern and it really shows how momentum has sort of hit a trough and then stalled. And the higher close of the second candle suggests that the market is ready to swing back the other way.

KO - Daily 4/13/2015 Open 39.6698, Hi 39.6698, Lo 39.4083, Close 39.4083 (-0.4%)

Our Formula

Bullish Harami

(O1>C1 AND (O1-C1)/(H1-L1)>.5) AND (C>O) AND (C<= O1) AND (C1<= O) AND ((C-O)<(O1-C1)) AND

Downtrend1

Rules

Two candle pattern that is bullish First candle is large black

candle Second candle is small white candle Second candle

body is completely engulfed by body of the first
candle
Appears in a downtrend

Results

Using the formula we created we can back-test the data and see what happens if you buy a particular market after we spot a bullish harami candle pattern.

So, you can see that buying the market on the close of a bullish harami and exiting the trade one day later performed no better than random across our 21 different markets.

Notes

Smaller the second candle, stronger the signal

Should not be used in sideways markets

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
FTSE 100	LFT__CCB	35	0.35	71.43
Euro Stoxx	ESX__CCB	47	0.27	59.57
Copper HG	HG2__CCB	54	0.23	59.26
Live Cattle	LC___CCB	71	0.18	57.75
E-Mini S&P 500	ES___CCB	87	0.14	54.02
Silver	SI2__CCB	69	0.1	44.93
5-Year Note	FV2__CCB	45	0.09	55.56
Nikkei 225	SNI__CCB	69	0.04	52.17
10-Year Note	TY2__CCB	43	0.03	44.19
USDCHF	USDCHF	81	0.03	54.32
Euro-Bund	GBL__CCB	49	0	59.18
AUDUSD	AUDUSD	80	-0.04	57.5
USDJPY	USDJPY	64	-0.07	43.75
GBPUSD	GBPUSD	68	-0.08	41.18
Gold	GC2__CCB	63	-0.09	47.62
USDCAD	USDCAD	90	-0.1	37.78
EURUSD	EURUSD	67	-0.12	41.79
Crude Oil	CL2__CCB	71	-0.14	43.66
Sugar	SB2__CCB	85	-0.14	45.88
Natural Gas	NG2__CCB	66	-0.18	50
Corn	C2___CCB	93	-0.31	44.09
Average		**66.52**	**0.01**	**50.74**
Benchmark Results		83888	0.01	50.54

Universe		# Trades	Avg % P/L	% Winners
S&P100		**4545**	**0.04**	**50.21**
Benchmark Results		390557	0.04	50.26

In stocks, the signal produced an average profit of 0.04% per trade but this was the same as our benchmark all trades result.

The numbers do not improve with longer holding periods for futures and forex but they do get better in stocks.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
FTSE 100	LFT__CCB	33	0.61	63.64
Silver	SI2__CCB	67	0.5	49.25
Euro Stoxx	ESX__CCB	47	0.44	48.94
E-Mini S&P 500	ES___CCB	81	0.22	58.02
Gold	GC2__CCB	63	0.21	58.73
Live Cattle	LC___CCB	68	0.17	52.94
5-Year Note	FV2__CCB	44	0.1	61.36
AUDUSD	AUDUSD	79	-0.01	55.7
10-Year Note	TY2__CCB	43	-0.04	46.51
Euro-Bund	GBL__CCB	48	-0.04	43.75
Nikkei 225	SNI__CCB	64	-0.04	51.56
USDCAD	USDCAD	85	-0.08	41.18
Copper HG	HG2__CCB	53	-0.1	50.94
USDCHF	USDCHF	80	-0.11	47.5
GBPUSD	GBPUSD	65	-0.12	46.15
USDJPY	USDJPY	63	-0.17	44.44
EURUSD	EURUSD	65	-0.2	35.38
Corn	C2___CCB	89	-0.27	39.33
Crude Oil	CL2__CCB	69	-0.46	44.93
Natural Gas	NG2__CCB	63	-0.6	33.33
Sugar	SB2__CCB	82	-0.67	35.37
Average		**64.33**	**-0.03**	**48.05**
Benchmark Results		27971	0.02	51.93

Universe		# Trades	Avg % P/L	% Winners
S&P100		**4433**	**0.14**	**52.38**
Benchmark Results		130417	0.11	51.88

You can see that buying a bullish harami in stocks and holding for 10-days produced the best results.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	46	0.67	47.83
Silver	SI2__CCB	66	0.47	51.52
Live Cattle	LC___CCB	64	0.3	60.94
E-Mini S&P 500	ES___CCB	74	0.24	59.46
10-Year Note	TY2__CCB	43	0.22	53.49
AUDUSD	AUDUSD	72	0.17	62.5
5-Year Note	FV2__CCB	44	0.17	61.36
Gold	GC2__CCB	63	0.02	65.08
FTSE 100	LFT__CCB	32	-0.02	46.88
GBPUSD	GBPUSD	61	-0.04	47.54
USDCHF	USDCHF	78	-0.05	53.85
USDCAD	USDCAD	84	-0.06	47.62
Euro-Bund	GBL__CCB	46	-0.06	43.48
Corn	C2___CCB	80	-0.13	46.25
EURUSD	EURUSD	60	-0.24	46.67
Copper HG	HG2__CCB	53	-0.28	50.94
USDJPY	USDJPY	60	-0.29	48.33
Nikkei 225	SNI__CCB	61	-0.38	52.46
Crude Oil	CL2__CCB	66	-0.4	46.97
Sugar	SB2__CCB	73	-0.71	39.73
Natural Gas	NG2__CCB	60	-0.78	35
Average		**61.24**	**-0.06**	**50.85**
Benchmark Results		16784	0.04	51.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**4276**	**0.20**	**54.72**
Benchmark Results	78331	0.18	52.98

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	44	0.77	59.09
AUDUSD	AUDUSD	68	0.58	66.18
Silver	SI2__CCB	62	0.57	51.61
Live Cattle	LC___CCB	58	0.44	51.72
10-Year Note	TY2__CCB	40	0.31	45
5-Year Note	FV2__CCB	42	0.24	54.76
E-Mini S&P 500	ES___CCB	68	0.19	52.94
GBPUSD	GBPUSD	55	0.04	52.73
Nikkei 225	SNI__CCB	58	0.01	56.9
Euro-Bund	GBL__CCB	42	-0.01	42.86
FTSE 100	LFT__CCB	32	-0.04	53.13
Copper HG	HG2__CCB	52	-0.12	53.85
Gold	GC2__CCB	56	-0.15	51.79
USDCAD	USDCAD	71	-0.23	42.25
USDJPY	USDJPY	56	-0.24	41.07
EURUSD	EURUSD	53	-0.25	33.96
USDCHF	USDCHF	74	-0.3	50
Corn	C2___CCB	75	-0.69	49.33
Crude Oil	CL2__CCB	59	-0.91	44.07
Natural Gas	NG2__CCB	56	-1.39	33.93
Sugar	SB2__CCB	63	-1.39	36.51
Average		**56.38**	**-0.12**	**48.75**
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	**4023**	**0.49**	**54.09**
Benchmark Results	39257	0.32	54.03

The strategy gave an average gain of 0.49% before commissions across our stock universe, with a win rate of 54% and this was based on over 4000 trades.

Overall, the bullish harami pattern is a fairly frequent signal and it appears to show a slight edge in stocks with longer holding periods, although the results were not particularly impressive.

In the next section, we will look at the bearish harami.

Bearish Harami

The bearish harami pattern is a bearish candlestick formation that should be found in an uptrend and never in a sideways market. And here, an uptrend is defined by the presence of a 10-day high in the previous bar.

So this is a two candle pattern.

The first candle is a large white up candle and the second candle is a small black candle. The second candle body should be completely engulfed by the body of the first candle.

Some traders might also call this an inside bar pattern and it really shows how momentum has sort of hit a peak and then stalled. And the lower close of the second candle suggests that the market is ready to swing back the other way. It's also noted by most sources that the signal is stronger when the second candle is small.

GE (Daily) × Analysis1

GE - Daily 2/27/2012 Open 16.6402, HI 16.8913, Lo 16.6052, Close 16.6839 (-0.9%)

Rules

Two candle pattern that is bearish

First candle is large white candle

Second candle is small black candle

Second candle body is completely engulfed by body of the first candle

Appears in a uptrend

Notes

Smaller the second candle, stronger the signal

Should not be used in sideways markets

Our Formula

Bearish Harami
$(C1>O1)$ AND $((C1-O1)/(H1-L1)>.5)$
AND $(C<O)$ AND $(O<= C1)$ AND
$(O1<= C)$ AND $((O-C)<(C1-O1))$ AND

Uptrend1

Results

Looking at the results from shorting the bearish harami pattern, you can see that we recorded a break even result across our selection of 21 markets when combined with a 1-day holding period. And in stocks we recorded results that were no better than the average return.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	52	0.39	57.69
Corn	C2___CCB	95	0.29	62.11
E-Mini S&P 500	ES___CCB	87	0.21	56.32
USDCHF	USDCHF	78	0.16	50
Copper HG	HG2__CCB	79	0.09	50.63
Euro-Bund	GBL__CCB	65	0.07	60
FTSE 100	LFT__CCB	39	0.03	38.46
Gold	GC2__CCB	51	0.03	43.14
Crude Oil	CL2__CCB	75	0.02	48
10-Year Note	TY2__CCB	61	0.02	49.18
USDCAD	USDCAD	69	0.01	43.48
5-Year Note	FV2__CCB	68	0	42.65
Natural Gas	NG2__CCB	43	-0.03	60.47
USDJPY	USDJPY	85	-0.06	50.59
EURUSD	EURUSD	92	-0.07	41.3
AUDUSD	AUDUSD	85	-0.09	42.35
GBPUSD	GBPUSD	63	-0.12	31.75
Live Cattle	LC___CCB	47	-0.14	38.3
Silver	SI2__CCB	61	-0.17	44.26
Sugar	SB2__CCB	75	-0.18	42.67
Nikkei 225	SNI__CCB	72	-0.23	38.89
Average		**68.67**	**0.01**	**47.25**
Benchmark Results		83888	-0.01	48.19

Universe	# Trades	Avg % P/L	% Winners
S&P100	**5809**	**-0.05**	**47.55**
Benchmark Results	390556	-0.04	48.66

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Corn	C2___CCB	91	0.46	54.95
Euro Stoxx	ESX__CCB	51	0.35	52.94
USDCHF	USDCHF	73	0.18	47.95
Gold	GC2__CCB	50	0.12	50
USDCAD	USDCAD	66	0.12	53.03
GBPUSD	GBPUSD	58	0.06	44.83
Natural Gas	NG2__CCB	42	0.05	54.76
E-Mini S&P 500	ES___CCB	82	0.02	43.9
Euro-Bund	GBL__CCB	63	-0.01	42.86
Crude Oil	CL2__CCB	72	-0.01	43.06
USDJPY	USDJPY	82	-0.06	42.68
FTSE 100	LFT__CCB	37	-0.06	40.54
5-Year Note	FV2__CCB	67	-0.1	35.82
Live Cattle	LC___CCB	45	-0.11	46.67
10-Year Note	TY2__CCB	60	-0.13	41.67
EURUSD	EURUSD	88	-0.13	45.45
Copper HG	HG2__CCB	74	-0.22	48.65
AUDUSD	AUDUSD	78	-0.3	34.62
Sugar	SB2__CCB	72	-0.34	47.22
Nikkei 225	SNI__CCB	69	-0.36	37.68
Silver	SI2__CCB	57	-0.5	38.6
Average		**65.57**	**-0.05**	**45.14**
Benchmark Results		27971	-0.02	47.47

Universe	# Trades	Avg % P/L	% Winners
S&P100	**5661**	**-0.10**	**48.47**
Benchmark Results	130414	-0.11	47.58

The pattern also performed modestly with longer holding periods.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Natural Gas	NG2__CCE	39	0.37	48.72
USDCHF	USDCHF	71	0.19	52.11
FTSE 100	LFT__CCE	37	0.15	51.35
Euro Stoxx	ESX__CCE	50	0.13	52
USDCAD	USDCAD	61	0.12	54.1
GBPUSD	GBPUSD	57	0.02	43.86
Gold	GC2__CCE	49	0.02	51.02
Live Cattle	LC___CCE	43	-0.02	48.84
Crude Oil	CL2__CCE	69	-0.02	40.58
E-Mini S&P 500	ES___CCE	78	-0.03	43.59
Corn	C2___CCE	86	-0.03	53.49
EURUSD	EURUSD	84	-0.05	50
USDJPY	USDJPY	74	-0.06	44.59
5-Year Note	FV2__CCE	64	-0.08	32.81
10-Year Note	TY2__CCE	58	-0.14	39.66
Euro-Bund	GBL__CCE	62	-0.18	38.71
AUDUSD	AUDUSD	73	-0.26	36.99
Nikkei 225	SNI__CCE	64	-0.29	40.63
Copper HG	HG2__CCE	71	-0.29	46.48
Sugar	SB2__CCE	67	-0.51	38.81
Silver	SI2__CCB	53	-0.88	33.96
Average		**62.38**	**-0.09**	**44.87**
Benchmark Results		16784	-0.04	47.58

Universe		# Trades	Avg % P/L	% Winners
S&P100		**5418**	**-0.09**	**47.79**
Benchmark Results		78332	-0.18	46.58

With a 10-day holding period, the pattern preceded an average loss of -0.07% per trade in futures and forex and a loss of -0.22% per trade in stocks. In fact, the pattern lost money in every test bar one.

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Natural Gas	NG2__CCE	38	0.83	60.53
USDCHF	USDCHF	61	0.39	50.82
Live Cattle	LC___CCB	41	0.36	65.85
E-Mini S&P 500	ES___CCB	70	0.31	52.86
USDCAD	USDCAD	55	0.24	56.36
Euro Stoxx	ESX__CCB	47	0.2	40.43
FTSE 100	LFT__CCB	37	0.12	37.84
Corn	C2___CCB	78	0.08	51.28
Crude Oil	CL2__CCB	63	0.07	42.86
GBPUSD	GBPUSD	53	0.01	52.83
USDJPY	USDJPY	66	-0.07	46.97
Nikkei 225	SNI__CCB	57	-0.12	42.11
EURUSD	EURUSD	75	-0.14	50.67
Euro-Bund	GBL__CCB	57	-0.19	40.35
5-Year Note	FV2__CCB	56	-0.21	42.86
AUDUSD	AUDUSD	63	-0.24	46.03
10-Year Note	TY2__CCB	54	-0.28	37.04
Gold	GC2__CCE	43	-0.43	46.51
Copper HG	HG2__CCE	61	-0.52	47.54
Sugar	SB2__CCB	63	-0.87	44.44
Silver	SI2__CCB	47	-1.1	42.55
Average		**56.43**	**-0.07**	**47.56**
Benchmark Results		8396	-0.07	46.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**5001**	**-0.22**	**45.63**
Benchmark Results		39258	-0.32	45.71

Overall, the bearish harami pattern a frequent signal and it seems to have no profitable edge in the markets that we tested.

Bullish Spinning Top

The spinning top candlestick pattern is a candle pattern that is sometimes referred to as a neutral formation. However, if it occurs in a downtrend, it can be a weak bullish signal and I've included it here because it actually shows some quite good results.

So a bullish spinning top should be a white up candle with a small body, but a wide price range. So it should have both upper and lower shadows and if it occurs in a strong trend, it symbolises indecision, a drop in momentum and therefore a possible reversal.

And another factor to note is that the possibility of a reversal is stronger when there are more than one spinning top patterns in the recent time period.

AUDUSD - Daily 7/25/2012 Open 1.022, Hi 1.0337, Lo 1.0173, Close 1.0314 (0.9%)

Rules

One candle pattern that is bullish in a downtrend

White candle with small body but a wide price range (length of candle)

In a strong trend, the spinning top can be a warning signal of reversal

Notes

Spinning tops can also be neutral and signify indecision

Signal is stronger if there is more than one spinning top

Similar to a doji but with a wider body.

Our Formula

Bullish Spinning Top
$$((C>O) \text{ AND } ((H-L)>(3*(C-O))) \text{ AND } (((H-C)/(H-L))<.5) \text{ AND } (((O-L)/(H-L))<.5)) \text{ AND Downtrend}$$

Results

Using our formula to calculate a bullish spinning top, we can test its powers as a reversal indicator.

In this first table on the left, we buy the market on the close of a bullish spinning top and we exit the trade one day later.
You can see that the average result from this strategy was a loss of -0.04% over our 21 markets with an average win rate of 50%.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
E-Mini S&P 500	ES___CCE	20	0.37	55
Gold	GC2__CCE	18	0.31	66.67
Sugar	SB2__CCE	16	0.25	50
10-Year Note	TY2__CCB	14	0.15	42.86
Euro-Bund	GBL__CCE	21	0.15	61.9
5-Year Note	FV2__CCB	17	0.12	64.71
EURUSD	EURUSD	27	0.1	59.26
Copper HG	HG2__CCE	14	0.07	64.29
AUDUSD	AUDUSD	24	0.04	54.17
Corn	C2___CCE	23	0.03	47.83
Silver	SI2__CCB	14	0.02	42.86
GBPUSD	GBPUSD	23	0.02	47.83
USDJPY	USDJPY	17	-0.03	41.18
USDCAD	USDCAD	21	-0.04	38.1
Live Cattle	LC___CCE	32	-0.06	56.25
Crude Oil	CL2__CCE	19	-0.14	52.63
USDCHF	USDCHF	27	-0.23	33.33
Natural Gas	NG2__CCE	41	-0.32	39.02
FTSE 100	LFT__CCB	18	-0.43	38.89
Nikkei 225	SNI__CCB	24	-0.51	41.67
Euro Stoxx	ESX__CCE	19	-0.65	57.89
Average		**21.38**	**-0.04**	**50.30**
Benchmark Results		83888	0.01	50.54

Universe		# Trades	Avg % P/L	% Winners
S&P100		**1788**	**0.19**	**51.73**
Benchmark Results		390557	0.04	50.26

In stocks, the strategy produced an average gain of 0.19% per trade and an average win rate of 52%.

With a 3-day holding period, results did not improve for our 21 markets, but they did improve in stocks where we saw an average gain of 0.30% per trade and a win rate of 53%.

3 DAY HOLDING PERIOD
Rotate

Name	Ticker	# Trades	Avg % P/L	% Winners
Copper HG	HG2__CCE	14	0.64	57.14
E-Mini S&P 500	ES___CCB	20	0.42	55
Gold	GC2__CCE	18	0.42	55.56
Silver	SI2__CCB	14	0.4	50
Euro Stoxx	ESX__CCB	19	0.39	52.63
Corn	C2___CCB	23	0.32	60.87
Euro-Bund	GBL__CCB	21	0.23	52.38
10-Year Note	TY2__CCB	14	0.17	64.29
AUDUSD	AUDUSD	23	0.12	60.87
EURUSD	EURUSD	26	0.06	53.85
5-Year Note	FV2__CCB	17	-0.02	47.06
Nikkei 225	SNI__CCB	23	-0.04	60.87
USDCAD	USDCAD	21	-0.06	47.62
Live Cattle	LC___CCB	32	-0.1	50
GBPUSD	GBPUSD	23	-0.29	43.48
USDCHF	USDCHF	26	-0.35	42.31
USDJPY	USDJPY	16	-0.37	31.25
Sugar	SB2__CCB	16	-0.52	37.5
Natural Gas	NG2__CCE	37	-0.58	51.35
Crude Oil	CL2__CCB	18	-0.77	38.89
FTSE 100	LFT__CCB	17	-0.97	47.06
Average		**20.86**	**-0.04**	**50.48**
Benchmark Results		27971	0.02	51.93

Universe		# Trades	Avg % P/L	% Winners
S&P100		**1760**	**0.30**	**53.18**
Benchmark Results		130417	0.11	51.88

With a 5-day holding period, the bullish spinning top predicted an average gain of 0.24% across our 21 markets and here our best performing symbol was the Euro Stoxx future.

In stocks, the bullish spinning top saw an average gain of 0.57% per trade with an average success rate of 55%.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCE	19	2.14	73.68
Corn	C2___CCE	23	1.25	69.57
E-Mini S&P 500	ES___CCE	20	1.06	70
Silver	SI2__CCB	14	0.89	71.43
Copper HG	HG2__CCE	14	0.8	42.86
Sugar	SB2__CCE	16	0.6	56.25
AUDUSD	AUDUSD	23	0.49	56.52
10-Year Note	TY2__CCB	13	0.31	61.54
Euro-Bund	GBL__CCE	20	0.28	55
EURUSD	EURUSD	26	0.26	50
Gold	GC2__CCE	17	0.24	70.59
5-Year Note	FV2__CCB	17	0.11	52.94
USDCAD	USDCAD	21	-0.05	47.62
Crude Oil	CL2__CCE	18	-0.11	55.56
USDCHF	USDCHF	26	-0.11	42.31
GBPUSD	GBPUSD	22	-0.31	36.36
FTSE 100	LFT__CCB	17	-0.35	35.29
Live Cattle	LC___CCE	32	-0.36	40.63
Nikkei 225	SNI__CCB	23	-0.41	56.52
USDJPY	USDJPY	15	-0.58	33.33
Natural Gas	NG2__CCE	32	-1.1	37.5
Average		**20.38**	**0.24**	**53.12**
Benchmark Results		16784	0.04	51.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1729**	**0.57**	**55.06**
Benchmark Results	78331	0.18	52.98

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	19	2.5	57.89
E-Mini S&P 500	ES___CCB	18	0.7	61.11
10-Year Note	TY2__CCB	13	0.65	53.85
Sugar	SB2__CCB	15	0.46	66.67
Euro-Bund	GBL__CCB	19	0.35	57.89
Corn	C2___CCB	21	0.28	66.67
Gold	GC2__CCE	16	0.22	50
5-Year Note	FV2__CCB	17	0.17	70.59
Nikkei 225	SNI__CCB	22	0.17	40.91
AUDUSD	AUDUSD	23	0.16	56.52
USDCHF	USDCHF	26	0.12	50
EURUSD	EURUSD	24	0.1	58.33
Silver	SI2__CCB	14	0.04	35.71
Live Cattle	LC___CCB	32	-0.02	43.75
USDCAD	USDCAD	20	-0.23	45
GBPUSD	GBPUSD	21	-0.29	38.1
FTSE 100	LFT__CCB	16	-0.57	43.75
Crude Oil	CL2__CCB	18	-0.93	33.33
USDJPY	USDJPY	14	-0.99	28.57
Copper HG	HG2__CCE	13	-1.58	38.46
Natural Gas	NG2__CCE	28	-1.75	25
Average		**19.48**	**-0.02**	**48.67**
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1680**	**0.69**	**54.82**
Benchmark Results	39257	0.32	54.03

The pattern breaks down across our 21 markets when combined with a 10-day holding period; however, it performed strongly on our S&P 100 universe of stocks.

There we saw 1680 signals and scored an average gain of 0.69% with a 55% win rate. The spinning top pattern is often referred to as a market neutral formation.

However, you can see that when this pattern occurs when a stock is in a downtrend, there is a decent enough chance that the market will reverse to the upside.

We've recorded some good results here in stocks so this could be another candle pattern to look out for.

Bearish Spinning Top

Unsurprisingly, the bearish spinning top is just like the bullish spinning top but in reverse.

This is a one candle pattern that is bearish in an uptrend. The candle should be black with a small body but with a wide price range. So in a strong trend, the spinning top can be a sign of indecision and potential reversal. And the signal will be stronger if there is more than one spinning top in the recent trading period.

Rules

One candle pattern that is bearish in an uptrend

Black candle with small body but a wide price range (length of candle)
In a strong trend the spinning top can be a warning signal of reversal

Notes
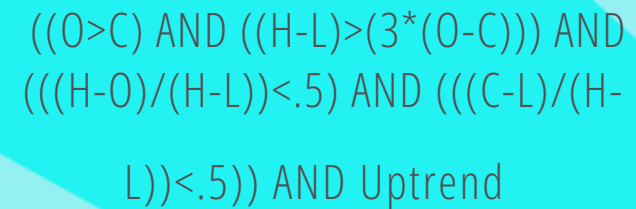
Spinning tops can also be neutral and signify indecision

Signal is stronger if there is more than one spinning top

Similar to a doji but with a wider body.

Our Formula

Bearish Spinning Top
$((O>C)$ AND $((H-L)>(3*(O-C)))$ AND $(((H-O)/(H-L))<.5)$ AND $(((C-L)/(H-L))<.5))$ AND Uptrend

Results

Unfortunately, the bearish spinning top does not seem to be as good at spotting reversals as the bullish spinning top.

The pattern did particularly poorly across our selection of futures and forex pairs, although it did better in stocks.

With a 1-day hold, the bearish spinning top preceded an average profit of 0.06% in S&P 100 stocks with a win rate of 50% based on 2435 trades.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	37	0.35	56.76
USDCHF	USDCHF	23	0.26	73.91
USDCAD	USDCAD	14	0.19	71.43
Natural Gas	NG2__CCB	30	0.19	50
5-Year Note	FV2__CCB	38	0.05	44.74
Gold	GC2__CCB	34	0.02	58.82
Live Cattle	LC___CCB	21	0.02	47.62
EURUSD	EURUSD	33	0.01	45.45
10-Year Note	TY2__CCB	26	0	42.31
USDJPY	USDJPY	31	-0.01	51.61
Nikkei 225	SNI__CCB	26	-0.04	50
Euro-Bund	GBL__CCB	47	-0.1	34.04
GBPUSD	GBPUSD	22	-0.1	40.91
AUDUSD	AUDUSD	28	-0.12	39.29
Corn	C2___CCB	15	-0.14	60
Crude Oil	CL2__CCB	29	-0.17	41.38
Copper HG	HG2__CCB	32	-0.19	53.13
FTSE 100	LFT__CCB	28	-0.19	50
E-Mini S&P 500	ES___CCB	44	-0.23	34.09
Silver	SI2__CCB	29	-0.31	51.72
Sugar	SB2__CCB	19	-0.36	47.37
Average		28.86	-0.04	49.74
Benchmark Results		83888	-0.01	48.19

Universe	# Trades	Avg % P/L	% Winners
S&P100	2435	0.06	50.02
Benchmark Results	390556	-0.04	48.66

With a 3-day holding period, the average profit was 0.07% per trade.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCB	34	0.47	58.82
Silver	SI2__CCB	27	0.34	40.74
USDCHF	USDCHF	22	0.2	59.09
FTSE 100	LFT__CCB	28	0.16	60.71
Natural Gas	NG2__CCB	27	0.15	48.15
USDCAD	USDCAD	14	0.01	50
EURUSD	EURUSD	31	-0.01	38.71
Corn	C2___CCB	15	-0.05	66.67
5-Year Note	FV2__CCB	37	-0.06	40.54
AUDUSD	AUDUSD	28	-0.06	46.43
Live Cattle	LC___CCB	20	-0.07	40
Euro Stoxx	ESX__CCB	37	-0.07	45.95
Crude Oil	CL2__CCB	29	-0.08	31.03
E-Mini S&P 500	ES___CCB	42	-0.09	50
Euro-Bund	GBL__CCB	47	-0.15	31.91
USDJPY	USDJPY	30	-0.16	36.67
GBPUSD	GBPUSD	21	-0.18	33.33
10-Year Note	TY2__CCB	26	-0.2	38.46
Nikkei 225	SNI__CCB	26	-0.23	50
Sugar	SB2__CCB	19	-0.95	36.84
Copper HG	HG2__CCB	32	-1.08	34.38
Average		28.19	-0.10	44.69
Benchmark Results		27971	-0.02	47.47

Universe	# Trades	Avg % P/L	% Winners
S&P100	2390	0.07	50.25
Benchmark Results	130414	-0.11	47.58

With a 5-day holding period, the average profit was 0.14% per trade and with a 10-day holding period the average profit was 0.1% with a 48% win rate.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Natural Gas	NG2__CCE	26	0.48	50
Silver	SI2__CCB	27	0.34	51.85
USDCHF	USDCHF	22	0.24	54.55
Live Cattle	LC___CCE	20	0.17	45
Gold	GC2__CCE	33	0.1	51.52
USDCAD	USDCAD	14	0.08	42.86
Nikkei 225	SNI__CCB	25	-0.04	40
FTSE 100	LFT__CCE	27	-0.08	51.85
EURUSD	EURUSD	31	-0.08	41.94
Euro-Bund	GBL__CCE	46	-0.16	28.26
E-Mini S&P 500	ES___CCE	41	-0.17	41.46
Euro Stoxx	ESX__CCE	36	-0.19	47.22
AUDUSD	AUDUSD	28	-0.19	42.86
5-Year Note	FV2__CCB	35	-0.23	40
USDJPY	USDJPY	28	-0.26	35.71
GBPUSD	GBPUSD	21	-0.31	38.1
10-Year Note	TY2__CCB	26	-0.57	42.31
Crude Oil	CL2__CCE	29	-0.6	34.48
Corn	C2___CCE	15	-0.89	53.33
Copper HG	HG2__CCE	31	-1.36	35.48
Sugar	SB2__CCE	19	-1.44	42.11
Average		**27.62**	**-0.25**	**43.38**
Benchmark Results		16784	-0.04	47.58

Universe		# Trades	Avg % P/L	% Winners
S&P100		**2342**	**0.14**	**49.06**
Benchmark Results		78332	-0.18	46.58

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Natural Gas	NG2__CCE	25	1.68	60
FTSE 100	LFT__CCB	26	1.07	57.69
Euro Stoxx	ESX__CCB	32	0.88	59.38
Silver	SI2__CCB	26	0.75	53.85
Live Cattle	LC___CCB	19	0.62	57.89
USDCAD	USDCAD	14	0.49	71.43
Corn	C2___CCB	15	0.48	53.33
USDCHF	USDCHF	22	0.34	50
Nikkei 225	SNI__CCB	22	0.23	36.36
AUDUSD	AUDUSD	28	-0.04	42.86
Euro-Bund	GBL__CCB	42	-0.22	38.1
Gold	GC2__CCB	33	-0.23	54.55
EURUSD	EURUSD	30	-0.23	46.67
5-Year Note	FV2__CCB	35	-0.42	28.57
USDJPY	USDJPY	27	-0.49	37.04
GBPUSD	GBPUSD	21	-0.51	28.57
10-Year Note	TY2__CCB	25	-0.64	40
E-Mini S&P 500	ES___CCB	37	-0.8	32.43
Crude Oil	CL2__CCB	29	-0.83	24.14
Sugar	SB2__CCB	16	-1.38	50
Copper HG	HG2__CCE	28	-1.68	46.43
Average		**26.29**	**-0.04**	**46.16**
Benchmark Results		8396	-0.07	46.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**2262**	**0.10**	**48.85**
Benchmark Results		39258	-0.32	45.71

Considering this is a bearish pattern, the results in stock are not too bad, but any profits would surely be wiped out by trading costs.

In the next section, we will look at a pattern called the bullish abandoned baby.

Bullish Abandoned Baby

The bullish abandoned baby candlestick pattern is a three candle pattern that is bullish when it occurs in a downtrend. And a downtrend here is defined by a new 10-day low in the previous candle.

To be a bullish abandoned baby, the first candle must be a black down candle. The second candle should gap down on the open and be a narrow range candle or doji. The third candle

should gap up on the open and the gap must
larger than the first gap, thus filling it in. The third candle should also be a white up candle.

As you would expect this is a rare signal, especially in forex where there are rarely gaps.

But the second day of the candle tends to be key as it reveals the loss of momentum among the bears. The idea is that this candle is completely abandoned, which should be a good sign of reversal.

HAL (Daily) × Analysis1
HAL - Daily 3/4/2015 Open 42.2829, Hi 42.4008, Lo 41.6547, Close 42.2731 (-0.1%)

Notes

Second day is key as it reveals loss of momentum among buyers

Importance of the gap is that it improves likelihood of reversal

Rare signal

Our Formula

Bullish Abandoned Baby

(O2>C2) AND (O1<C2) AND
(abs(O1-C1) <= ((H1-L1)*0.1)) AND
(C>O) AND (O>C1) AND (abs(O-C1))
> (C2-O1) AND Downtrend1

Rules

Three candle pattern that is bullish in a downtrend

First candle is black down candle

Second candle gaps down on open and is a narrow range day or doji

Third candle gaps up on the open and the gap is larger than the first gap

Third candle is white up candle

Results

The bullish abandoned baby does not occur often. In our sample period we only recorded a fairly small number of trades per security.

And the tables show the results from testing this pattern on the data.

Buying the pattern on the close and holding the trade for one day saw an average gain of 0.06% in our 21 markets with a win rate of 54%.

In stocks, the pattern only broke even.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Corn	C2___CCE	2	1.83	100
Crude Oil	CL2__CCE	3	1.65	100
Silver	SI2__CCB	2	1.63	100
Gold	GC2__CCE	5	0.35	80
10-Year Note	TY2__CCB	3	0.08	66.67
EURUSD	EURUSD	1	0.07	100
Natural Gas	NG2__CCE	6	-0.02	66.67
USDCHF	USDCHF	5	-0.03	40
USDJPY	USDJPY	4	-0.03	50
GBPUSD	GBPUSD	4	-0.05	25
5-Year Note	FV2__CCB	8	-0.07	50
USDCAD	USDCAD	3	-0.07	33.33
Sugar	SB2__CCE	3	-0.08	0
Euro-Bund	GBL__CCE	5	-0.14	20
FTSE 100	LFT__CCB	6	-0.14	50
Copper HG	HG2__CCE	5	-0.15	40
Live Cattle	LC___CCE	3	-0.2	33.33
AUDUSD	AUDUSD	2	-0.24	50
Euro Stoxx	ESX__CCE	3	-0.91	33.33
Nikkei 225	SNI__CCB	4	-0.96	50
E-Mini S&P 500	ES___CCE	4	-1.3	50
Average		**3.86**	**0.06**	**54.21**
Benchmark Results		83888	0.01	50.54

Universe	# Trades	Avg % P/L	% Winners
S&P100	**340**	**0.00**	**49.71**
Benchmark Results	390557	0.04	50.26

The pattern performed better with a 3-day holding period in stocks where it preceded an average gain of 0.37% with a win rate of 52%. However it did poorly in futures even though we saw a high win rate of 60%.

You can see that the bullish abandoned baby did better over a 5-day and 10-day holding period.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Silver	SI2__CCB	2	2.59	100
Crude Oil	CL2__CCB	3	1.01	100
EURUSD	EURUSD	1	0.78	100
Natural Gas	NG2__CCE	6	0.73	66.67
Copper HG	HG2__CCE	5	0.54	60
USDCAD	USDCAD	3	0.46	66.67
10-Year Note	TY2__CCB	3	0.37	100
USDJPY	USDJPY	4	0.34	75
Gold	GC2__CCE	5	0.28	60
FTSE 100	LFT__CCB	6	0.15	50
5-Year Note	FV2__CCB	8	0.13	37.5
GBPUSD	GBPUSD	4	0.01	50
Euro-Bund	GBL__CCB	5	0.01	80
Live Cattle	LC___CCB	3	-0.16	66.67
USDCHF	USDCHF	5	-0.27	60
Sugar	SB2__CCB	3	-0.56	33.33
Nikkei 225	SNI__CCB	4	-0.66	50
AUDUSD	AUDUSD	2	-1.12	0
E-Mini S&P 500	ES___CCB	4	-1.15	50
Corn	C2___CCB	2	-1.94	50
Euro Stoxx	ESX__CCB	3	-4.2	0
Average		3.86	-0.13	59.80
Benchmark Results		27971	0.02	51.93

Universe	# Trades	Avg % P/L	% Winners
S&P100	340	0.37	51.76
Benchmark Results	130417	0.11	51.88

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Crude Oil	CL2__CCE	3	3.3	100
Silver	SI2__CCB	2	2.62	50
Natural Gas	NG2__CCE	6	2.09	66.67
Copper HG	HG2__CCE	5	1.95	80
Gold	GC2__CCE	5	1.9	60
10-Year Note	TY2__CCB	3	0.96	100
EURUSD	EURUSD	1	0.91	100
USDCAD	USDCAD	3	0.53	100
Live Cattle	LC___CCE	3	0.27	66.67
Euro-Bund	GBL__CCE	5	0.21	80
USDJPY	USDJPY	4	-0.02	75
GBPUSD	GBPUSD	4	-0.06	50
5-Year Note	FV2__CCE	8	-0.06	37.5
FTSE 100	LFT__CCB	6	-0.51	66.67
E-Mini S&P 500	ES___CCE	4	-0.65	50
USDCHF	USDCHF	5	-0.76	20
Sugar	SB2__CCE	3	-1.13	0
Nikkei 225	SNI__CCB	4	-1.15	25
Euro Stoxx	ESX__CCE	3	-1.46	33.33
AUDUSD	AUDUSD	2	-2.83	0
Corn	C2___CCE	2	-3.83	0
Average		3.86	0.11	55.28
Benchmark Results		16784	0.04	51.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	337	0.83	58.46
Benchmark Results	78331	0.18	52.98

Name	Ticker	# Trades	Avg % P/L	% Winners
Copper HG	HG2__CCE	5	3.63	100
Gold	GC2__CCE	5	3.51	60
Crude Oil	CL2__CCB	3	1.81	66.67
Natural Gas	NG2__CCE	6	1.74	50
USDCAD	USDCAD	3	1.45	66.67
10-Year Note	TY2__CCB	3	1.25	100
Silver	SI2__CCB	2	1.19	50
Live Cattle	LC___CCB	3	0.73	100
USDJPY	USDJPY	4	0.53	75
GBPUSD	GBPUSD	4	0.52	50
Euro-Bund	GBL__CCB	5	0.28	40
FTSE 100	LFT__CCB	6	-0.05	50
Euro Stoxx	ESX__CCB	3	-0.37	33.33
5-Year Note	FV2__CCB	8	-0.49	25
AUDUSD	AUDUSD	2	-0.58	50
EURUSD	EURUSD	1	-0.67	0
Corn	C2___CCB	2	-0.8	0
Nikkei 225	SNI__CCB	4	-1.08	50
USDCHF	USDCHF	5	-1.54	40
Sugar	SB2__CCB	3	-1.6	33.33
E-Mini S&P 500	ES___CCB	4	-2.38	0
Average		**3.86**	**0.34**	**49.52**
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	**335**	**0.76**	**52.24**
Benchmark Results	39257	0.32	54.03

With a 5-day holding period, the bullish abandoned baby pattern preceded an average fain of 0.11% in our 21 markets and 0.83% in stocks with a win rate of 59%.

With a 10-day holding period, the bullish abandoned baby signal preceded an average gain of 0.34% in futures and an average gain of 0.76% in stocks.

Overall, this pattern shows some potential in stocks. However, this is also a rare signal and we only saw 335 trades in our data sample.

As well, the results here were somewhat skewed by two stand-out trades in stocks that recorded gains of 49% and 99% respectively.

All in all, this is an unusual pattern that might be worth paying attention to when it happens to occur.

Bearish Abandoned Baby

The bearish abandoned baby is a three candle pattern that is bearish in an uptrend. The first candle should be a white up candle. The second candle should gap up on the open and be a narrow range candle or doji.

The third candle should gap down on the open and the gap should be larger than the first gap. This third candle should also be a black down candle.

So this is a bearish signal. When it occurs, the theory is that the market should head lower.

The second candle tends to be key as it reveals the loss of momentum among the bulls. The idea is that this candle is completely abandoned which should be a good sign of reversal.

XOM (Daily) × Analysis1
XOM - Daily 5/30/2013 Open 84.5269, Hi 85.1794, Lo 84.1868, Close 84.6372 (0.0%)

Notes

Second day is key as it reveals loss of momentum among buyers

Importance of the gap is that it improves likelihood of reversal

Rare signal

Our Formula

Bearish Abandoned Baby

$(C2>O2)$ AND $(O1>C2)$ AND $(abs(O1-C1) <= ((H1-L1)*0.1))$ AND $(O>C)$ AND $(O<C1)$ AND $(abs(O-C1)) > (O1-C2)$ AND Uptrend1

Rules

Three candle pattern that is bearish in an uptrend

First candle is white up candle

Second candle gaps up on open and is a narrow range day or doji

Third candle gaps down on the open and the gap is larger than the first gap

Third candle is black down candle

Results

Shorting the bearish abandoned baby candlestick pattern and holding for one day produced an average loss of -0.20% per trade across 19 markets with a win rate of 46%.

The results were a little better than break even for S&P 100 stocks.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Nikkei 225	SNI__CCB	2	0.89	50
FTSE 100	LFT__CCB	6	0.75	66.67
5-Year Note	FV2__CCB	4	0.38	75
Euro-Bund	GBL__CCB	9	0.06	44.44
AUDUSD	AUDUSD	1	0.06	100
Crude Oil	CL2__CCB	9	0.03	55.56
USDJPY	USDJPY	0	N/A	N/A
Corn	C2___CCB	0	N/A	N/A
Silver	SI2__CCB	4	-0.01	50
10-Year Note	TY2__CCB	4	-0.01	50
EURUSD	EURUSD	3	-0.02	33.33
Live Cattle	LC___CCB	3	-0.04	66.67
Gold	GC2__CCB	7	-0.07	57.14
GBPUSD	GBPUSD	3	-0.16	33.33
USDCAD	USDCAD	2	-0.27	50
Euro Stoxx	ESX__CCB	5	-0.29	40
Natural Gas	NG2__CCB	5	-0.36	40
E-Mini S&P 500	ES___CCB	6	-0.37	16.67
USDCHF	USDCHF	2	-0.87	50
Copper HG	HG2__CCB	3	-1.36	0
Sugar	SB2__CCB	3	-2.15	0
Average		**3.86**	**-0.20**	**46.25**
Benchmark Results		83888	-0.01	48.19

Universe		# Trades	Avg % P/L	% Winners
S&P100		**327**	**0.03**	**46.48**
Benchmark Results		390556	-0.04	48.66

The numbers were modest with a 3-day holding period and slightly better than the benchmark numbers.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Crude Oil	CL2__CCB	9	1.55	55.56
Nikkei 225	SNI__CCB	2	0.87	50
Sugar	SB2__CCB	3	0.51	66.67
AUDUSD	AUDUSD	1	0.47	100
EURUSD	EURUSD	3	0.43	66.67
Gold	GC2__CCB	7	0.4	57.14
Euro Stoxx	ESX__CCB	5	0.36	80
FTSE 100	LFT__CCB	6	0.35	33.33
5-Year Note	FV2__CCB	4	0.11	75
Silver	SI2__CCB	4	0.11	50
USDCAD	USDCAD	2	0.05	50
Corn	C2___CCB	0	N/A	N/A
Euro-Bund	GBL__CCB	9	0	55.56
USDJPY	USDJPY	0	N/A	N/A
10-Year Note	TY2__CCB	4	-0.08	50
E-Mini S&P 500	ES___CCB	6	-0.1	50
Live Cattle	LC___CCB	3	-0.28	0
Copper HG	HG2__CCB	3	-0.67	33.33
GBPUSD	GBPUSD	3	-0.7	0
USDCHF	USDCHF	2	-1.36	0
Natural Gas	NG2__CCB	5	-1.73	20
Average		**3.86**	**0.02**	**47.01**
Benchmark Results		27971	-0.02	47.47

Universe		# Trades	Avg % P/L	% Winners
S&P100		**327**	**0.02**	**45.26**
Benchmark Results		130414	-0.11	47.58

With a five day holding period, we saw an average gain across both tests, as we did with a 10-day holding period.

Shorting the bearish abandoned baby and holding for 10 days produced an average profit of 0.32% in futures and forex with a win rate of 50%.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Nikkei 225	SNI__CCB	2	1.92	50
USDCAD	USDCAD	2	1.71	100
Crude Oil	CL2__CCB	9	1.28	55.56
FTSE 100	LFT__CCB	6	1.2	83.33
E-Mini S&P 500	ES___CCB	6	1.17	66.67
EURUSD	EURUSD	3	0.52	66.67
Euro Stoxx	ESX__CCB	5	0.41	60
Gold	GC2__CCB	7	0.19	57.14
Euro-Bund	GBL__CCB	9	0.17	44.44
Silver	SI2__CCB	4	0.03	50
Corn	C2___CCB	0	N/A	N/A
USDJPY	USDJPY	0	N/A	N/A
5-Year Note	FV2__CCB	4	-0.02	50
10-Year Note	TY2__CCB	4	-0.14	0
Natural Gas	NG2__CCB	5	-0.3	60
Live Cattle	LC___CCB	3	-0.35	33.33
AUDUSD	AUDUSD	1	-0.68	0
Sugar	SB2__CCB	3	-0.9	33.33
GBPUSD	GBPUSD	3	-0.96	0
USDCHF	USDCHF	2	-1.1	0
Copper HG	HG2__CCB	3	-2.12	33.33
Average		**3.86**	**0.11**	**44.41**
Benchmark Results		16784	-0.04	47.58

Universe		# Trades	Avg % P/L	% Winners
S&P100		327	0.15	46.79
Benchmark Results		78332	-0.18	46.58

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCB	3	3.45	66.67
E-Mini S&P 500	ES___CCB	6	2.58	66.67
USDCAD	USDCAD	2	2.3	100
Euro Stoxx	ESX__CCB	5	2.04	60
Crude Oil	CL2__CCB	9	1.54	44.44
EURUSD	EURUSD	3	1.43	66.67
AUDUSD	AUDUSD	1	0.41	100
Euro-Bund	GBL__CCB	9	0.27	44.44
10-Year Note	TY2__CCB	4	0.05	50
Corn	C2___CCB	0	N/A	N/A
USDJPY	USDJPY	0	N/A	N/A
FTSE 100	LFT__CCB	6	-0.1	50
Gold	GC2__CCB	7	-0.2	57.14
Live Cattle	LC___CCB	3	-0.33	0
5-Year Note	FV2__CCB	4	-0.41	50
GBPUSD	GBPUSD	3	-0.48	33.33
Silver	SI2__CCB	4	-0.53	25
USDCHF	USDCHF	2	-0.71	50
Natural Gas	NG2__CCB	5	-0.84	40
Nikkei 225	SNI__CCB	2	-1.51	50
Copper HG	HG2__CCB	3	-2.93	0
Average		**3.86**	**0.32**	**50.23**
Benchmark Results		8396	-0.07	46.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		325	0.13	48.62
Benchmark Results		39258	-0.32	45.71

In stocks we recorded an average profit of 0.13%.

This is an infrequent pattern and the results that we recorded are modest.

Three White Soldiers

The three white soldiers candlestick pattern is a popular pattern among trend traders as it suggests momentum and strength in a new trend. And some technical traders believe that three higher closes is the official definition of an uptrend.

This is a three candle bullish pattern that should occur in a downtrend. Steve Nison, author of Candlestick Charting Techniques suggests that the downtrend does not need to be a long one so we will define a downtrend as the presence of a new 10-day low. The three white soldiers formation should consist of

three or
more candles with consecutive higher opens and closes. Each higher open should occur within the body of the previous candle, this is according to most sources on the matter.

So this pattern clearly shows a change in direction and it's a pattern that is always very visible on a chart.

Rules

Three candle reversal pattern that is bullish in a downtrend

Consists of three or more candles with consecutive higher opens and closes
Each higher open should occur within the body of the previous candle

Notes

Some swing traders and day traders consider this the official definition of an uptrend

Rare pattern

Our Formula

Three White Soldiers
(O>O1) AND (O<C1) AND (O1>O2)
AND (O1<C2) AND (C>O) AND
(C1>O1) AND (C2>O2) AND

Downtrend2

Results

So we have coded the formula for the three white soldiers candlestick pattern. We can now test the pattern on historical data.

In our first test, we will buy a security on the close of the third white soldier and we will hold the trade for one whole day.
As you can see, doing so produced an average loss of -0.07% in our 21 markets with a win rate of 47%.
In stocks, the signal preceded an average loss of -0.08% and the win rate was 49%.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Natural Gas	NG2__CCE	5	1.31	100
Corn	C2___CCE	5	0.83	100
Euro Stoxx	ESX__CCE	6	0.43	50
Silver	SI2__CCB	5	0.2	80
Gold	GC2__CCE	3	0.17	66.67
FTSE 100	LFT__CCB	1	0.16	100
Crude Oil	CL2__CCE	4	0.12	25
Euro-Bund	GBL__CCE	9	0.02	44.44
E-Mini S&P 500	ES___CCE	5	0.01	60
Copper HG	HG2__CCE	8	-0.07	50
10-Year Note	TY2__CCB	3	-0.08	66.67
5-Year Note	FV2__CCB	7	-0.17	28.57
Live Cattle	LC___CCE	6	-0.17	50
USDJPY	USDJPY	3	-0.18	33.33
GBPUSD	GBPUSD	3	-0.21	0
EURUSD	EURUSD	5	-0.22	40
USDCHF	USDCHF	2	-0.25	50
USDCAD	USDCAD	7	-0.4	14.29
AUDUSD	AUDUSD	6	-0.63	16.67
Nikkei 225	SNI__CCB	3	-1.04	0
Sugar	SB2__CCE	1	-1.39	0
Average		**4.62**	**-0.07**	**46.46**
Benchmark Results		83888	0.01	50.54

Universe	# Trades	Avg % P/L	% Winners
S&P100	**258**	**-0.08**	**49.22**
Benchmark Results	390557	0.04	50.26

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Corn	C2___CCB	5	1.88	60
Crude Oil	CL2__CCB	4	1.48	75
Nikkei 225	SNI__CCB	3	1.05	66.67
Natural Gas	NG2__CCE	5	0.6	40
Silver	SI2__CCB	5	0.51	40
Euro-Bund	GBL__CCB	9	0.45	88.89
Gold	GC2__CCE	3	0.39	66.67
E-Mini S&P 500	ES___CCB	5	0.35	60
Sugar	SB2__CCB	1	0.32	100
Live Cattle	LC___CCB	6	0.18	66.67
Copper HG	HG2__CCE	8	0.18	37.5
FTSE 100	LFT__CCB	1	0.08	100
Euro Stoxx	ESX__CCB	5	0.07	60
10-Year Note	TY2__CCB	3	0.06	66.67
GBPUSD	GBPUSD	3	-0.02	66.67
EURUSD	EURUSD	5	-0.03	20
AUDUSD	AUDUSD	6	-0.04	66.67
5-Year Note	FV2__CCB	7	-0.07	42.86
USDCHF	USDCHF	2	-0.09	50
USDJPY	USDJPY	3	-0.65	0
USDCAD	USDCAD	7	-0.84	28.57
Average		**4.57**	**0.28**	**57.28**
Benchmark Results		27971	0.02	51.93

Universe		# Trades	Avg % P/L	% Winners
S&P100		**257**	**-0.32**	**50.58**
Benchmark Results		130417	0.11	51.88

With a 3-day holding period, the pattern performed much better on our 21 markets. We recorded an average profit of 0.28% per trade with a much improved win rate of 57%. And our best performing symbol was corn, closely followed by crude oil.

The pattern did much more poorly in S&P 100 stocks where it preceded an average loss of 0.32% per trade and a 51% win rate across 257 signals.

With a 5-day holding period, the three white soldiers pattern preceded an average gain of 0.57% per trade in our 21 markets with a win rate of 55%, but we saw an average loss of -0.41% in stocks with a win rate of 49%.

The three white soldiers pattern preceded an average gain of 0.55% in our 21 markets with a holding period of 10 days with a win rate of 52%. However, the strategy performed poorly in stocks as it was unable to beat the benchmark 10-day return.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCE	1	4.11	100
Crude Oil	CL2__CCE	4	2.1	50
Gold	GC2__CCE	3	1.86	66.67
FTSE 100	LFT__CCE	1	1.66	100
USDCHF	USDCHF	2	1.66	100
Natural Gas	NG2__CCE	5	1.36	80
Euro Stoxx	ESX__CCE	5	0.7	60
Nikkei 225	SNI__CCB	3	0.59	66.67
Euro-Bund	GBL__CCE	9	0.39	55.56
E-Mini S&P 500	ES___CCE	5	0.38	60
Live Cattle	LC___CCE	6	0.3	66.67
Corn	C2___CCE	5	0.21	40
Silver	SI2__CCB	5	0.15	40
5-Year Note	FV2__CCE	7	0.01	42.86
10-Year Note	TY2__CCB	3	-0.16	33.33
GBPUSD	GBPUSD	3	-0.26	33.33
EURUSD	EURUSD	5	-0.3	20
Copper HG	HG2__CCE	8	-0.39	50
AUDUSD	AUDUSD	6	-0.54	50
USDJPY	USDJPY	3	-0.76	33.33
USDCAD	USDCAD	7	-1.02	14.29
Average		**4.57**	**0.57**	**55.37**
Benchmark Results		16784	0.04	51.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**255**	**-0.41**	**49.41**
Benchmark Results		78331	0.18	52.98

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	5	3.58	100
FTSE 100	LFT__CCB	1	3.57	100
Crude Oil	CL2__CCB	4	2.98	50
Gold	GC2__CCE	3	2.26	66.67
Natural Gas	NG2__CCE	5	0.82	60
EURUSD	EURUSD	5	0.81	80
USDCHF	USDCHF	2	0.8	50
Corn	C2___CCB	5	0.71	60
Euro-Bund	GBL__CCE	9	0.59	66.67
GBPUSD	GBPUSD	3	0.45	100
AUDUSD	AUDUSD	6	0.35	50
5-Year Note	FV2__CCB	7	0.24	71.43
Sugar	SB2__CCB	1	0	0
Live Cattle	LC___CCB	6	-0.21	50
Silver	SI2__CCB	5	-0.23	60
10-Year Note	TY2__CCB	3	-0.24	0
USDJPY	USDJPY	3	-0.46	33.33
Nikkei 225	SNI__CCB	3	-0.58	0
E-Mini S&P 500	ES___CCB	5	-0.72	60
Copper HG	HG2__CCE	8	-1.15	25
USDCAD	USDCAD	7	-2.1	14.29
Average		**4.57**	**0.55**	**52.26**
Benchmark Results		8396	0.07	52.73

Universe		# Trades	Avg % P/L	% Winners
S&P100		**251**	**0.04**	**51.00**
Benchmark Results		39257	0.32	54.03

These results are mixed and somewhat unusual. You can see that the pattern is a fairly strong one on futures but it performs consistently poorly with individual stocks.

This could be evidence that trend following strategies are more suited to futures than shares. Having said that, this is also a fairly rare signal.

Altogether, the popularity of this pattern does not seem to be totally justified, especially in S&P 100 companies.
Next up, we'll take a look at the three black crows pattern.

Three Black Crows

The three black crows pattern is a bearish three candle formation that must appear in an uptrend.

This pattern consists of three or more candles with consecutive lower opens and closes. Each lower open should occur within the body of the previous candle.
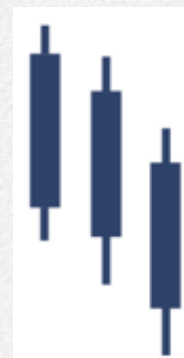
So this pattern shows a very visible change in momentum and a strong downward bias. Trend traders see this pattern as the establishing of a new downward trend. It's also noted that the pattern is stronger when the uptrend contains gappy price action.

USDJPY (Daily) × Analysis1

USDJPY - Daily 9/25/2012 Open 77.85, Hi 77.93, Lo 77.62, Close 77.78 (-0.0%)

Rules

Three candle reversal pattern that is bearish in an uptrend

Consists of three or more candles with consecutive lower opens and closes

Each lower open should occur within the body of the previous candle

Notes

Some swing traders and day traders consider this the official definition of a downtrend

This pattern is stronger if uptrend contains gappy price action

Another rare pattern

Seems to work better in reverse

Our Formula

Three Black Crows
(O<O1) AND (O>C1) AND (O1<O2)
AND (O1>C2) AND (C<O) AND
(C1<O1) AND (C2<O2) AND

Uptrend2

Results

The three black crows pattern is a bearish signal so in our tests we have shorted the pattern on the close and then held that trade for 1, 3, 5 or 10 days.

Running through these results you can see that this pattern is not a good one. The pattern does not do a good job of predicting further downward moves.

We saw a couple of positive results but on the whole the average profit from this strategy is negative.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	4	1.26	100
Sugar	SB2__CCB	5	1.25	40
Copper HG	HG2__CCB	3	0.68	66.67
10-Year Note	TY2__CCB	2	0.61	50
Natural Gas	NG2__CCB	7	0.44	42.86
Silver	SI2__CCB	5	0.38	60
USDJPY	USDJPY	10	0.02	40
Crude Oil	CL2__CCB	0	N/A	N/A
AUDUSD	AUDUSD	4	-0.05	50
USDCHF	USDCHF	7	-0.06	28.57
Gold	GC2__CCB	5	-0.08	40
5-Year Note	FV2__CCB	4	-0.09	25
GBPUSD	GBPUSD	8	-0.14	25
EURUSD	EURUSD	7	-0.19	42.86
Live Cattle	LC___CCB	11	-0.21	36.36
Euro-Bund	GBL__CCB	5	-0.26	20
FTSE 100	LFT__CCB	8	-0.3	37.5
USDCAD	USDCAD	7	-0.48	0
E-Mini S&P 500	ES___CCB	8	-0.83	12.5
Nikkei 225	SNI__CCB	3	-1.25	0
Corn	C2___CCB	1	-3.56	0
Average		**5.43**	**-0.14**	**35.87**
Benchmark Results		83888	-0.01	48.19

Universe	# Trades	Avg % P/L	% Winners
S&P100	601	-0.14	46.26
Benchmark Results	390556	-0.04	48.66

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCB	5	2.15	60
Corn	C2___CCB	1	1.72	100
Natural Gas	NG2__CCB	7	1.1	57.14
Copper HG	HG2__CCB	3	0.97	66.67
Nikkei 225	SNI__CCB	3	0.78	66.67
Gold	GC2__CCB	5	0.52	60
10-Year Note	TY2__CCB	2	0.51	50
Live Cattle	LC___CCB	11	0.27	63.64
USDJPY	USDJPY	10	0.14	50
5-Year Note	FV2__CCB	4	0.03	50
Crude Oil	CL2__CCB	0	N/A	N/A
GBPUSD	GBPUSD	8	-0.05	37.5
AUDUSD	AUDUSD	4	-0.05	50
EURUSD	EURUSD	7	-0.11	42.86
USDCAD	USDCAD	7	-0.12	42.86
FTSE 100	LFT__CCB	8	-0.51	37.5
USDCHF	USDCHF	7	-0.54	28.57
Euro-Bund	GBL__CCB	5	-0.59	0
Euro Stoxx	ESX__CCB	4	-0.61	50
Silver	SI2__CCB	5	-1.11	20
E-Mini S&P 500	ES___CCB	8	-1.94	12.5
Average		**5.43**	**0.13**	**47.30**
Benchmark Results		27971	-0.02	47.47

Universe	# Trades	Avg % P/L	% Winners
S&P100	595	-0.14	43.36
Benchmark Results	130414	-0.11	47.58

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCB	5	1.78	60
Copper HG	HG2__CCB	3	1.64	66.67
10-Year Note	TY2__CCB	2	0.84	50
Live Cattle	LC___CCB	11	0.8	81.82
Corn	C2___CCB	1	0.76	100
Nikkei 225	SNI__CCB	3	0.31	66.67
Gold	GC2__CCB	5	0.25	60
AUDUSD	AUDUSD	4	0.23	50
EURUSD	EURUSD	7	0.15	57.14
USDJPY	USDJPY	10	0.1	40
FTSE 100	LFT__CCB	8	0.03	37.5
Crude Oil	CL2__CCB	0	N/A	N/A
5-Year Note	FV2__CCB	4	-0.03	50
GBPUSD	GBPUSD	8	-0.17	37.5
USDCAD	USDCAD	7	-0.23	28.57
Natural Gas	NG2__CCB	7	-0.6	57.14
USDCHF	USDCHF	7	-0.63	28.57
Euro-Bund	GBL__CCB	5	-0.73	20
Silver	SI2__CCB	5	-1.02	40
Euro Stoxx	ESX__CCB	4	-1.39	25
E-Mini S&P 500	ES___CCB	8	-1.69	37.5
Average		**5.43**	**0.02**	**49.70**
Benchmark Results		16784	-0.04	47.58

Universe		# Trades	Avg % P/L	% Winners
S&P100		**594**	**-0.04**	**47.81**
Benchmark Results		78332	-0.18	46.58

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCB	5	1.96	80
Sugar	SB2__CCB	5	1.86	80
Natural Gas	NG2__CCB	7	1.36	57.14
Silver	SI2__CCB	5	0.79	80
USDJPY	USDJPY	9	0.44	66.67
Live Cattle	LC___CCB	11	0.32	63.64
Crude Oil	CL2__CCB	0	N/A	N/A
EURUSD	EURUSD	7	-0.09	42.86
USDCAD	USDCAD	7	-0.18	57.14
USDCHF	USDCHF	7	-0.22	57.14
FTSE 100	LFT__CCB	8	-0.23	37.5
5-Year Note	FV2__CCB	4	-0.24	50
AUDUSD	AUDUSD	4	-0.28	25
10-Year Note	TY2__CCB	2	-0.38	50
GBPUSD	GBPUSD	8	-0.52	37.5
Euro-Bund	GBL__CCB	5	-0.99	0
Nikkei 225	SNI__CCB	3	-1.01	33.33
E-Mini S&P 500	ES___CCB	8	-1.11	37.5
Copper HG	HG2__CCB	3	-1.62	33.33
Euro Stoxx	ESX__CCB	4	-4.12	25
Corn	C2___CCB	1	-5.68	0
Average		**5.38**	**-0.50**	**45.69**
Benchmark Results		8396	-0.07	46.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**592**	**-0.18**	**46.79**
Benchmark Results		39258	-0.32	45.71

For example, with a 10-day holding period we saw an average loss of 0.5% in futures and an average loss of -0.18% in stocks.

In conclusion, it seems that selling into weakness is not a very successful strategy after all. In fact, you would be better off doing the exact opposite. In other words, you would be better off buying the market when you see the three black crows pattern.

And, if you look at the next tables of results, you can see what happens if you had done so:

So here you can see that markets are more likely to go higher after three black crows than they are to go lower.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Corn	C2___CCE	1	3.56	100
Nikkei 225	SNI__CCB	3	1.25	100
E-Mini S&P 500	ES___CCE	8	0.83	87.5
USDCAD	USDCAD	7	0.48	100
FTSE 100	LFT__CCE	8	0.3	62.5
Euro-Bund	GBL__CCE	5	0.26	80
Live Cattle	LC___CCE	11	0.21	63.64
EURUSD	EURUSD	7	0.19	57.14
GBPUSD	GBPUSD	8	0.14	62.5
5-Year Note	FV2__CCE	4	0.09	75
Gold	GC2__CCE	5	0.08	60
USDCHF	USDCHF	7	0.06	57.14
AUDUSD	AUDUSD	4	0.05	50
Crude Oil	CL2__CCE	0	N/A	N/A
USDJPY	USDJPY	10	-0.02	60
Silver	SI2__CCB	5	-0.38	40
Natural Gas	NG2__CCE	7	-0.44	57.14
10-Year Note	TY2__CCB	2	-0.61	50
Copper HG	HG2__CCE	3	-0.68	33.33
Sugar	SB2__CCE	5	-1.25	60
Euro Stoxx	ESX__CCE	4	-1.26	0
Average		**5.43**	**0.14**	**62.79**
Benchmark Results		83888	0.01	50.54

Universe	# Trades	Avg % P/L	% Winners
S&P100	**601**	**0.14**	**53.41**
Benchmark Results	390557	0.04	50.26

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
E-Mini S&P 500	ES___CCB	8	1.94	87.5
Silver	SI2__CCB	5	1.11	80
Euro Stoxx	ESX__CCB	4	0.61	50
Euro-Bund	GBL__CCB	5	0.59	100
USDCHF	USDCHF	7	0.54	71.43
FTSE 100	LFT__CCB	8	0.51	62.5
USDCAD	USDCAD	7	0.12	57.14
EURUSD	EURUSD	7	0.11	57.14
GBPUSD	GBPUSD	8	0.05	62.5
AUDUSD	AUDUSD	4	0.05	50
Crude Oil	CL2__CCB	0	N/A	N/A
5-Year Note	FV2__CCB	4	-0.03	50
USDJPY	USDJPY	10	-0.14	50
Live Cattle	LC___CCB	11	-0.27	36.36
10-Year Note	TY2__CCB	2	-0.51	50
Gold	GC2__CCB	5	-0.52	40
Nikkei 225	SNI__CCB	3	-0.78	33.33
Copper HG	HG2__CCB	3	-0.97	33.33
Natural Gas	NG2__CCB	7	-1.1	42.86
Corn	C2___CCB	1	-1.72	0
Sugar	SB2__CCB	5	-2.15	40
Average		**5.43**	**-0.13**	**52.70**
Benchmark Results		27971	0.02	51.93

Universe		# Trades	Avg % P/L	% Winners
S&P100		**595**	**0.14**	**56.64**
Benchmark Results		130417	0.11	51.88

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
E-Mini S&P 500	ES___CCB	8	1.69	62.5
Euro Stoxx	ESX__CCB	4	1.39	75
Silver	SI2__CCB	5	1.02	60
Euro-Bund	GBL__CCB	5	0.73	80
USDCHF	USDCHF	7	0.63	71.43
Natural Gas	NG2__CCB	7	0.6	42.86
USDCAD	USDCAD	7	0.23	57.14
GBPUSD	GBPUSD	8	0.17	62.5
5-Year Note	FV2__CCB	4	0.03	50
Crude Oil	CL2__CCB	0	N/A	N/A
FTSE 100	LFT__CCB	8	-0.03	62.5
USDJPY	USDJPY	10	-0.1	60
EURUSD	EURUSD	7	-0.15	42.86
AUDUSD	AUDUSD	4	-0.23	50
Gold	GC2__CCB	5	-0.25	40
Nikkei 225	SNI__CCB	3	-0.31	33.33
Corn	C2___CCB	1	-0.76	0
Live Cattle	LC___CCB	11	-0.8	18.18
10-Year Note	TY2__CCB	2	-0.84	50
Copper HG	HG2__CCB	3	-1.64	33.33
Sugar	SB2__CCB	5	-1.78	40
Average		**5.43**	**-0.02**	**49.58**
Benchmark Results		16784	0.04	51.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**594**	**0.04**	**51.18**
Benchmark Results		78331	0.18	52.98

Name	Ticker	# Trades	Avg % P/L	% Winners
Corn	C2___CCB	1	5.68	100
Euro Stoxx	ESX__CCB	4	4.12	75
Copper HG	HG2__CCE	3	1.62	66.67
E-Mini S&P 500	ES___CCB	8	1.11	62.5
Nikkei 225	SNI__CCB	3	1.01	66.67
Euro-Bund	GBL__CCB	5	0.99	100
GBPUSD	GBPUSD	8	0.52	62.5
10-Year Note	TY2__CCB	2	0.38	50
AUDUSD	AUDUSD	4	0.28	75
5-Year Note	FV2__CCB	4	0.24	50
FTSE 100	LFT__CCB	8	0.23	62.5
USDCHF	USDCHF	7	0.22	42.86
USDCAD	USDCAD	7	0.18	42.86
EURUSD	EURUSD	7	0.09	57.14
Crude Oil	CL2__CCB	0	N/A	N/A
Live Cattle	LC___CCB	11	-0.32	36.36
USDJPY	USDJPY	9	-0.44	33.33
Silver	SI2__CCB	5	-0.79	20
Natural Gas	NG2__CCE	7	-1.36	42.86
Sugar	SB2__CCB	5	-1.86	20
Gold	GC2__CCE	5	-1.96	20
Average		5.38	0.50	54.31
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	592	0.18	52.87
Benchmark Results	39257	0.32	54.03

With a 10-day holding period, buying the three black crows pattern instead of shorting produced an average gain of 0.50%

across 20 markets with a win rate of 54% and an average gain of 0.18% in stocks.

Next, we'll take a look at the bullish three line strike pattern.

Bullish Three Line Strike

I believe that the bullish three line strike pattern was popularised by Thomas Bulkowski in the Encyclopedia of Candlestick Charts and it was noted as one of the best performing candlestick patterns.

So this is a four candle reversal pattern that is bullish when it occurs in a downtrend.

The first three candles are black down candles with consecutive lower lows. The fourth candle is a large white candle and the fourth candle must open below the previous candle close and it must close above the first candle's open.

So this is a pattern when the last candle basically spans almost all of the price action of the last 3 days. Clearly this is a bullish sign since it shows a lot of strength and a lot of buying. But it"s also quite a rare signal.

GBPAUD (Daily) × ✔ Analysis1 ◇
GBPAUD - Daily 4/12/2006 Open 2.3839, Hi 2.4013, Lo 2.3823, Close 2.3881 (0.2%)

Rules

Four candle reversal pattern that is bullish in a downtrend

First three candles are black with consecutive lower lows

Fourth candle is large white candle

Fourth candle opens below previous candle close and closes above first candle's open.

Notes

Associated with Charles Bulkowski

Last candle spans most of the price action of last 3 days

Another rare pattern

Our Formula

Bullish Three Line Strike
$(O3>C3)$ AND $(O2>C2)$ AND $(O1>C1)$
AND $(L1<L2)$ AND $(L2<L3)$ AND

$(O<C1)$ AND $(C>O3)$

Results

Testing the three line strike pattern on a selection of 21 markets produced an average gain of 0.04% with a 1-day holding period measured from close to close.

In stocks, the pattern lost an average of -0.19% per trade with a poor win rate of 43%.

This pattern also performed poorly with a 3-day holding period and did not do much better with a 5-day holding period.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Nikkei 225	SNI__CCB	2	1.47	100
Euro Stoxx	ESX__CCE	4	1.04	75
Live Cattle	LC___CCE	2	0.67	100
USDCHF	USDCHF	2	0.62	100
E-Mini S&P 500	ES___CCE	4	0.58	100
Silver	SI2__CCB	2	0.42	100
Natural Gas	NG2__CCE	4	0.39	100
GBPUSD	GBPUSD	3	0.33	33.33
Corn	C2___CCE	4	0.23	50
USDCAD	USDCAD	5	0.21	60
Gold	GC2__CCE	1	0.09	100
Crude Oil	CL2__CCE	2	-0.04	50
EURUSD	EURUSD	5	-0.07	60
Sugar	SB2__CCE	1	-0.12	0
USDJPY	USDJPY	5	-0.18	40
Euro-Bund	GBL__CCE	2	-0.31	50
FTSE 100	LFT__CCB	3	-0.31	0
5-Year Note	FV2__CCE	3	-0.35	0
10-Year Note	TY2__CCB	5	-0.36	20
AUDUSD	AUDUSD	1	-0.55	0
Copper HG	HG2__CCE	1	-2.85	0
Average		**2.90**	**0.04**	**54.21**
Benchmark Results		83888	0.01	50.54

Universe	# Trades	Avg % P/L	% Winners
S&P100	**200**	**-0.19**	**43.00**
Benchmark Results	390557	0.04	50.26

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Nikkei 225	SNI__CCB	2	4.11	100
Live Cattle	LC___CCB	2	2.11	100
Gold	GC2__CCE	1	1.06	100
USDCAD	USDCAD	5	0.86	100
Euro Stoxx	ESX__CCB	4	0.82	50
E-Mini S&P 500	ES___CCB	4	0.74	75
Natural Gas	NG2__CCE	4	0.37	50
GBPUSD	GBPUSD	3	0.34	66.67
EURUSD	EURUSD	5	-0.09	60
USDJPY	USDJPY	5	-0.16	60
Euro-Bund	GBL__CCB	2	-0.18	50
Sugar	SB2__CCB	1	-0.36	0
5-Year Note	FV2__CCB	3	-0.51	33.33
USDCHF	USDCHF	2	-0.53	0
AUDUSD	AUDUSD	1	-0.62	0
10-Year Note	TY2__CCB	5	-0.75	40
Corn	C2___CCB	4	-0.94	50
Crude Oil	CL2__CCB	2	-1.36	50
FTSE 100	LFT__CCB	3	-1.43	0
Silver	SI2__CCB	2	-1.71	50
Copper HG	HG2__CCE	1	-1.96	0
Average		**2.90**	**-0.01**	**49.29**
Benchmark Results		27971	0.02	51.93

Universe	# Trades	Avg % P/L	% Winners
S&P100	**200**	**-0.24**	**46.00**
Benchmark Results	130417	0.11	51.88

You can see that with a 10-day holding period, the three line strike preceded an average gain of 0.49% across our selection of 21 markets with a 59% win rate.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Nikkei 225	SNI__CCB	2	3.49	100
Euro Stoxx	ESX__CCB	4	2.35	75
Gold	GC2__CCB	1	1.7	100
Live Cattle	LC___CCB	2	1.66	100
USDCAD	USDCAD	5	0.72	100
USDJPY	USDJPY	5	0.61	60
Crude Oil	CL2__CCB	2	0.61	50
GBPUSD	GBPUSD	3	0.58	66.67
E-Mini S&P 500	ES___CCB	4	0.03	75
Sugar	SB2__CCB	1	0	0
USDCHF	USDCHF	2	-0.07	50
EURUSD	EURUSD	5	-0.1	80
Natural Gas	NG2__CCB	4	-0.14	50
5-Year Note	FV2__CCB	3	-0.2	33.33
AUDUSD	AUDUSD	1	-0.33	0
10-Year Note	TY2__CCB	5	-0.52	60
Euro-Bund	GBL__CCB	2	-0.88	0
Corn	C2___CCB	4	-1.39	25
FTSE 100	LFT__CCB	3	-1.67	0
Silver	SI2__CCB	2	-3.1	0
Copper HG	HG2__CCB	1	-3.29	0
Average		**2.90**	**0.00**	**48.81**
Benchmark Results		16784	0.04	51.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**199**	**-0.07**	**50.75**
Benchmark Results		78331	0.18	52.98

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Euro Stoxx	ESX__CCB	4	5.18	50
Nikkei 225	SNI__CCB	2	4.67	100
Gold	GC2__CCB	1	4.08	100
AUDUSD	AUDUSD	1	1.96	100
Silver	SI2__CCB	2	1.23	50
USDCHF	USDCHF	2	1.21	100
USDCAD	USDCAD	5	1.18	80
FTSE 100	LFT__CCB	3	0.99	100
Crude Oil	CL2__CCB	2	0.59	50
GBPUSD	GBPUSD	3	0.55	66.67
Live Cattle	LC___CCB	2	0.44	100
E-Mini S&P 500	ES___CCB	4	0.35	75
USDJPY	USDJPY	5	0.31	60
5-Year Note	FV2__CCB	3	-0.36	66.67
Euro-Bund	GBL__CCB	2	-0.42	0
10-Year Note	TY2__CCB	5	-0.55	60
EURUSD	EURUSD	5	-0.58	20
Natural Gas	NG2__CCB	4	-0.74	25
Corn	C2___CCB	4	-1.36	25
Sugar	SB2__CCB	1	-2.51	0
Copper HG	HG2__CCB	1	-5.87	0
Average		**2.90**	**0.49**	**58.49**
Benchmark Results		8396	0.07	52.73

Universe		# Trades	Avg % P/L	% Winners
S&P100		**199**	**-0.29**	**48.74**
Benchmark Results		39257	0.32	54.03

In stocks, we saw an average loss of -0.29% with a 49% win rate.

This is another rare signal. We saw a couple of good results in the futures but there is not enough evidence to make this pattern one to watch.

Piercing Line

The piercing line candlestick is a two candle reversal pattern that is bullish.

The first candle is a black down candle and the second candle is a white up candle. The second candle must open lower than the previous candle's close and the second candle must close above the previous candle mid-point, but below the previous candle's open.
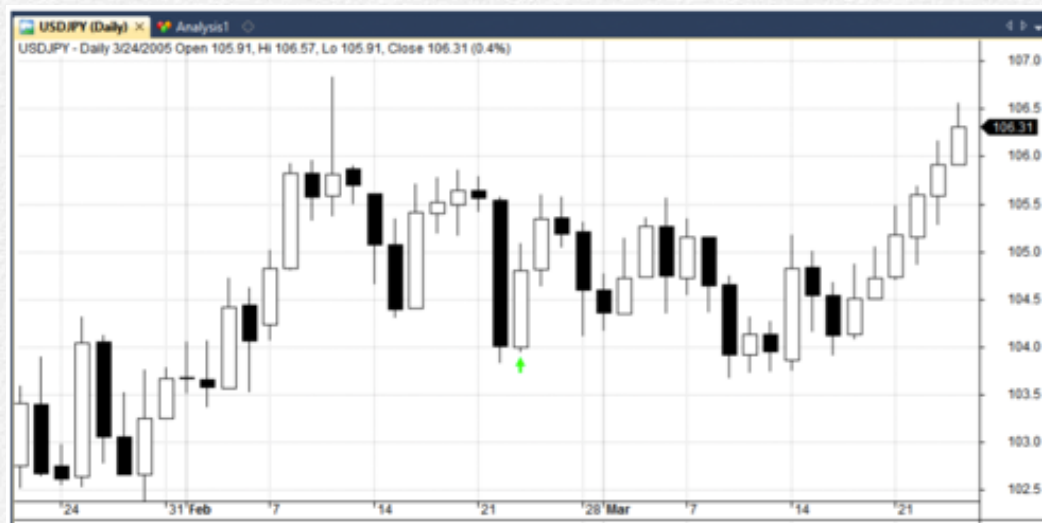

So in this context, the second candle is piercing the body of the first candle. And this signal is stronger when the candle closes near its highs.

Rules

Two candle reversal pattern that is bullish

First candle is black down candle

Second candle is white up candle

USDJPY (Daily) ✕ Analysis1

USDJPY - Daily 3/24/2005 Open 105.91, Hi 106.57, Lo 105.91, Close 106.31 (0.4%)

Second candle must open lower than previous candle close

Second candle must close above previous candle mid point but below previous candle open

Notes

Candle must "pierce" prior candle body

Stronger when candle closes near its highs

Our Formula

Piercing Line
(C1<O1) AND (((O1+C1)/2)<C) AND
(O<C) AND (O<C1) AND (C<O1)

Results

You can see from the number of trades that this is a frequent pattern. We saw 96 piercing line signals in the USDCAD currency pair and 83 in cable between 2000 and 2016.

Buying the market on the close of a piercing line pattern and holding for one day produced an average loss of -0.07% across our 21 markets with an average win rate of 47%. And it produced an average gain of 0.10% across our S&P 100 universe of stocks.

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCE	64	0.12	46.88
Corn	C2___CCE	61	0.08	39.34
USDCAD	USDCAD	96	0.07	53.13
GBPUSD	GBPUSD	83	0.05	56.63
Sugar	SB2__CCE	53	0.03	50.94
5-Year Note	FV2__CCB	71	0.03	53.52
Live Cattle	LC___CCE	48	0.02	47.92
10-Year Note	TY2__CCE	73	0.01	57.53
Euro-Bund	GBL__CCE	66	0	56.06
Copper HG	HG2__CCE	74	-0.01	45.95
USDJPY	USDJPY	74	-0.02	44.59
EURUSD	EURUSD	85	-0.06	48.24
Natural Gas	NG2__CCE	73	-0.09	46.58
AUDUSD	AUDUSD	83	-0.1	48.19
E-Mini S&P 500	ES___CCE	72	-0.15	38.89
USDCHF	USDCHF	80	-0.17	41.25
Nikkei 225	SNI__CCB	58	-0.18	46.55
Crude Oil	CL2__CCE	85	-0.22	37.65
FTSE 100	LFT__CCB	60	-0.22	45
Euro Stoxx	ESX__CCE	50	-0.23	36
Silver	SI2__CCB	65	-0.45	40
Average		**70.19**	**-0.07**	**46.71**
Benchmark Results		83888	0.01	50.54

Universe		# Trades	Avg % P/L	% Winners
S&P100		**5521**	**0.10**	**50.14**
Benchmark Results		390557	0.04	50.26

With a 3-day holding period, the pattern preceded an average loss of -0.07% in our 21 markets and a gain of 0.18% in stocks with a 53% win rate.

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCE	63	0.4	63.49
Corn	C2___CCB	58	0.29	44.83
USDCAD	USDCAD	93	0.16	52.69
Crude Oil	CL2__CCB	85	0.12	50.59
5-Year Note	FV2__CCB	70	0.12	58.57
10-Year Note	TY2__CCB	72	0.11	58.33
Euro-Bund	GBL__CCB	66	0.11	56.06
Live Cattle	LC___CCB	48	0.08	52.08
E-Mini S&P 500	ES___CCB	72	0.05	56.94
Nikkei 225	SNI__CCB	56	0.05	53.57
FTSE 100	LFT__CCB	57	0.02	49.12
USDJPY	USDJPY	73	0.01	53.42
GBPUSD	GBPUSD	83	-0.05	49.4
EURUSD	EURUSD	79	-0.12	43.04
Copper HG	HG2__CCE	73	-0.13	52.05
AUDUSD	AUDUSD	81	-0.23	45.68
USDCHF	USDCHF	77	-0.25	40.26
Sugar	SB2__CCB	53	-0.27	37.74
Silver	SI2__CCB	64	-0.41	39.06
Natural Gas	NG2__CCE	72	-0.51	41.67
Euro Stoxx	ESX__CCB	49	-0.93	44.9
Average		**68.76**	**-0.07**	**49.69**
Benchmark Results		27971	0.02	51.93

Universe		# Trades	Avg % P/L	% Winners
S&P100		**5434**	**0.18**	**52.63**
Benchmark Results		130417	0.11	51.88

The pattern does not do well in futures but it did ok in stocks with a 5-day or 10-day holding period.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCE	59	0.44	59.32
FTSE 100	LFT__CCB	55	0.4	56.36
Corn	C2___CCE	51	0.33	54.9
Live Cattle	LC___CCE	47	0.32	55.32
10-Year Note	TY2__CCB	68	0.25	55.88
Euro-Bund	GBL__CCE	65	0.14	52.31
5-Year Note	FV2__CCB	68	0.1	52.94
E-Mini S&P 500	ES___CCE	70	0.05	55.71
Euro Stoxx	ESX__CCE	47	0.03	53.19
USDJPY	USDJPY	72	-0.02	45.83
USDCAD	USDCAD	89	-0.02	41.57
Crude Oil	CL2__CCE	80	-0.05	50
EURUSD	EURUSD	78	-0.07	50
GBPUSD	GBPUSD	80	-0.08	47.5
Nikkei 225	SNI__CCB	52	-0.15	57.69
AUDUSD	AUDUSD	76	-0.27	43.42
Natural Gas	NG2__CCE	70	-0.27	48.57
Sugar	SB2__CCE	51	-0.27	47.06
Copper HG	HG2__CCE	72	-0.41	47.22
USDCHF	USDCHF	76	-0.43	39.47
Silver	SI2__CCB	61	-0.82	44.26
Average		**66.05**	**-0.04**	**50.41**
Benchmark Results		16784	0.04	51.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**5283**	**0.21**	**52.41**
Benchmark Results	78331	0.18	52.98

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCE	52	0.87	57.69
Corn	C2___CCB	50	0.76	52
Live Cattle	LC___CCB	47	0.49	68.09
E-Mini S&P 500	ES___CCB	66	0.48	62.12
Copper HG	HG2__CCE	63	0.43	58.73
10-Year Note	TY2__CCB	61	0.24	50.82
Euro-Bund	GBL__CCE	63	0.22	52.38
5-Year Note	FV2__CCB	63	0.21	57.14
GBPUSD	GBPUSD	72	0.18	62.5
USDCAD	USDCAD	83	0.13	53.01
FTSE 100	LFT__CCB	49	0.12	53.06
USDJPY	USDJPY	64	0.11	51.56
Crude Oil	CL2__CCB	71	-0.2	46.48
Sugar	SB2__CCB	49	-0.2	48.98
EURUSD	EURUSD	72	-0.2	44.44
AUDUSD	AUDUSD	73	-0.22	42.47
Nikkei 225	SNI__CCB	50	-0.35	46
Natural Gas	NG2__CCE	65	-0.47	55.38
USDCHF	USDCHF	64	-0.52	39.06
Euro Stoxx	ESX__CCB	46	-0.65	36.96
Silver	SI2__CCB	58	-1.33	41.38
Average		**61.00**	**0.00**	**51.44**
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	**4928**	**0.28**	**53.15**
Benchmark Results	39257	0.32	54.03

With a 10-day holding period it preceded an average gain of 0.28% with a win rate of 53% across 4900 trades.

The piercing line is a frequent pattern but it does not show a huge edge and is probably worth ignoring.

Dark Cloud Cover

The dark cloud cover candlestick pattern is the opposite of the piercing line.

This is a two candle reversal pattern that is bearish when it appears in an uptrend.

The first candle is a white up candle and the second candle is a black down candle. The second candle must open higher than the previous candle close and the second candle must close below the previous candle mid-point but also above the previous candle open.

In this way, the second candle is piercing into the body of the first candle and it suggests that the market is switching from uptrend to downtrend. This pattern is also stronger when the second candle closes near it's lows.

AAPL (Daily) × Analysis1
AAPL - Daily 1/13/2015 Open 108.972, Hi 110.312, Lo 106.507, Close 107.789 (0.9%)

Notes

Candle must "pierce" prior candle body

Stronger when candle closes near its lows

Opposite of the piercing line

Our Formula

Dark Cloud Cover
(C1>O1) AND ((C1+O1)/2)>C AND
(O>C) AND (O>C1) AND (C>O1) AND

Uptrend

Rules

Two candle reversal pattern that is bearish

Should appear in uptrend

First candle is white up candle

Second candle is black down candle

Second candle must open higher than previous candle close

Second candle must close below previous candle mid point but above previous candle open

Results

Shorting the dark cloud cover candlestick pattern was not found to be a profitable indication of a reversal.

As you can see from looking over the tables of results, the pattern rarely produced a profitable result. It's fair to say that the dark cloud cover pattern is one to forget about.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Silver	SI2__CCB	12	0.6	50
Corn	C2___CCB	5	0.57	60
EURUSD	EURUSD	9	0.47	66.67
Copper HG	HG2__CCB	13	0.15	46.15
Gold	GC2__CCB	17	0.11	52.94
10-Year Note	TY2__CCB	17	0.04	41.18
FTSE 100	LFT__CCB	11	0.03	63.64
5-Year Note	FV2__CCB	21	0.01	57.14
AUDUSD	AUDUSD	13	0	38.46
Nikkei 225	SNI__CCB	13	-0.03	30.77
USDJPY	USDJPY	7	-0.04	28.57
Euro-Bund	GBL__CCB	18	-0.05	38.89
Natural Gas	NG2__CCB	27	-0.07	55.56
GBPUSD	GBPUSD	14	-0.11	35.71
USDCHF	USDCHF	18	-0.13	50
USDCAD	USDCAD	13	-0.15	38.46
Live Cattle	LC___CCB	26	-0.22	30.77
Euro Stoxx	ESX__CCB	13	-0.22	38.46
E-Mini S&P 500	ES___CCB	10	-0.27	40
Crude Oil	CL2__CCB	15	-0.39	33.33
Sugar	SB2__CCB	19	-0.44	42.11
Average		**14.81**	**-0.01**	**44.71**
Benchmark Results		83888	-0.01	48.19

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1681**	**-0.05**	**46.88**
Benchmark Results	390556	-0.04	48.66

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Corn	C2___CCB	5	1.05	60
Silver	SI2__CCB	12	0.98	50
Natural Gas	NG2__CCB	26	0.74	53.85
EURUSD	EURUSD	8	0.61	50
Nikkei 225	SNI__CCB	13	0.51	38.46
FTSE 100	LFT__CCB	11	0.37	45.45
5-Year Note	FV2__CCB	21	0.23	52.38
Copper HG	HG2__CCB	13	0.14	61.54
USDCAD	USDCAD	13	0.06	38.46
Live Cattle	LC___CCB	25	0.06	44
Euro-Bund	GBL__CCB	18	0.01	50
GBPUSD	GBPUSD	14	-0.04	42.86
AUDUSD	AUDUSD	13	-0.05	38.46
10-Year Note	TY2__CCB	16	-0.17	43.75
Gold	GC2__CCB	17	-0.25	29.41
USDCHF	USDCHF	18	-0.29	33.33
USDJPY	USDJPY	7	-0.38	28.57
Crude Oil	CL2__CCB	15	-0.46	20
Euro Stoxx	ESX__CCB	13	-0.51	38.46
E-Mini S&P 500	ES___CCB	10	-1.13	30
Sugar	SB2__CCB	19	-1.44	26.32
Average		**14.62**	**0.00**	**41.68**
Benchmark Results		27971	-0.02	47.47

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1666**	**-0.14**	**45.98**
Benchmark Results	130414	-0.11	47.58

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Nikkei 225	SNI__CCB	13	0.82	53.85
Live Cattle	LC___CCB	25	0.63	64
FTSE 100	LFT__CCB	11	0.59	54.55
Natural Gas	NG2__CCB	26	0.4	53.85
EURUSD	EURUSD	8	0.24	75
Euro Stoxx	ESX__CCB	13	0.23	61.54
5-Year Note	FV2__CCB	21	0.18	52.38
Euro-Bund	GBL__CCB	18	-0.07	55.56
USDJPY	USDJPY	7	-0.09	42.86
10-Year Note	TY2__CCB	16	-0.12	43.75
Silver	SI2__CCB	12	-0.12	33.33
USDCHF	USDCHF	18	-0.13	55.56
Crude Oil	CL2__CCB	15	-0.18	53.33
GBPUSD	GBPUSD	14	-0.25	28.57
USDCAD	USDCAD	13	-0.27	61.54
Sugar	SB2__CCB	18	-0.39	33.33
AUDUSD	AUDUSD	13	-0.47	38.46
Copper HG	HG2__CCB	13	-0.52	46.15
E-Mini S&P 500	ES___CCB	10	-0.7	20
Gold	GC2__CCB	17	-0.74	35.29
Corn	C2___CCB	5	-0.87	60
Average		**14.57**	**-0.09**	**48.71**
Benchmark Results		16784	-0.04	47.58

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1650**	**-0.24**	**46.30**
Benchmark Results	78332	-0.18	46.58

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
FTSE 100	LFT__CCB	11	1.51	54.55
Silver	SI2__CCB	11	1.43	45.45
Natural Gas	NG2__CCB	26	1	57.69
USDJPY	USDJPY	7	0.56	57.14
EURUSD	EURUSD	8	0.42	62.5
USDCHF	USDCHF	17	0.34	52.94
GBPUSD	GBPUSD	13	0.02	53.85
5-Year Note	FV2__CCB	18	-0.04	44.44
Live Cattle	LC___CCB	25	-0.13	48
Euro-Bund	GBL__CCB	18	-0.18	38.89
10-Year Note	TY2__CCB	16	-0.3	43.75
USDCAD	USDCAD	13	-0.48	46.15
AUDUSD	AUDUSD	13	-0.65	38.46
Nikkei 225	SNI__CCB	12	-1.09	50
Gold	GC2__CCB	16	-1.11	25
Euro Stoxx	ESX__CCB	13	-1.28	38.46
Crude Oil	CL2__CCB	15	-1.4	26.67
Sugar	SB2__CCB	15	-1.76	20
Copper HG	HG2__CCB	13	-2.58	38.46
E-Mini S&P 500	ES___CCB	10	-2.65	10
Corn	C2___CCB	5	-2.8	40
Average		**14.05**	**-0.53**	**42.50**
Benchmark Results		8396	-0.07	46.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1605**	**-0.23**	**45.48**
Benchmark Results	39258	-0.32	45.71

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Tweezer Top

Like the dark cloud cover pattern, the tweezer top is another two candle reversal pattern that is bearish when it appears in an uptrend. I've found different interpretations for this pattern, but I think this one works the best.

So, to be a tweezer top, the first candle should be a strong white up candle where the body is more than 50% of the total range.

The second candle high should be equal to the first candle high and it should close below the previous candle's close.

So this pattern signifies a switch in momentum from bulls to bears, where the market has been unable to break above the previous bar's high.

Here you can see an example of the tweezer top pattern in gold. It's noticeable by the fact the high is equal to the previous

high and on this occasion it did mark the beginning of a new down move.

Rules

Two candle reversal pattern that is bearish

Should appear in uptrend

First candle is white up candle

Second candle is black down candle

Second candle should open at same price as previous close

Second candle should close below previous candle's open

Notes

Also strong if candle's have long upper or lower shadows

Signifies a complete switch in momentum

Our Formula

Tweezer Top

(C1>O1) ((C1-O1/(H1-L1)>.5) AND (H==H1) AND (C<C1) AND Uptrend1

Results

The tweezer top pattern is a fairly rare pattern, but it did occur in all of our 21 markets at least once.

However, as you can see as we scroll through the results, the pattern did not pick out reversals all that well.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCE	3	0.71	33.33
Natural Gas	NG2__CCE	5	0.3	80
USDJPY	USDJPY	2	0.19	50
Live Cattle	LC___CCE	4	0.11	50
5-Year Note	FV2__CCB	7	0.02	57.14
USDCHF	USDCHF	2	-0.04	50
10-Year Note	TY2__CCB	8	-0.06	37.5
E-Mini S&P 500	ES___CCE	3	-0.06	33.33
Euro-Bund	GBL__CCE	6	-0.07	50
GBPUSD	GBPUSD	4	-0.07	50
Copper HG	HG2__CCE	5	-0.1	40
Corn	C2___CCE	9	-0.1	55.56
Sugar	SB2__CCE	10	-0.17	30
EURUSD	EURUSD	2	-0.17	0
AUDUSD	AUDUSD	9	-0.19	33.33
USDCAD	USDCAD	3	-0.3	0
Euro Stoxx	ESX__CCE	6	-0.3	33.33
Nikkei 225	SNI__CCB	5	-0.69	20
Crude Oil	CL2__CCE	3	-0.78	33.33
Silver	SI2__CCB	5	-1.05	20
FTSE 100	LFT__CCB	2	-1.16	0
Average		**4.90**	**-0.19**	**36.04**
Benchmark Results		83888	-0.01	48.19

Universe		# Trades	Avg % P/L	% Winners
S&P100		**478**	**0.01**	**46.86**
Benchmark Results		390556	-0.04	48.66

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCE	3	0.68	33.33
Natural Gas	NG2__CCE	5	0.41	60
5-Year Note	FV2__CCB	7	0.21	85.71
GBPUSD	GBPUSD	4	0.17	75
Euro-Bund	GBL__CCB	6	-0.01	66.67
USDCHF	USDCHF	2	-0.02	50
10-Year Note	TY2__CCB	8	-0.02	37.5
Live Cattle	LC___CCB	4	-0.02	50
Corn	C2___CCB	9	-0.08	33.33
E-Mini S&P 500	ES___CCB	3	-0.16	33.33
EURUSD	EURUSD	2	-0.17	0
USDJPY	USDJPY	2	-0.29	0
Euro Stoxx	ESX__CCB	6	-0.38	33.33
FTSE 100	LFT__CCB	2	-0.4	50
Sugar	SB2__CCB	10	-0.43	60
USDCAD	USDCAD	3	-0.45	33.33
AUDUSD	AUDUSD	9	-0.54	22.22
Copper HG	HG2__CCE	5	-0.68	40
Nikkei 225	SNI__CCB	5	-0.8	20
Silver	SI2__CCB	5	-0.92	0
Crude Oil	CL2__CCB	3	-2.01	33.33
Average		**4.90**	**-0.28**	**38.91**
Benchmark Results		27971	-0.02	47.47

Universe		# Trades	Avg % P/L	% Winners
S&P100		**475**	**-0.12**	**49.68**
Benchmark Results		130414	-0.11	47.58

Shorting the tweezer top pattern on the close and holding the trade for 3-days produced an average loss of -0.28% over our 21 markets with an average win rate of only 39%.

In stocks, we saw an average loss of -0.12% with a 50% win rate. The longer holding periods produced even poorer results.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCE	3	3.14	100
Natural Gas	NG2__CCE	5	0.8	60
Silver	SI2__CCB	5	0.56	40
Euro Stoxx	ESX__CCE	6	0.34	50
EURUSD	EURUSD	2	0.2	100
USDJPY	USDJPY	2	-0.04	50
USDCHF	USDCHF	2	-0.07	50
USDCAD	USDCAD	3	-0.09	66.67
Euro-Bund	GBL__CCE	6	-0.18	50
10-Year Note	TY2__CCB	8	-0.21	62.5
5-Year Note	FV2__CCB	7	-0.24	28.57
AUDUSD	AUDUSD	9	-0.28	44.44
GBPUSD	GBPUSD	4	-0.31	50
Sugar	SB2__CCE	10	-0.51	40
Live Cattle	LC___CCE	4	-0.55	0
E-Mini S&P 500	ES___CCE	3	-0.74	33.33
FTSE 100	LFT__CCB	2	-0.99	50
Nikkei 225	SNI__CCB	5	-1.16	40
Copper HG	HG2__CCE	5	-1.28	40
Corn	C2___CCE	9	-1.43	22.22
Crude Oil	CL2__CCE	3	-1.62	33.33
Average		**4.90**	**-0.22**	**48.15**
Benchmark Results		16784	-0.04	47.58

Universe		# Trades	Avg % P/L	% Winners
S&P100		**474**	**-0.04**	**50.00**
Benchmark Results		78332	-0.18	46.58

Shorting the tweezer top pattern and exiting the trade 10 days later produced an average loss of -0.29% in our 21 markets and it produced an average loss of -0.17% in stocks.

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCE	3	3.25	100
Natural Gas	NG2__CCE	5	1.55	60
Nikkei 225	SNI__CCB	5	1.34	60
USDJPY	USDJPY	2	1.21	100
EURUSD	EURUSD	2	0.37	50
Live Cattle	LC___CCB	4	0.02	75
USDCAD	USDCAD	3	-0.02	66.67
AUDUSD	AUDUSD	9	-0.06	44.44
Euro-Bund	GBL__CCB	6	-0.11	50
USDCHF	USDCHF	2	-0.15	0
Silver	SI2__CCB	5	-0.16	20
GBPUSD	GBPUSD	4	-0.21	75
Crude Oil	CL2__CCB	3	-0.41	33.33
10-Year Note	TY2__CCB	7	-0.45	28.57
5-Year Note	FV2__CCB	7	-0.56	14.29
E-Mini S&P 500	ES___CCB	3	-0.63	33.33
FTSE 100	LFT__CCB	2	-0.96	0
Sugar	SB2__CCB	10	-1.27	40
Corn	C2___CCB	9	-1.47	33.33
Euro Stoxx	ESX__CCB	6	-3.07	16.67
Copper HG	HG2__CCE	5	-4.28	20
Average		**4.86**	**-0.29**	**43.84**
Benchmark Results		8396	-0.07	46.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**464**	**-0.17**	**45.26**
Benchmark Results		39258	-0.32	45.71

This is another candlestick pattern that has no edge according to our results. In the next section, we'll be looking at the tweezer bottom.

Tweezer Bottom

The tweezer bottom candlestick pattern is a two candle reversal pattern that is bullish when it appears in a downtrend. And remember that we are defining a downtrend as the presence of a new 10-day low.

To be a tweezer bottom, the first candle should be a strong black down candle whose body is at least 50% of the total range.

The second candle's low should equal the first candle's low it should close above the previous candle's close.

So this emphasises bullishness and a complete switch over from bears to bulls where price was unable to break the previous swing low.

Notes

Also strong if candles have long upper or lower shadows

Signifies a complete switch in momentum

Rare because price needs to open exactly same as previous close

Our Formula

Rules

Two candle reversal pattern that is bullish

Should appear in downtrend

First candle is black down candle

Second candle is white up candle

Second candle should open at same price as previous close

Second candle should close above previous candle's open

Tweezer Bottom

(C1<O1) ((O1-C1/(H1-L1)>.5) AND (L=L1) AND (C>C1) AND Downtrend1

Results

The idea of a tweezer bottom is to go long after the pattern has been identified as it is supposed to predict a bullish move to the upside. So now we have put the pattern into code we can test it on our historical database between 2000 and 2016.

On the left, the table reveals that buying the close of a tweezer bottom pattern and exiting the trade after one day produced an average gain of 0.13% in a selection of 20 different markets with an average win rate of 54%. Our best result came from a trade in Crude oil.

Across 100 US stocks, we didn't do so well and saw an average loss of -0.1% per trade with an average win rate of 45%.

1 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Crude Oil	CL2__CCE	1	1.04	100
Euro Stoxx	ESX__CCE	1	0.75	100
Nikkei 225	SNI__CCB	2	0.6	50
Live Cattle	LC___CCE	7	0.4	71.43
USDCAD	USDCAD	1	0.4	100
Copper HG	HG2__CCE	4	0.35	50
GBPUSD	GBPUSD	4	0.29	50
Natural Gas	NG2__CCE	2	0.18	50
Sugar	SB2__CCE	8	0.13	50
USDCHF	USDCHF	7	0.07	57.14
Corn	C2___CCE	20	0.07	45
10-Year Note	TY2__CCB	1	0	0
FTSE 100	LFT__CCB	0	N/A	N/A
E-Mini S&P 500	ES___CCE	5	-0.02	40
USDJPY	USDJPY	4	-0.02	75
Euro-Bund	GBL__CCE	5	-0.04	60
AUDUSD	AUDUSD	2	-0.06	50
5-Year Note	FV2__CCB	7	-0.06	42.86
Gold	GC2__CCE	2	-0.14	50
EURUSD	EURUSD	4	-0.53	0
Silver	SI2__CCB	3	-0.8	33.33
Average		**4.29**	**0.13**	**53.74**
Benchmark Results		83888	0.01	50.54

Universe	# Trades	Avg % P/L	% Winners
S&P100	**260**	**-0.10**	**45.38**
Benchmark Results	390557	0.04	50.26

With a 3-day holding period we saw an average gain of 0.49% in futures and currencies with an average win rate of 64%. And in stocks we saw an average gain of 0.06% which was worse than our benchmark return.

However, with longer holding periods, the results are much stronger.

3 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
10-Year Note	TY2__CCB	1	2.61	100
Gold	GC2__CCE	2	2.12	100
AUDUSD	AUDUSD	2	1.77	100
Crude Oil	CL2__CCB	1	1.06	100
Copper HG	HG2__CCE	4	0.93	50
Silver	SI2__CCB	3	0.8	33.33
USDCAD	USDCAD	1	0.73	100
Live Cattle	LC___CCB	7	0.62	71.43
E-Mini S&P 500	ES___CCB	5	0.6	60
GBPUSD	GBPUSD	4	0.52	50
Euro-Bund	GBL__CCB	5	0.5	80
USDJPY	USDJPY	4	0.31	75
Corn	C2___CCB	20	0.14	40
Sugar	SB2__CCB	8	0.09	62.5
5-Year Note	FV2__CCB	7	0	57.14
FTSE 100	LFT__CCB	0	N/A	N/A
USDCHF	USDCHF	7	-0.02	57.14
Nikkei 225	SNI__CCB	2	-0.16	50
Natural Gas	NG2__CCE	2	-0.22	50
EURUSD	EURUSD	4	-0.76	50
Euro Stoxx	ESX__CCB	1	-1.87	0
Average		**4.29**	**0.49**	**64.33**
Benchmark Results		27971	0.02	51.93

Universe		# Trades	Avg % P/L	% Winners
S&P100		**258**	**0.06**	**50.00**
Benchmark Results		130417	0.11	51.88

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Gold	GC2__CCE	2	2.48	100
10-Year Note	TY2__CCB	1	2.13	100
AUDUSD	AUDUSD	2	1.39	100
Copper HG	HG2__CCE	4	1.34	50
USDCAD	USDCAD	1	1.04	100
Live Cattle	LC___CCB	7	1.03	100
E-Mini S&P 500	ES___CCB	5	0.96	60
Silver	SI2__CCB	3	0.77	33.33
USDJPY	USDJPY	4	0.5	75
Crude Oil	CL2__CCB	1	0.46	100
Euro-Bund	GBL__CCB	5	0.42	60
GBPUSD	GBPUSD	4	0.24	50
Sugar	SB2__CCB	8	0.16	62.5
USDCHF	USDCHF	7	0.08	57.14
FTSE 100	LFT__CCB	0	N/A	N/A
5-Year Note	FV2__CCB	7	-0.14	28.57
Corn	C2___CCB	19	-0.23	36.84
Natural Gas	NG2__CCE	2	-0.3	0
EURUSD	EURUSD	4	-0.55	50
Nikkei 225	SNI__CCB	2	-1	50
Euro Stoxx	ESX__CCE	1	-1.94	0
Average		**4.24**	**0.44**	**60.67**
Benchmark Results		16784	0.04	51.95

Universe		# Trades	Avg % P/L	% Winners
S&P100		**257**	**0.95**	**53.70**
Benchmark Results		78331	0.18	52.98

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10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
10-Year Note	TY2__CCB	1	3.13	100
Gold	GC2__CCE	2	2.7	50
AUDUSD	AUDUSD	2	2.36	100
USDCAD	USDCAD	1	2.33	100
E-Mini S&P 500	ES___CCB	5	1.68	80
Live Cattle	LC___CCB	7	1.36	85.71
EURUSD	EURUSD	4	1.11	50
Crude Oil	CL2__CCB	1	0.85	100
Copper HG	HG2__CCE	4	0.62	50
Euro-Bund	GBL__CCB	5	0.62	60
Corn	C2___CCB	19	0.31	68.42
USDCHF	USDCHF	7	0.15	42.86
USDJPY	USDJPY	4	0.12	50
Sugar	SB2__CCB	7	0.05	42.86
FTSE 100	LFT__CCB	0	N/A	N/A
5-Year Note	FV2__CCB	7	-0.09	42.86
Silver	SI2__CCB	3	-0.23	33.33
GBPUSD	GBPUSD	4	-0.42	50
Natural Gas	NG2__CCE	2	-0.54	0
Nikkei 225	SNI__CCB	2	-0.61	50
Euro Stoxx	ESX__CCB	1	-1.53	0
Average		**4.19**	**0.70**	**57.80**
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	**257**	**1.70**	**54.09**
Benchmark Results	39257	0.32	54.03

With a 5-day holding period the tweezer bottom preceded an average gain of 0.44% measured from close to close across our 20 markets with a healthy win rate of 61%.

In stocks, we recorded an average gain of 0.96% per trade with a win rate of 54%.

Looking at the 10-day holding period, we saw an average profit of 0.70% in futures and forex with a win rate of 58%. While in our stock universe the pattern produced an average profit of 1.70% per trade with a win rate of 54% across 257 signals. Overall, the tweezer candlestick pattern may offer some clues to a bottom when viewed within the context of a decent time horizon.

However, it is also a rare pattern so some more research may be needed.

Loose Kicker

We saw before that the bullish kicker is a rare pattern and that's because the rules require two long candles with only small shadows, or wicks. In fact, the perfect bullish kicker is a black marubozu followed by a white marubozu, with no wick at all, with the white marubozu opening on a gap up.

However, that's a rare occurrence because markets don't often close at their highest or lowest points so the combination results in fewer signals.

So, instead, I've modified the rules to be more flexible regarding the size of the body and I've made it so that the body of the candle needs to only be one fifth or more of the total range. Whereas before, we needed the body to be at least half of the total range.

So, the first candle will be a down candle and the second candle will be an up candle but the candles don't need to be full marubozus with long bodies.

ORCL (Daily) × Analysis1
ORCL - Daily 3/17/2014 Open 36.6568, Hi 37.3162, Lo 36.6568, Close 37.0641 (1.6%)

Rules

Two candle pattern that is bullish

First candle is down candle

Second candle is up candle

Second candle must open above prior candle's open

Second candle low must be higher than prior candle's high (gap)

Notes

Just the bullish kicker, but less restrictive

Our Formula

Loose Kicker

$$(O1 > C1 \text{ AND } (O1-C1)/(H1-L1) > .2)$$
$$\text{AND } ((C>O) \text{ AND } ((C-O)/(H-L) > .2))$$
$$\text{AND } L > H1;$$

Results

Now, we have modified the original bullish kicker pattern to create the Loose Kicker we can test the pattern and see how it performs on our different securities.

As you can see from the first table on the left, buying the Loose Kicker pattern on the close and holding for 1 day saw an average gain of 0.12% across 15 markets with a win rate of 50%, and in stocks the average gain was 0.04% with a win rate of 48%.

Name	Ticker	# Trades	Avg % P/L	% Winners
AUDUSD	AUDUSD	1	1.27	100
Sugar	SB2__CCB	5	1.01	80
Silver	SI2__CCB	5	0.88	100
Euro Stoxx	ESX__CCB	6	0.4	50
FTSE 100	LFT__CCB	10	0.3	60
Live Cattle	LC___CCB	9	0.26	33.33
Euro-Bund	GBL__CCB	5	0.22	80
Natural Gas	NG2__CCB	18	0.03	50
USDJPY	USDJPY	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
Gold	GC2__CCB	6	-0.01	50
Copper HG	HG2__CCB	14	-0.18	50
10-Year Note	TY2__CCB	1	-0.19	0
Nikkei 225	SNI__CCB	11	-0.29	36.36
5-Year Note	FV2__CCB	2	-0.34	0
Crude Oil	CL2__CCB	6	-0.44	33.33
Corn	C2___CCB	3	-1.06	33.33
Average		**4.86**	**0.12**	**50.42**
Benchmark Results		83888	0.01	50.54

Universe		# Trades	Avg % P/L	% Winners
S&P100		**1086**	**0.04**	**48.43**
Benchmark Results		390557	0.04	50.26

You can see that the Loose Kicker pattern performs better over longer holding periods.

With a 3-day holding period, the pattern saw an average profit of 0.57% per trade with a win rate of 69% across 14 futures markets and one currency pair. In stocks, the pattern saw an average profit of 0.31% per trade across 1000 signals.

Name	Ticker	# Trades	Avg % P/L	% Winners
AUDUSD	AUDUSD	1	3.31	100
Sugar	SB2__CCB	5	1.98	60
Euro Stoxx	ESX__CCB	6	1.74	83.33
Live Cattle	LC___CCB	9	0.96	55.56
Silver	SI2__CCB	5	0.76	60
Copper HG	HG2__CCB	14	0.75	71.43
Natural Gas	NG2__CCB	18	0.42	72.22
Corn	C2___CCB	3	0.38	66.67
Gold	GC2__CCB	6	0.31	66.67
10-Year Note	TY2__CCB	1	0.24	100
5-Year Note	FV2__CCB	2	0.2	100
Euro-Bund	GBL__CCB	5	0.17	80
USDJPY	USDJPY	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
Nikkei 225	SNI__CCB	11	-0.66	36.36
Crude Oil	CL2__CCB	6	-0.99	33.33
FTSE 100	LFT__CCB	10	-1.02	50
Average		**4.86**	**0.57**	**69.04**
Benchmark Results		27971	0.02	51.93

Universe		# Trades	Avg % P/L	% Winners
S&P100		**1082**	**0.31**	**55.36**
Benchmark Results		130417	0.11	51.88

With a 5-day holding period, the pattern preceded an average gain of 0.62% in futures with a win rate of 58%. In stocks we recorded an average profit of 0.59% per trade with a win rate of 59%.

5 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCB	5	3.73	100
AUDUSD	AUDUSD	1	3.7	100
Silver	SI2__CCB	4	1.97	75
Live Cattle	LC___CCB	9	1.06	66.67
Corn	C2___CCB	3	0.8	33.33
Copper HG	HG2__CCB	13	0.73	53.85
Natural Gas	NG2__CCB	17	0.51	47.06
10-Year Note	TY2__CCB	1	0.37	100
Euro-Bund	GBL__CCB	5	0.29	80
Gold	GC2__CCB	6	0.2	16.67
Euro Stoxx	ESX__CCB	6	0.03	50
USDJPY	USDJPY	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
USDCAD	USDCAD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
Crude Oil	CL2__CCB	6	-0.95	33.33
5-Year Note	FV2__CCB	2	-0.98	50
FTSE 100	LFT__CCB	10	-1.05	30
Nikkei 225	SNI__CCB	11	-1.14	27.27
Average		**4.71**	**0.62**	**57.55**
Benchmark Results		16784	0.04	51.95

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1078**	**0.59**	**58.91**
Benchmark Results	78331	0.18	52.98

The pattern also did well with a 10-day holding period.

10 DAY HOLDING PERIOD

Name	Ticker	# Trades	Avg % P/L	% Winners
Sugar	SB2__CCB	5	5.43	100
Corn	C2___CCB	3	3.49	33.33
AUDUSD	AUDUSD	1	1.75	100
Silver	SI2__CCB	4	1.72	100
Copper HG	HG2__CCB	12	1.46	58.33
Euro-Bund	GBL__CCB	5	1.12	80
Euro Stoxx	ESX__CCB	6	0.84	33.33
Natural Gas	NG2__CCB	17	0.22	58.82
Live Cattle	LC___CCB	9	0.2	55.56
Nikkei 225	SNI__CCB	10	0.16	60
USDCAD	USDCAD	0	N/A	N/A
USDCHF	USDCHF	0	N/A	N/A
GBPUSD	GBPUSD	0	N/A	N/A
USDJPY	USDJPY	0	N/A	N/A
E-Mini S&P 500	ES___CCB	0	N/A	N/A
EURUSD	EURUSD	0	N/A	N/A
10-Year Note	TY2__CCB	1	-0.01	0
5-Year Note	FV2__CCB	2	-0.23	50
Gold	GC2__CCB	6	-0.23	33.33
Crude Oil	CL2__CCB	6	-0.95	33.33
FTSE 100	LFT__CCB	10	-3.17	30
Average		**4.62**	**0.79**	**55.07**
Benchmark Results		8396	0.07	52.73

Universe	# Trades	Avg % P/L	% Winners
S&P100	**1060**	**0.40**	**54.72**
Benchmark Results	39257	0.32	54.03

In futures we recorded an average gain of 0.79% per trade.

So, I think you can see that modifying the original bullish kicker pattern gave us much better results.

Even though this is still a fairly rare signal, we have increased the number of trades significantly by loosening the candle criteria and we also saw more profit potential on average per trade.

The Loose Kicker, therefore, is another pattern that we might want to keep an eye out for.

Observations

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What We Have Learnt

The Best Candlestick Pattern

So we've now been through all of the candlestick patterns and in this section we're going to make some conclusions and talk about some of the things we've learnt. And we're also going to talk about some of the things that these tests haven't taught us.

So after going through the results, I think that we can come to a number of conclusions.

First of all, I think we can say that the bearish candlestick patterns performed less well than the bullish candlesticks, especially in stocks. And this is what we would probably expect. Stocks have an overall tendency to go up over the long term, so it's not surprising that the short selling strategies performed less well.

Second, it's clear that there is a lot of subjectivity in the definitions of candlesticks, ranging from the definition of a trend, the length of the candle, etc.

It seems that many of the popular candlestick patterns are actually extremely rare signals and that makes analysis of these patterns particularly difficult. Some of the patterns that require gaps, for example, gave no signals in over 15 years of data on some instruments.

Thirdly, I think we can make some fairly bold statements which in my opinion challenge what most people think about the candlestick patterns. Some of the most popular patterns were found to be barely profitable, some lost money.

And, from what we have seen in these tests, the number one best performing candlestick was the humble Inverted Hammer. In the past, the inverted hammer has occasionally been mistaken for a bearish signal, because of the long upper shadow and the closing near the lows of the price range.

However, we have shown that the inverted hammer is in fact a very bullish signal and, based on trade frequency and profit potential, it was the best pattern that we tested.

Lastly, I think we've also shown that there exist plenty of inherent differences between different futures markets and stocks. Because we often received different results, such as in the three white soldiers pattern.
And this means it's unwise to apply a one-size fits all approach to your trading. For instance, we found some evidence that stocks do not trend quite as smoothly as some futures products. So it would be more reasonable to apply different strategies to different securities.

What We Haven't Learnt

So let's take a look now at some conclusions that we can't draw from these tests.

First off all, we can't say how these patterns might perform on different timeframes. These tests have all been on daily data. So we don't know how well they perform on intraday charts or weekly charts or monthly charts, for example.
For all we know, these patterns might perform completely different on different timeframes. And that's something we might want to look into later on.

Secondly, we haven't included any money management rules or other technical indicator which could clearly combine to produce much different results. The goal was to take each pattern and test it to see its stripped down potential, free of any indicator or rules and we've achieved that.

So that means to say that the results we have come up with are not set in stone. They could easily be improved by combining other rules and analysis. And, in a later section, I will do just that when I put the patterns into a complete trading strategy with money management and portfolio rules.

Overall, most analysts will say that candlesticks are more of a tool for confirmation rather than tools to make straight trade decisions and I think this analysis backs that up. Candlesticks are

certainly handy but most of the patterns are not going to make anybody rich.

Limitations of the computer

Lastly, I'd like to say a few words about the limitations of back-testing and from using a computer.

First of all, because of the subjective nature of the patterns, as have discussed already, programming them into code is difficult. And in some cases, I think you will probably agree that the computer doesn't always do a good job of finding the right patterns, even when they are properly defined.

Often, the human eye is a much better judge of the strength of a pattern and is much more able to spot them in the first place. Second, although we've done this analysis and we've shown how the patterns have performed over the past data we cannot necessarily make any inferences about the future. Back-testing is a very useful tool but it only shows us the past.

Financial markets are always changing so these patterns may perform completely different in the future than they have before. Although I do think it's unlikely that we will see any of the unprofitable candles become strong performers going forward because as markets become more efficient, profitable patterns will get arbitraged away.

So, these are just some considerations and some comments about the analysis so far. We've been through the main part of the eBook now.

In the next section, we're going to go over some more ideas about how to use candlestick patterns.

Confirmations & Combinations

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Other Ways To Use Candlesticks

1.Support/Resistance Levels

2.Other Technical Indicators

3. Volume

4. News

More ideas for trading with candlesticks

Our analysis so far has centred around the candlestick patterns themselves and we have shown the stripped down potential of every candlestick pattern that we've tested.

But it's also true that candlestick patterns are recommended as a form of confirmation, rather than as buy and sell signals. In other words, a candlestick pattern can be used to help confirm some other trading idea or give more confidence to a trade signal. So we can get creative now and think of some different ways we can use candlesticks and some techniques that might work well together.

1. Support/ Resistance Levels

So, one of the most obvious things we can do when we trade candlesticks and how we might be able to improve their performance is to combine them with relevant support and resistance levels.

Some traders might refer to swing highs or swing lows, which are recent peaks or troughs where the market recently traded.

Or there might be a head and shoulders level, a double 00 level or some kind of double top or double bottom pattern, or we might simply have found a level that the market has traded at a number of times in the past.

When we see the market hit a key support or resistance level and we also see a candlestick pattern that supports that level, perhaps an inverted hammer or a tweezer top, then we can be more confident that the market will reverse off that level. Also, in intraday trading, traders might look at pivot levels (which are calculated using the previous days price range). Conversely, if we hit a strong support level, and the market drops through it with a strong marubozu or engulfing candle, then we can be more confident that the reversal will fail and the market will break out, or trade in a continuation of the trend. Now in our tests, we've mainly looked at 10-day uptrends and downtrends, because that"s how the signals are presented in most books. However, there are clearly many scenarios to contend with and every trading setup is going to be different. But one of the problems with support and resistance levels is that they can be subjective and personal to the trader so they are not easy to back-test.

Nevertheless, once you know what the candles look like you can start to spot them and learn to read the market.

Then, you can keep track of your own pattern recognition attempts. Note them down in a trade journal and put them in a spreadsheet. When you have a good enough sample size you can look back and see just how well you were able to spot the reversals... or breakouts.

Looking back on your own trading data is a great way to build confidence in a trading method and improve your trading. So, try to find a profitable pattern once a day, put it in your journal and then note down the trade result. Once you have at least 30 entries, go back and see how well you've done.

2. Other Technical Indicators

Of course, another common way to use candlestick patterns is to combine them with other technical indicators such as moving averages, Bollinger Bands, RSI, trend lines etc.

For example you might see a hammer pattern occurring at the same time as a market drops below a key moving average such as the 200 day moving average.

So this might be a strong sign of reversal.

Because it suggests that traders have seen the market drop below the key 200 day moving average so they've bought it up

and that's why the market has finished back near the open with the lower shadow. So in this case the candle pattern acts as a confirmation of the supporting moving average.

Likewise, Bollinger Bands can be used.

For example you might see a market spike above the top Bollinger Band.

That can be a sign of strength but if the spike is accompanied by a bearish candlestick pattern, perhaps one with a long upper shadow, that is going to be a sign that the market isn't so strong because the price has closed back down near the open and that could therefore be a good reversal indication.

Once again, you can start to record these ideas in a journal and see how good you can get at spotting the price reversals. RSI is another useful technical indicator which indicates how oversold or overbought the market is. So, if you have an oversold market and then you also see a bullish candle pattern such as the inverted hammer, then that might be a stronger signal to go long that it would have been on it's own. Later on, I will put this particular example to the test.

One of the biggest advantages of using candlestick patterns in the first place is because you can combine them with nearly anything. Because they represent naked price action you can pretty much use them with any technical indicator you like.

And as I said already, don't just rely on what the experts say about when to trade a particular pattern... record your trading ideas yourself and then go over how well you would have done.

Being proactive and disciplined in recording your trading is one of the best ways to improve performance.

3. Volume

Another popular combination is to combine your candlestick patterns with volume which simply refers to the number of shares or contracts that changed hands over a trading period.

If you think of a candlestick, such as the bullish engulfing or bearish engulfing pattern, then you can see how volume might benefit your strategy.

For example, a bullish engulfing pattern is supposed to reveal a market where buyers have overpowered the sellers with some force so that the market then moves higher and closes near its highs.

So, think about what it means if we have strong volume or weak volume on an engulfing pattern.

If we have a bullish engulfing pattern on the chart and that is confirmed by strong volume, then that's going to offer confirmation that the pattern is good.

However, if volume is weak, perhaps weaker than the previous bar, then the logic of the bullish engulfing pattern doesn't really stack up. And it suggests that the market doesn't necessarily

have much
support behind it even though the move was up. In this case you might want to reject the buy signal.

4. News

Another option, which is not often talked about, is to combine your candlestick analysis with fundamental events or news releases. And this could be an interesting option for those of you who are looking at intraday trading.

You probably know that news releases or economic events can trigger big price moves when they come out so looking at the price action is a good way of gauging how traders are reacting to the new information.
Often, when there's a big news release, such as non-farm payrolls or a central bank rate, you'll see a wide spinning top or long-legged doji candle on a short-term chart.

And this is because a lot of traders have come together and each one might have a different opinion on the news release. So you get a big group of people buying and selling and the market is effectively in a state of flux, trying to get back to a state of efficiency.

Often, traders will still be processing or listening to the news and unsure about what it means for the market.
But let's say a good piece of news comes out and the market doesn't rally much, in fact, let's say that the market initially spikes up, but then ends up near its lows with a long upper shadow.
Well that might be an extra bearish signal, because we have had bullish news, but the market has shown disapproval in the form of a bearish candlestick formation.

So, essentially, pay attention to the news and most importantly the price action to that news and see whether candlesticks can show you what the market makes of it.

Lots of options

To sum up this section, it's good to be aware how candlesticks act as a visualisation tool of the market. They are extremely good for gauging price action.

Even if you don't trade off candlesticks alone, having knowledge of them then combining them with other factors can help you form a big picture view of the market with which to make your trades.

And as we have seen, there are lots of different ways to combine candlesticks to help you make well-grounded trading decisions.

Conclusions & Cautions

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We're almost at the end of the eBook.

Thanks for hanging in there and going through all of the material that's been presented. I sincerely hope it helps you with your trading and gives you a better understanding of how to use Japanese candlesticks going forward.

This book has been an interesting topic for me and I now have a much better idea of what to expect when I see a particular candlestick pattern on a price chart. I am sure that I will still use candlesticks in my trading as, in my opinion, they are still the best way to visualise price action.

However, I will certainly be more dubious about certain patterns and recognise that many are no better at identifying profitable trades than if you were to flip a coin.

Of course, we have not tested every possibility and no doubt I will receive requests to try various patterns using different combinations of settings or indicators.

It may be worth testing some of these ideas but for the most part, too much testing and too many indicators will bog us down and we will be data mining.

In many instances, I suspect that the human eye does a better job than the computer in identifying the profitable patterns as it is infinitely more complex and nuanced in its ability to spot profitable patterns.

But even if these tests have not been perfect, and even if there are better ways to define each pattern, we still have a much better view of the power of candlesticks now. We have seen the

stripped down potential of the candlestick patterns and I think this information is valuable. We now know that certain patterns are not profitable while others do carry a slight edge.

So, yes. I hope you enjoyed this exploration into Japanese candlesticks and that it will help you going forward.

Best of luck and good trading.