Forex Technical Indicators List

by ForexFlash aka Paul Gold

1. Average True Range (ATR)
2. Bollinger Bands
3. Commodity Channel Index (CCI)
4. Moving Average Convergence Divergence (MACD)
5. Momentum
6. Moving Average
7. Parabolic Time Price SAR
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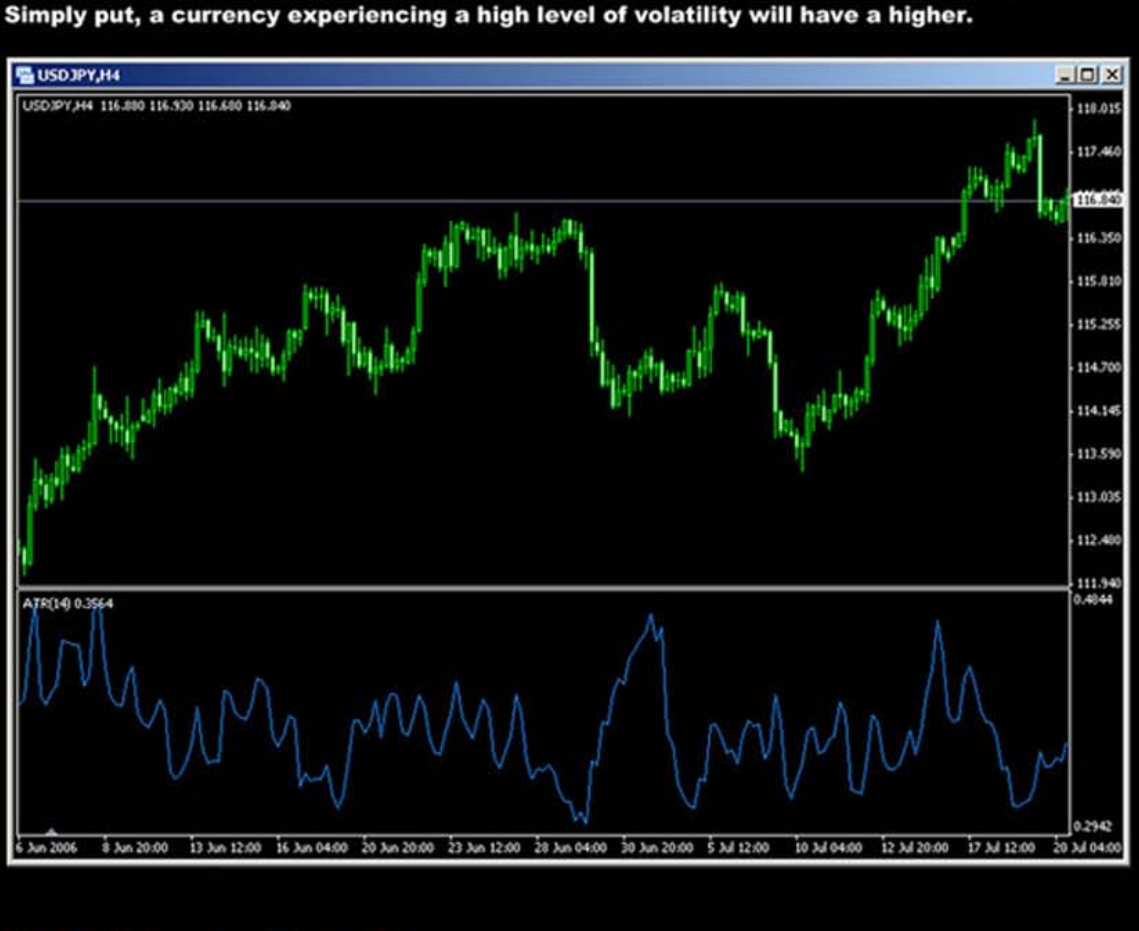
1. Average True Range (ATR)

The True Range indicator is a measure of volatility.

The ATR indicator do the following:
- Current high less the current low.
- The absolute value of the current high less the previous close.
- The absolute value of the current low less the previous close.

The Average True Range is a moving average (generally 14-days) of the True Ranges.
Simply put, a currency experiencing a high level of volatility will have a higher.

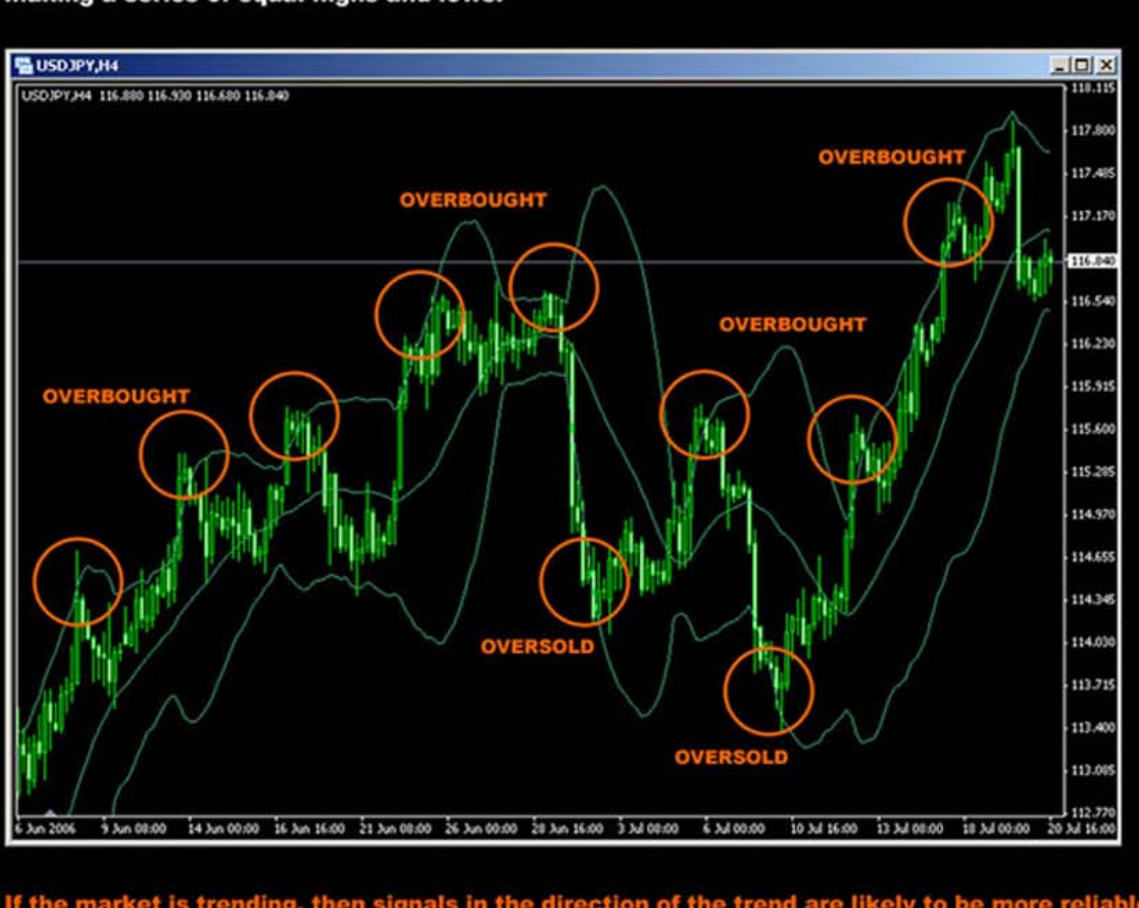


2. Bollinger Bands

Bollinger Bands are charted by calculating a simple moving average of price, then creating two bands a specified number of standard deviations above and below the moving average. You can draw the simple moving average analysis on the same chart as the Bollinger Bands analysis, using the same interval. In addition, Bollinger Bands are usually plotted with a bar analysis so that the proximity of the bands to the prices can be easily observed.

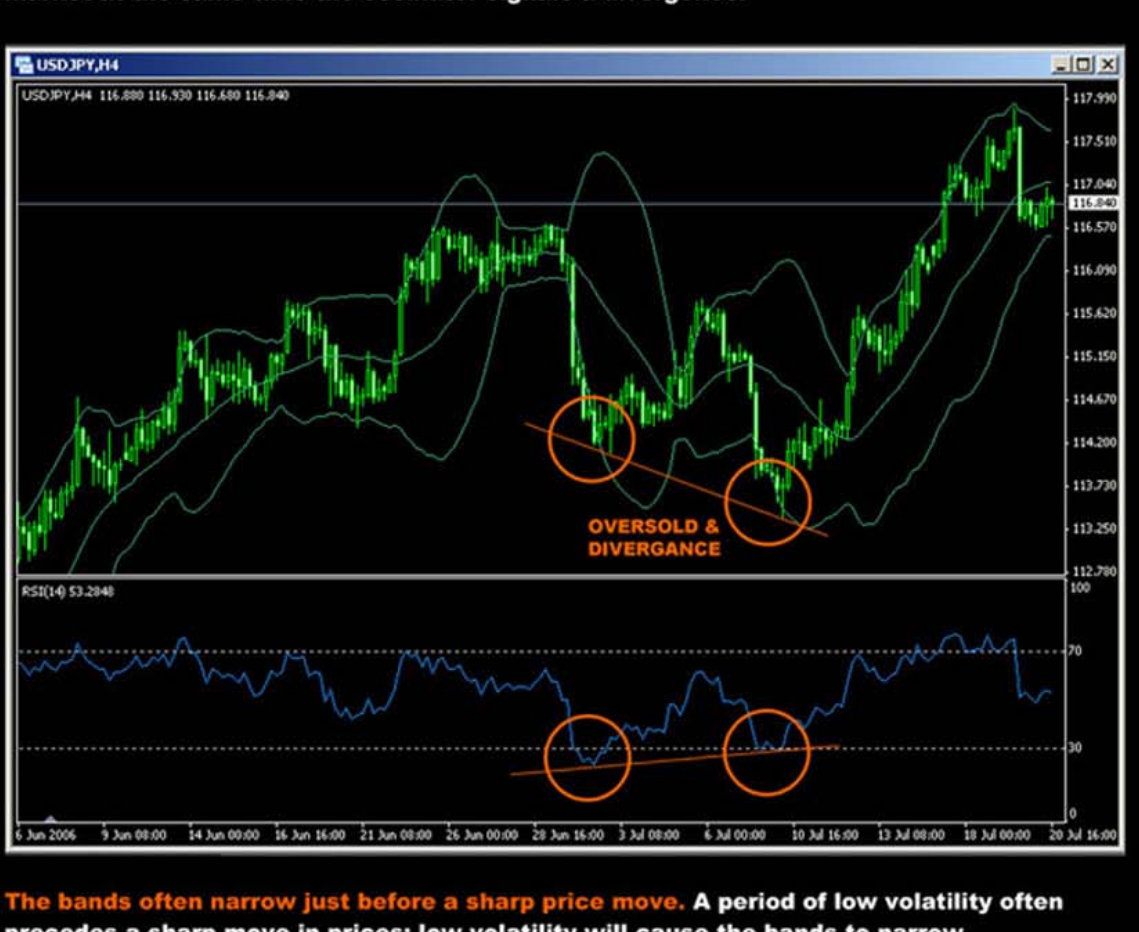
The most common uses of Bollinger Bands are to:
- Identify overbought and oversold markets

An overbought or oversold market is one where the prices have risen or fallen too far and are therefore likely to retrace. Prices near the lower band signal an oversold market and prices near the upper band signal an overbought market.
Overbought and oversold signals are most reliable in a non-trending market where prices are making a series of equal highs and lows.

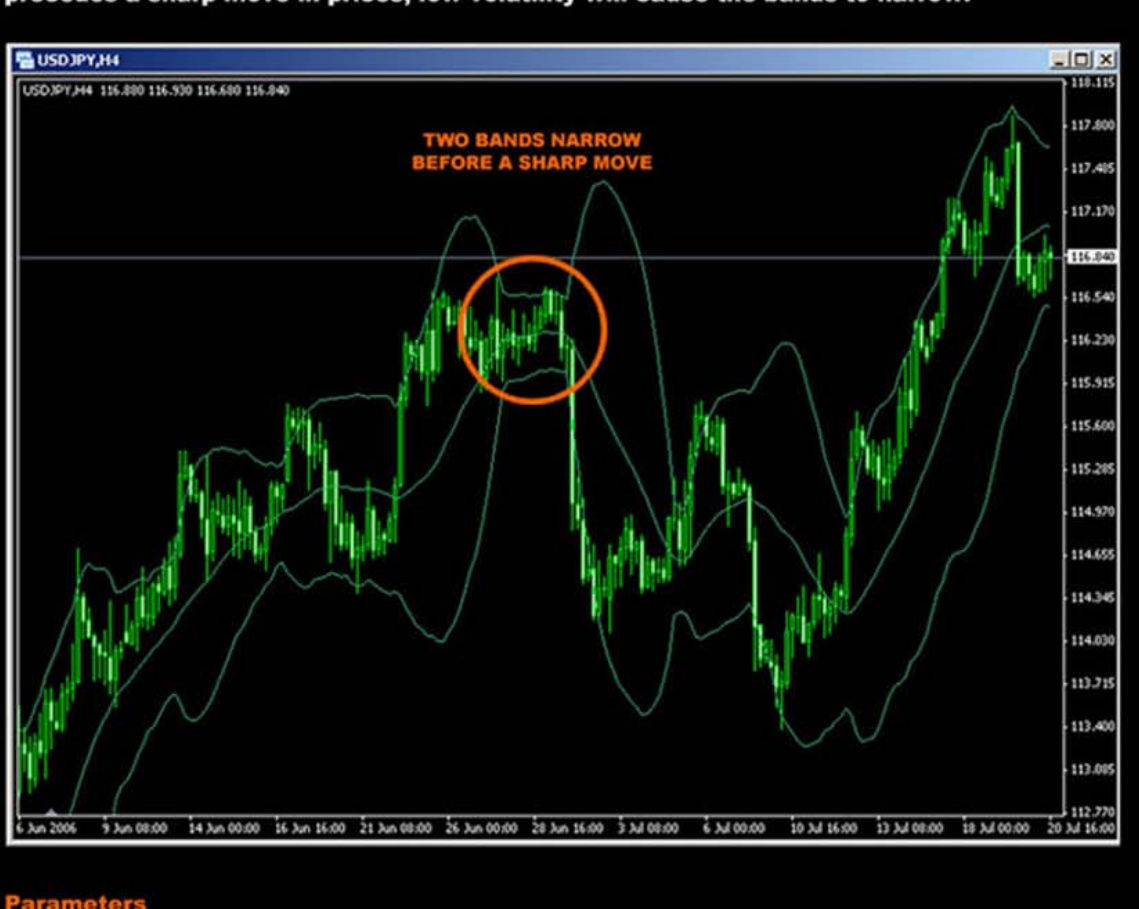


If the market is trending, then signals in the direction of the trend are likely to be more reliable. For example if prices are in an up trend, a safer trade entry may be obtained by waiting for prices to pullback giving an oversold signal and then turn up again.

If you use Bollinger Bands in combination with an oscillator such as Relative Strength Index buy and sell signals are generated when the Bollinger Bands signal an overbought/oversold market at the same time the oscillator signals a divergence.



The bands often narrow just before a sharp price move. A period of low volatility often precedes a sharp move in prices; low volatility will cause the bands to narrow.



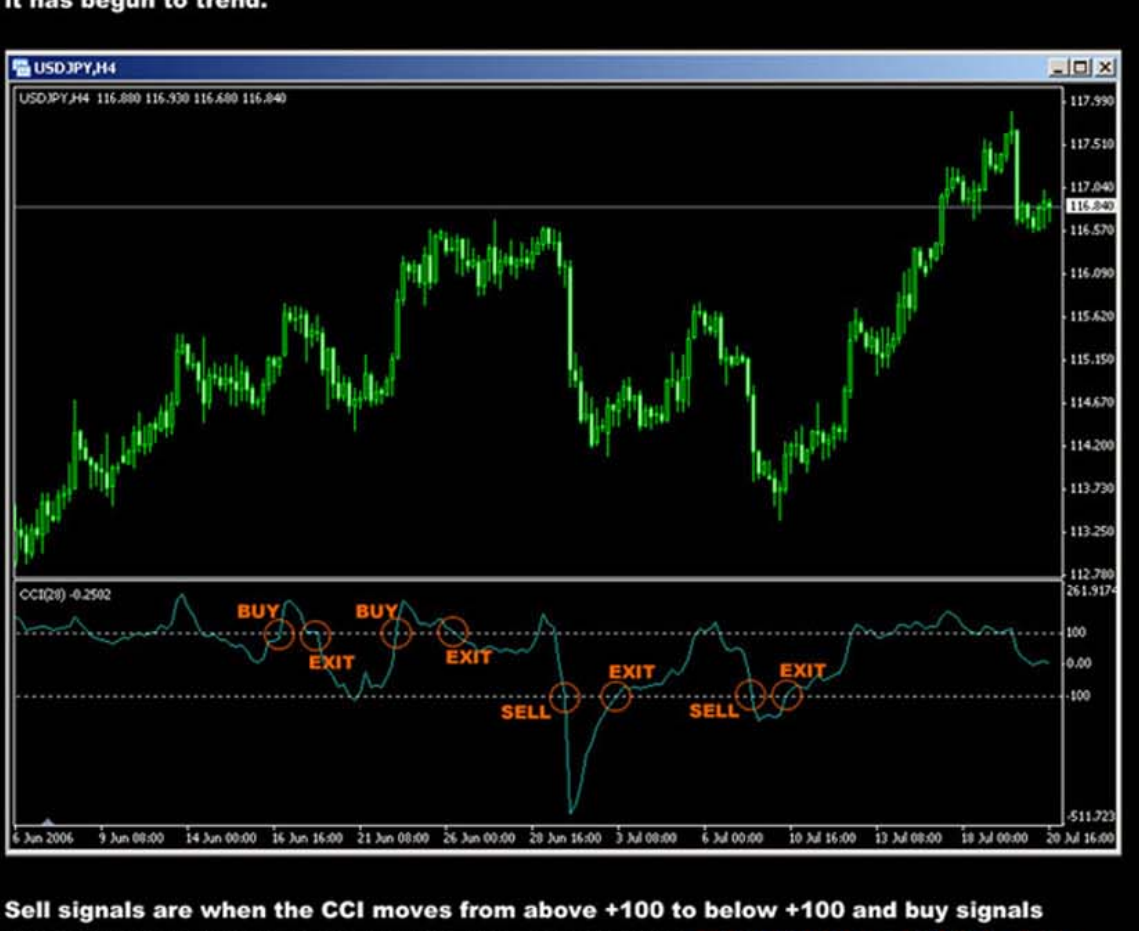
Parameters
The length of the moving average is usually 20 days or less. Bollinger suggested using a moving average that would catch the first retracement of an up move.
Bollinger used a figure of 2 standard deviations in his work, which was in stock trading.
A value of 2 captures about 95% of the variation in price action. Different figures may be more appropriate for other types of markets.

3. Commodity Channel Index (CCI)

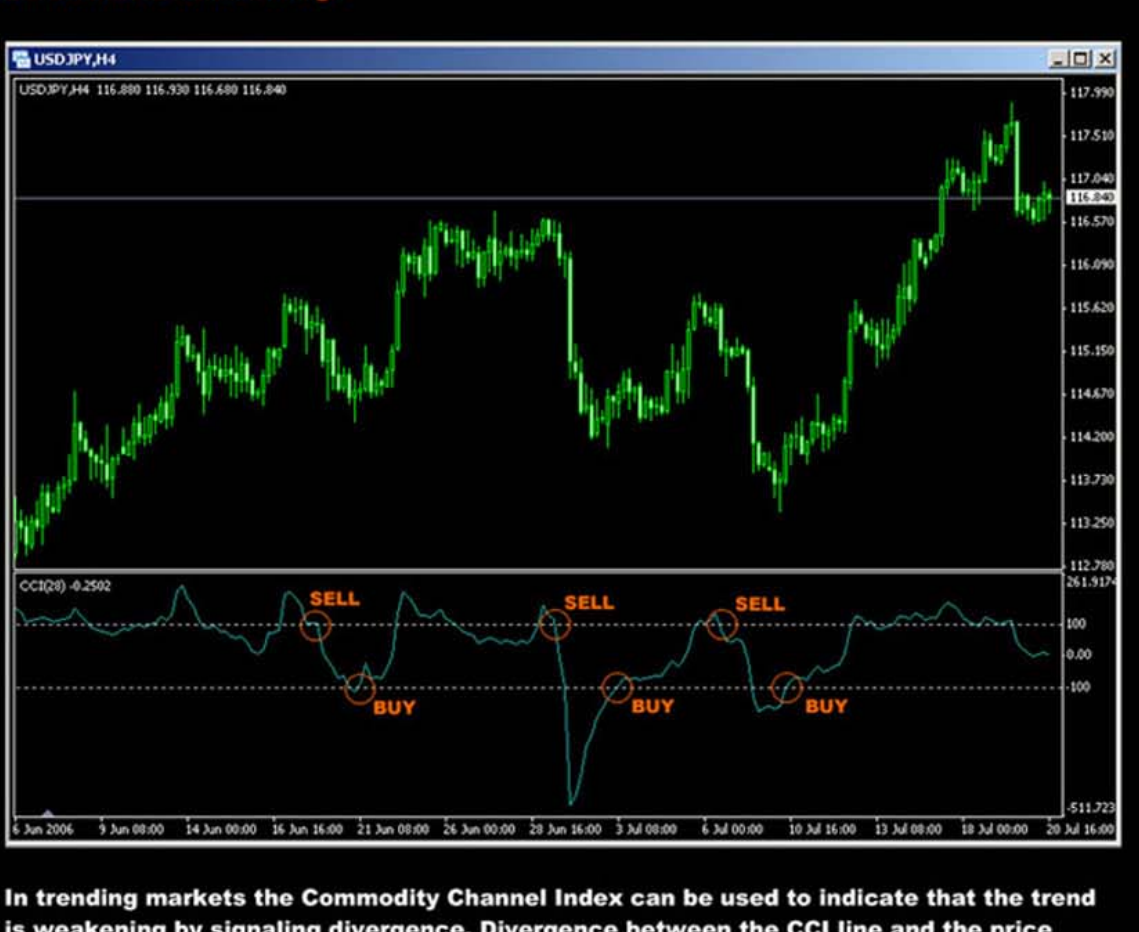
Commodity Channel Index (CCI) is based on the assumption that a perfectly cyclical commodity price approximates a sine wave. Designed to be used with instruments, which have seasonal or cyclical tendencies, CCI is not used to calculate cycle lengths but rather to indicate that a cycle trend is beginning.

The most common uses of Commodity Channel Index are to:
- Indicate breakouts

Buy when the CCI move above +100 and sell when the CCI went below -100.
Exit the trade once the CCI move back within the -100 to +100 bands.
The assumption with this use of CCI is that once an instrument breaks +100 or -100 it has begun to trend.



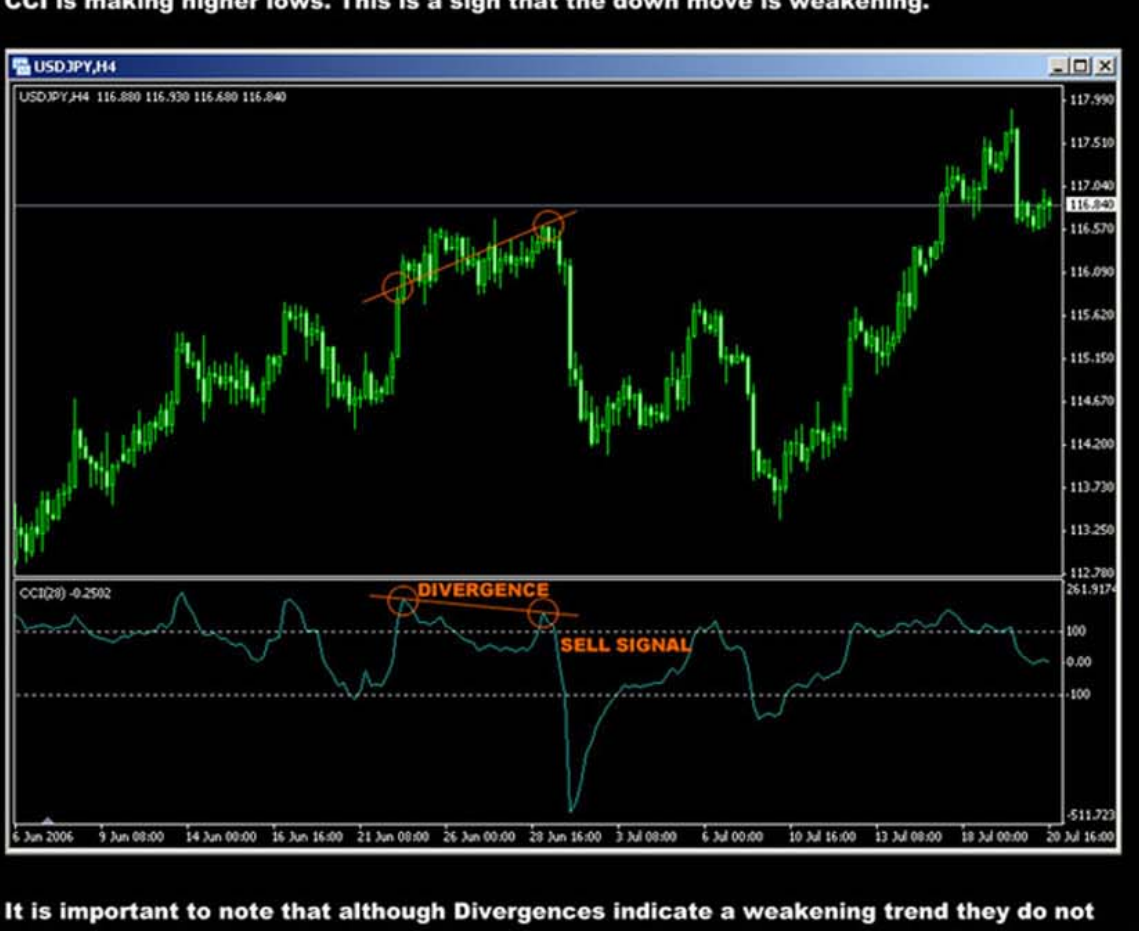
Sell signals are when the CCI moves from above +100 to below +100 and buy signals are when the CCI moves from below -100 to above -100. This method works best when the market is non-trending.



In trending markets the Commodity Channel Index can be used to indicate that the trend is weakening by signaling divergence. Divergence between the CCI line and the price indicates that an up or down move is weakening.

Bearish Divergence occurs when prices are making higher highs but the CCI is making lower highs. This is a sign that the up move is weakening.

Bullish Divergence occurs when prices are making lower lows but the CCI is making higher lows. This is a sign that the down move is weakening.



It is important to note that although Divergences indicate a weakening trend they do not in themselves indicate that the trend has reversed. The confirmation or signal that the trend has reversed must come from price action, for example when prices break a trend line.

Parameters
Observation period: (default 5)
The choice of observation period is important. If the CCI is to be used as Lambert originally suggested then the Observation Period should be one third of the cycle length.
If the Commodity Channel Index is to be used for purposes other than in relation to cycles, the Observation Period can be set so that the -100 to +100 bands contain 70% to 80% of the data.

4. Moving Average Convergence Divergence (MACD)

Moving Average Convergence Divergence or MACD as it is more commonly known, was developed to trade 26 and 12-week cycles in the stock market.
MACD is a type of oscillator that can measure market momentum as well as follow or indicate the trend.

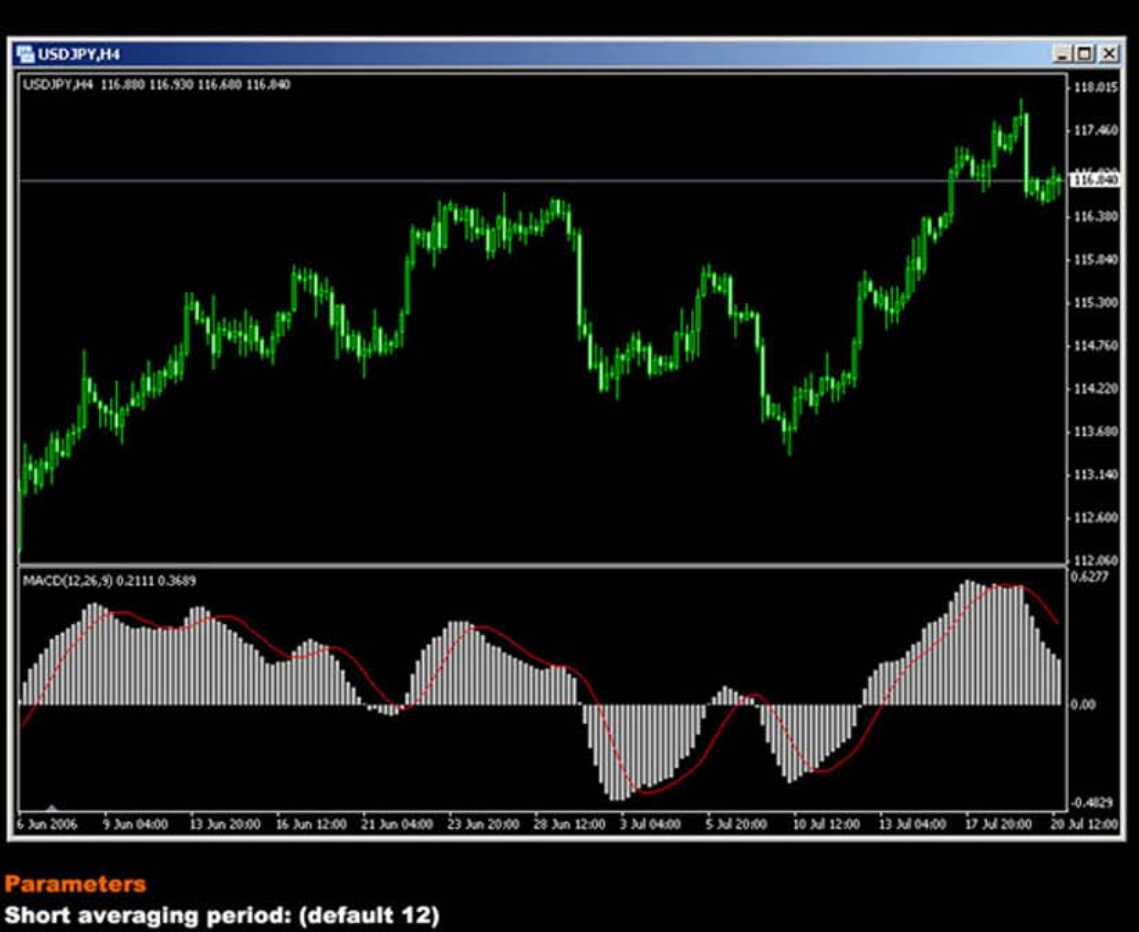
The Signal Line is an Exponential Moving Average of the MACD Line. MACD oscillates above and below a zero line without upper and lower boundaries.

There is another form of MACD, which displays the difference between the MACD Line and the Signal Line as a histogram.

The default periods are the same as the periods used by Appel.
Remember that Appel used 26 and 12 because he observed weekly cycles of similar length in the US stock market. You may wish to change the parameters to match another cycle period you have observed.

The most common uses of MACD are to:
- Generate buy and sell signals

Signals are generated when the MACD Line and the Signal Line cross.
A buy signal occurs when the MACD Line crosses from below to above the Signal Line, the further below the zero line that this occurs the stronger the signal.
A sell signal occurs when the MACD Line crosses from above to below the Signal Line, the further above the zero line that this occurs the stronger the signal.



Parameters
Short averaging period: (default 12)
Long averaging period: (default 26)
Signal line averaging period: (default 9)

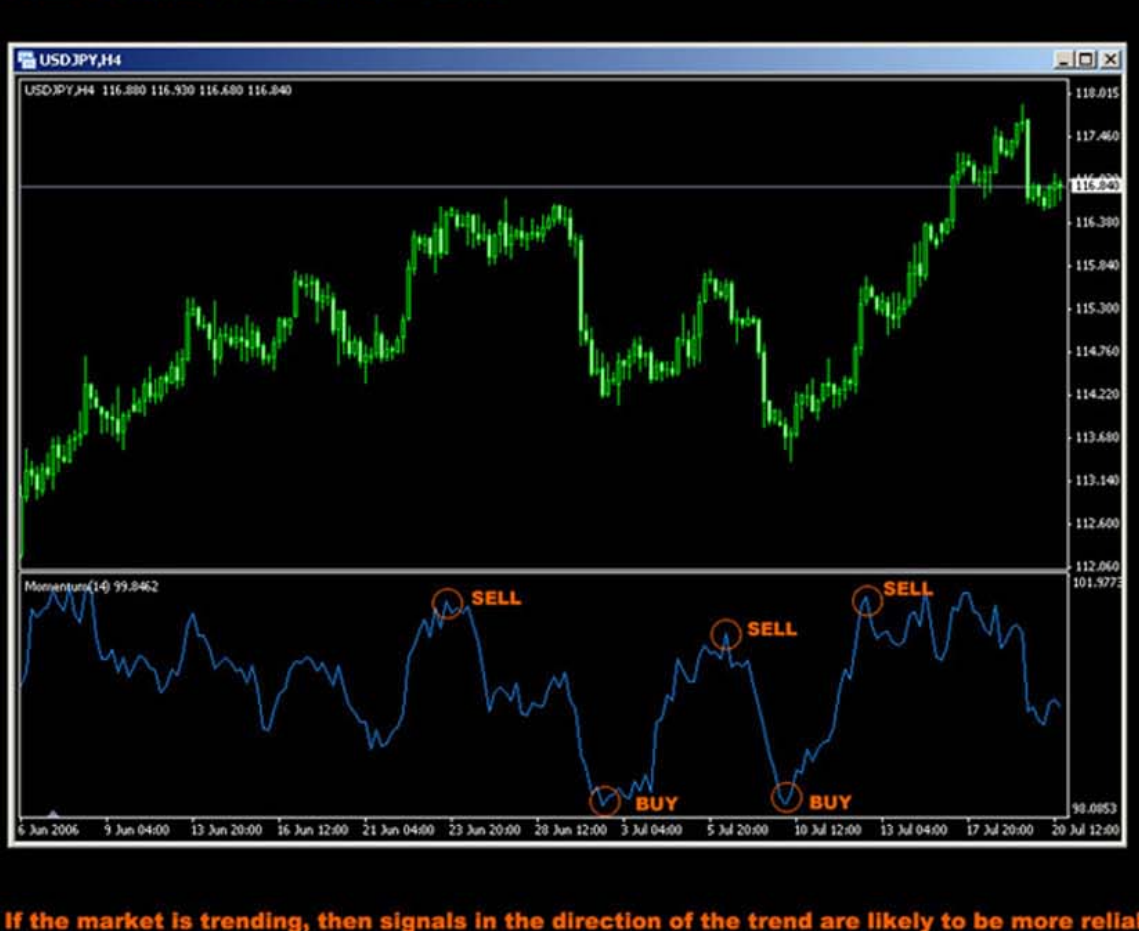
5. Momentum

Momentum is an oscillator that measures the rate at which prices are changing over the Observation Period. It measures whether prices are rising or falling at an increasing or decreasing rate. The Momentum calculation subtracts the current price from the price a set number of periods ago. This positive or negative difference is plotted about a zero line.

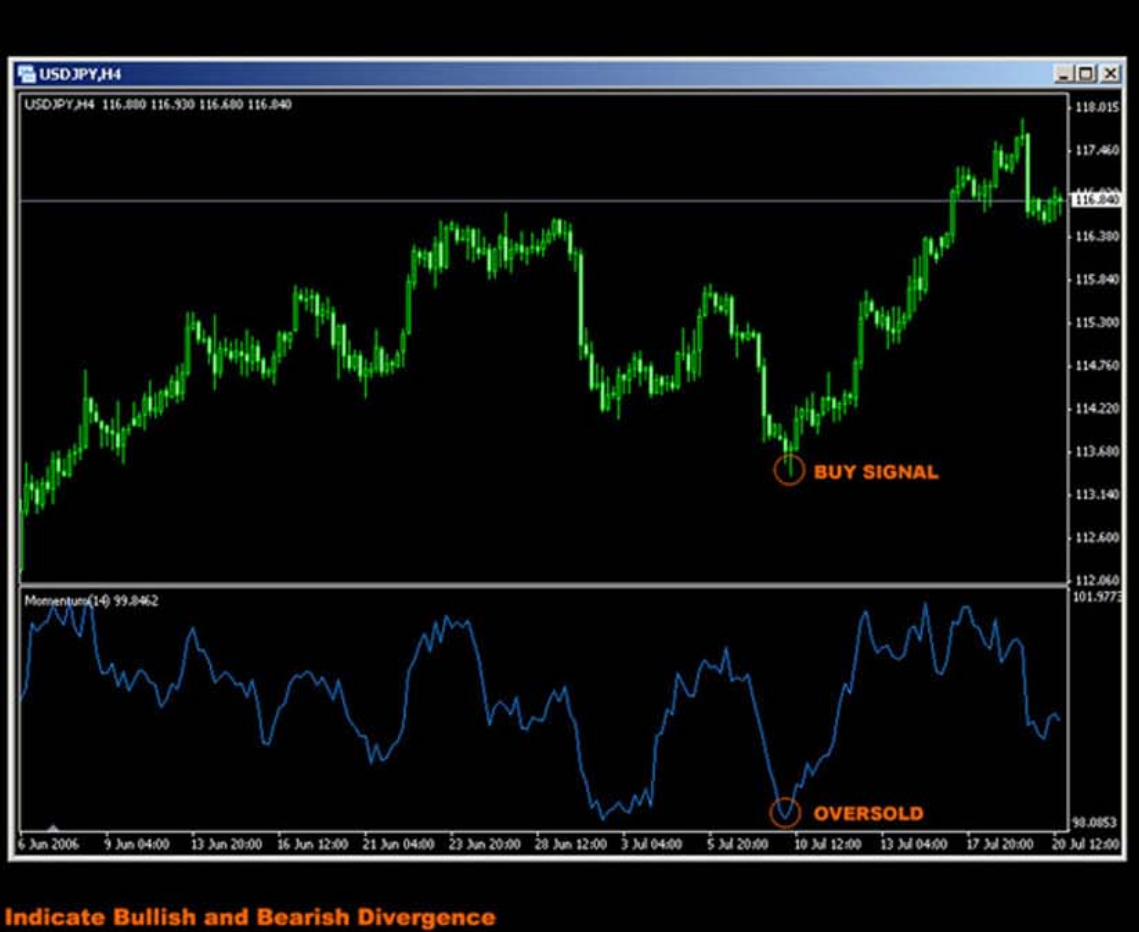
The most common uses of Momentum are to:
- Indicate overbought and oversold conditions

An overbought or oversold market is one where the prices have risen or fallen too far and are therefore likely to retrace. If the Momentum line moves to a very high value above the zero line, this is a sign of an overbought market. If the Momentum line moves to a very low value below the zero line this is a sign of an oversold market.

Overbought and oversold signals are most reliable in a non-trending market where prices are making a series of equal highs and lows.



If the market is trending, then signals in the direction of the trend are likely to be more reliable. For example if prices are in an up trend, a safer trade entry may be obtained by waiting for prices to pullback giving an oversold signal and then turn up again.



Indicate Bullish and Bearish Divergence
Divergence between the Momentum line and the price indicates that an up or downmove is weakening.
Bearish Divergence occurs when prices are making higher highs but the Momentum is making lower highs. This is a sign that the up move is weakening.
Bullish Divergence occurs when prices are making lower lows but the Momentum is making higher lows. This is a sign that the down move is weakening.
It is important to note that although Divergences indicate a weakening trend they do not in themselves indicate that the trend has reversed. The confirmation or signal that the trend has reversed must come from price action, for example a trend line break.

Parameters
Observation period: (default 10)
Normally the Observation Period is set to half the cycle length of the underlying instrument. This means that the Momentum line will peak and bottom along with prices.

6. Moving Average

A Moving Average is a moving mean of data. In other words, Moving Averages perform a mathematical function where data within a selected period is averaged and the average 'moves' as new data is included in the calculation while older data is removed or lessened. Moving Averages essentially smooth data by removing 'noise'. This smoothing of data makes Moving Averages popular tools in identifying price trends and trend reversals.

The differences between the three types of moving averages lie in the way that they are calculated and whether they look at all the data available or only the data within a selected period. This means that each type of moving average has its own characteristics, for example how quickly each will respond to changes in the underlying price.

Simple Moving Average
Simple Moving Averages are the most common and popular form of moving average.
The primary reason for this is the relative ease with which Simple Moving Averages are calculated.
A Simple Moving Average is calculated by adding values over a set number of periods and then dividing the sum by the total number of values.
As with other types of moving averages, Simple Moving Averages smooth the data by removing 'noise' over the selected period. The ability to smooth data makes them a useful tool in identifying price trends and trend reversals.

Moving average - weighted
As with Simple Moving Averages, Weighted Moving Averages smooth the data by removing 'noise' over the selected period. However a Weighted Moving Average will be more sensitive to recent changes in data.
This is because a Simple Moving Average gives all observations equal emphasis in its calculation, but a Weighted Moving Average assigns a greater weight to the most recent observations.

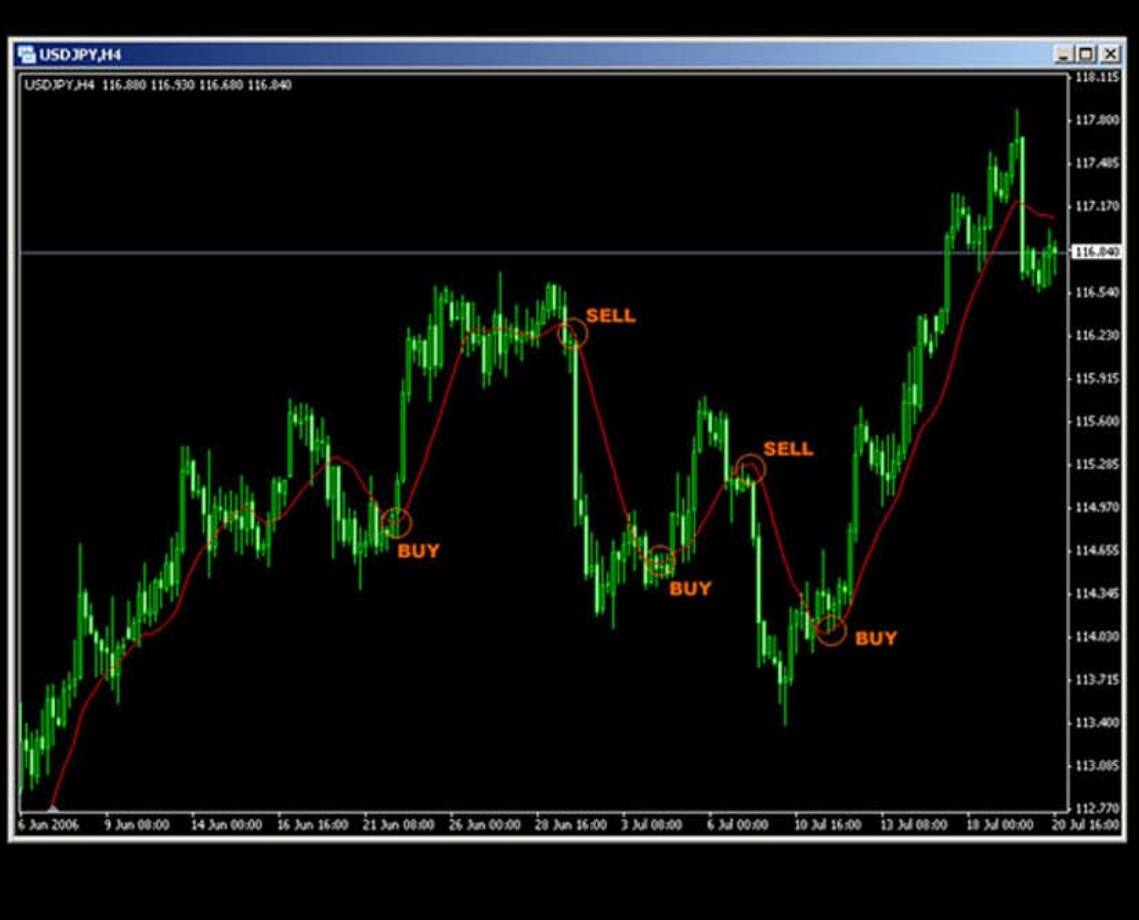
Moving average - exponential
The Exponential Moving Average is similar to the Weighted Moving Average in that they both assign greater weight to the most recent data. Where they differ is that instead of dropping off the oldest data point in the selected period of the moving average, the Exponential Moving Average continues to maintain all the data. In other words, a 5 day Exponential Moving Average will contain more than 5 pieces of data information. Each observation becomes progressively less significant but still includes in its calculation all the price data in the life of the instrument. The Exponential Moving Average is another method of weighting a moving average.

The most common uses of Moving Averages are to:
- Identify the trend

A common method involves looking at the slope of the Moving Average and the relationship of the prices to the Moving Average. For example, if the Moving Average is sloping down and prices are below the Moving Average then prices are considered to be in a downtrend.
The opposite is true for an up trend. If prices are moving above and below the Moving Average and the Moving Average is flat then a non-trending market exists.

Give buy and sell signals

This can be achieved a number of ways. The first method looks at the relationship between the close and a single Moving Average. If the market closes above the Moving Average then a buy signal is generated, if the market closes below the Moving Average then a sell signal is generated.



If the market is non-trending then these techniques are likely to give false signals.
This is simply because the market needs to continue in the direction of the buy or sell signal in order for the trade to be profitable.
Exponential Moving Averages are used in the same manner as the other types of moving average, usually to identify price trends and trend reversals.

Parameters
Averaging period: (default 5)

The exact averaging period to be used will depend upon the purpose of the moving average.
If you are using moving averages to identify the trend, then the length of the averaging period should reflect the length of the trend you are trying to identify. The longer the trend - the longer the averaging period. For example, if you are looking at a daily chart to identify the long-term trend, you may decide to use an averaging period of 200.
For short and medium term trends periods of 20 and 50 could be used respectively.
If you are using moving averages to generate buy and sell signals then shorter, more responsive averaging periods are normally used. For example a two moving average system may use averaging periods of 5 and 20.

Note:
When selecting an averaging period there is a tradeoff between the averaging period, the number of signals generated and the risk associated with the signal. A longer averaging period will generate less signals but will require a larger price move before responding, sacrificing potential profits in order to confirm the signal. A shorter averaging period will generate more signals and require less of a price move before responding, however the risk that the signal is false increases.

7. Parabolic Time Price SAR

Parabolic Time Price is a system that always has a position in the market, either long or short. You would close out the current position and enter a reverse position when the price crosses the current Stop And Reverse (SAR) point.

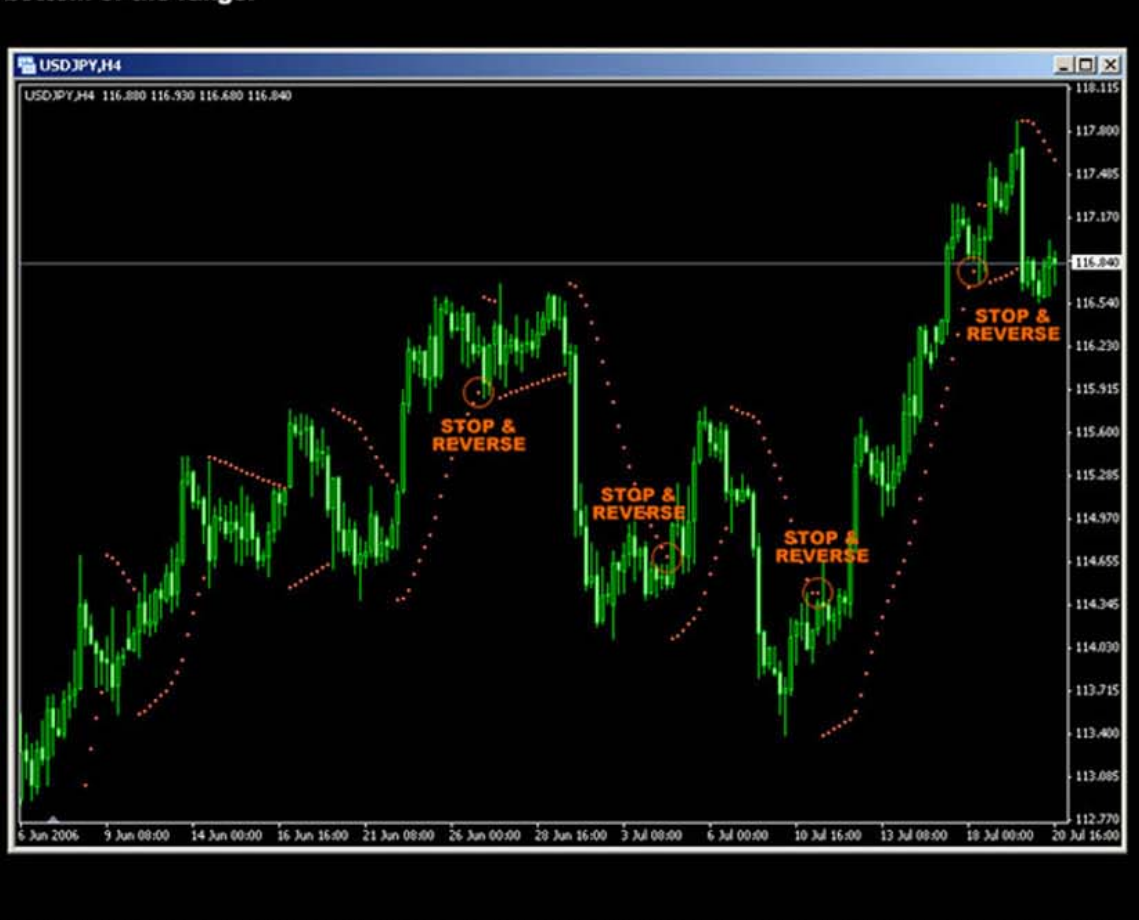
The SAR points resemble a parabolic curve as they begin to tighten and close in on prices once prices begin to trend. This explains the name - Parabolic Time Price.
Parabolic Time Price is usually charted with a bar analysis so that the stop and reverse points are easily identified. If you are long, the SAR points will be below the prices and the signal to go short will be when prices cross the current SAR point from above. If you are short, the SAR points will be above the prices and the signal to go long will be when prices cross the current SAR point from below.
When a new position is entered the SAR points will be positioned far enough away from the prices to permit some contra-trend price movement. As the market begins to trend the SAR points will move with prices and progressively tighten as the trend continues.
This is accomplished by the use of an acceleration factor that increases up to a given limit each time a new extreme in the direction of the trend is reached.

The most common uses of Parabolic Time Price are:
- As a Stop And Reverse system

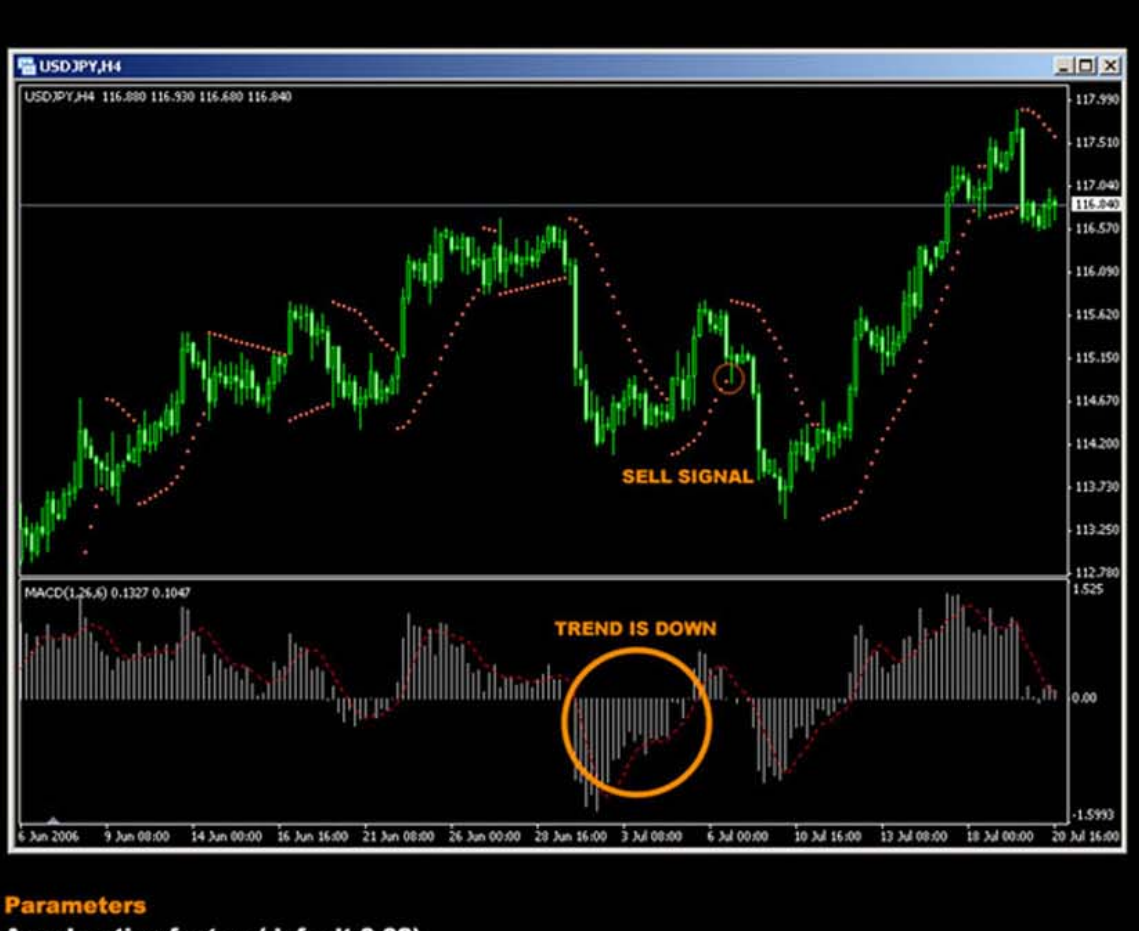
Signals to stop out of the current position and enter a reverse position are when prices cross the current SAR point. For example if the SAR points are below prices you would be long with an order to close out the current long position and enter a short position at that period's SAR point. Once you are stopped into a short position the SAR points will be above prices and the current period's SAR point will be the level at which you will be stopped out of your short position and enter a long position.

When applied in its original form Parabolic Time Price is a system that is always in the market. In order for this technique to be successful the underlying market needs to be trending strongly.

If Parabolic Time Price is applied in a non-trending market then it is likely that losses will result because the buy signals will occur at the top of the range and the sell signals at the bottom of the range.



By using Parabolic Time Price in conjunction with an analysis that indicates market trend such as MACD, you would take only long trades when the trend was up and only short trades when the trend was down.



Parameters
Acceleration factor: (default 0.02)

The Acceleration increment is the rate at which the SAR points will progressively tighten upon prices each time a new extreme in the direction of the trend is reached.
A value greater (less) than 0.02 means that the SAR points will tighten more quickly (slowly) upon prices, leaving less (more) room for counter trend price movements.

Maximum constant: (default 0.2)

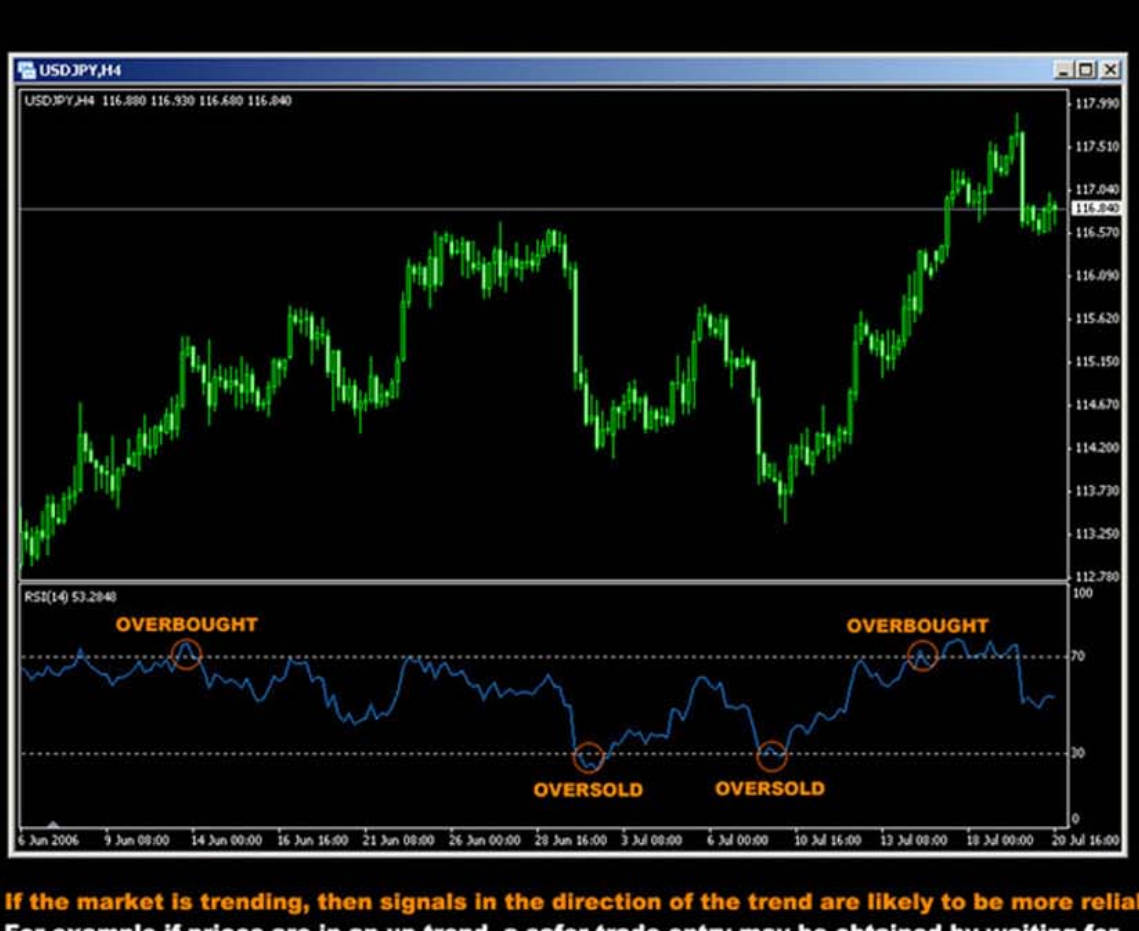
When a new signal is given the acceleration factor will use the Start acceleration as its initial value. Each time a new extreme is made in the direction of the trend the acceleration factor will increase by the value of the Acceleration increment until the acceleration factor equals the Maximum acceleration.
A value greater (less) than 0.2 means that the SAR points will tighten more quickly (slowly) upon prices, leaving less (more) room for counter trend price movements.

8. Relative Strength Index (RSI)

RSI calculates the difference in values between the closes over the Observation Period. These values are averaged, with an up average being calculated for periods with higher closes and a down-average being calculated for periods with lower closes. The up average is divided by the down average to create the Relative Strength. Finally, the Relative Strength is put into the Relative Strength Index formula to produce an oscillator that fluctuates between 0 and 100.

The most common uses of RSI are to:
- Indicate overbought and oversold conditions

An overbought or oversold market is one where prices have risen or fallen too far and are therefore likely to retrace. If the RSI is above 70 then the market is considered to be overbought, and an RSI value below 30 indicates that the market is oversold. 80 and 20 can also be used to indicate overbought and oversold levels.
Overbought and oversold signals are most reliable in a non-trending market where prices are making a series of equal highs and lows.



If the market is trending, then signals in the direction of the trend are likely to be more reliable. For example if prices are in an up trend, a safer trade entry may be obtained by waiting for prices to pullback giving an oversold signal and then turn up again.

If the RSI is above 70 and you are looking for the market to form a top, then the RSI crossing back below 70 can be used as a sell signal. The same is true for market bottoms, buying after the RSI has moved back above 30. These signals are best used in non-trending markets.

In trending markets, the most reliable signals will be in the direction of the trend.
For example if the market is trending up, taking only buy signals after the RSI has moved back above 30 after dipping below it. The reason for taking signals only in the direction of the trend, is that when the market is trending any counter-trend signal is likely to indicate a small retracement against the underlying trend rather than true reversal.

Divergence between the RSI and the price indicates that an up or down move is weakening.

Bearish Divergence occurs when prices are making higher highs but the RSI is making lower highs. This is a sign that the up move is weakening.
Bullish Divergence occurs when prices are making lower lows but the RSI is making higher lows. This is a sign that the down move is weakening.
It is important to note that although Divergences indicate a weakening trend they do not in themselves indicate that the trend has reversed. The confirmation or signal that the trend has reversed must come from price action, for example a trend line break.

Parameters
Observation Period: (default 14)
Lower Bound percentage (default 30); this provides the lower boundary expressed as a percentage of the instrument´s value. The number must be less than the Upper Bound.
Upper Bound percentage (default 70); this provides the upper boundary expressed as a percentage of the instrument´s value.

Wilder used 14 as an Observation Period although periods of 9 and 7 are also popular.
Decreasing the observation period increases the sensitivity of the RSI to changes in price, resulting in a more responsive RSI. Note that a shorter observation period may also result in an increase in the number of false signals. A longer period results in a smoother RSI that will generate less signals.

9. Stochastic

As prices increase - closing prices tend to be closer to the upper end of the price range
As prices decrease - closing prices tend to be closer to the lower end of the price range

Fast Stochastics consists of two lines, %K and %D:

The %K line measures, as a percentage, where the current close is, in relation to the lowest low over the observation period. This is shown on a scale of 0 to 100, where 0 is the observation period low, and 100 is the observation period high.

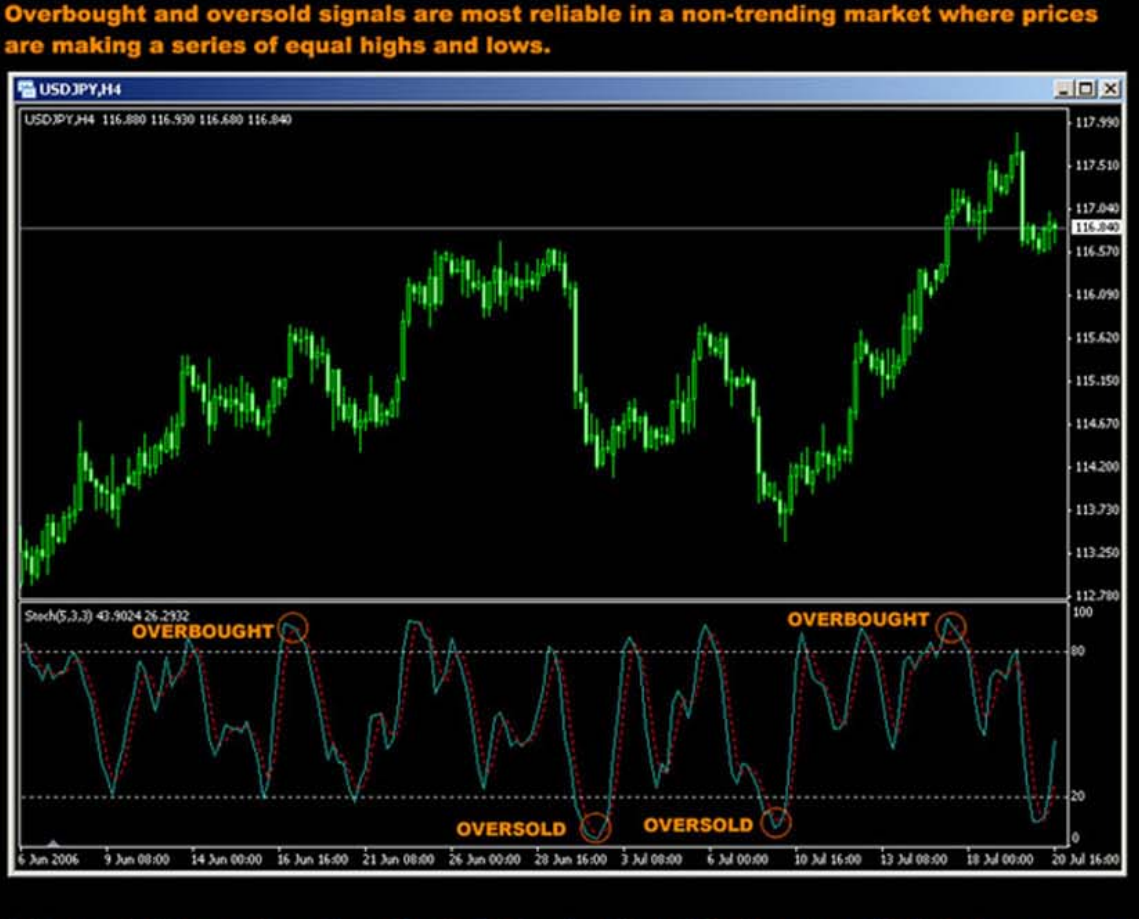
The %D line is a Simple Moving Average of the %K. Because it is a moving average, this line is smoother than the %K and provides the signals for an overbought / oversold market.

Fast Stochastics are more sensitive than Slow Stochastics and therefore more likely to give false signals. As a result Fast Stochastics are less commonly used than Slow Stochastics.

The most common uses of Stochastics are to:
- Indicate overbought and oversold conditions

An overbought or oversold market is one where the prices have risen or fallen too far and are therefore likely to retrace. If the %D line is above 80% then the close is near the top end of the range of the observation period, while a reading below 20% means that the close is near the bottom end of the range of the observation period.
Generally the area above 80 is considered overbought, while the area below 20 is oversold.
The specified overbought/oversold ranges vary. Other commonly used ranges include 75-25, 70-30 and 85-15.

Overbought and oversold signals are most reliable in a non-trending market where prices are making a series of equal highs and lows.



If the market is trending, then signals in the direction of the trend are likely to be more reliable. For example if prices are in an up trend, a safer trade entry may be obtained by waiting for prices to pullback giving an oversold signal and then turn up again.

For a buy or sell signal the following conditions must be met in order.
1.The %K and %D lines move above 80 or below 20
2. The %K and %D lines cross
3. The %K and %D lines move below 80 or above 20

Divergence between Stochastics and the price indicates that an up or down move is weakening.
Bearish Divergence occurs when prices are making higher highs but the Stochastics are making lower highs. This is a sign that the up move is weakening.
Bullish Divergence occurs when prices are making lower lows but the Stochastics are making higher lows. This is a sign that the down move is weakening.

It is important to note that although Divergences indicate a weakening trend they do not in themselves indicate that the trend has reversed. The confirmation or signal that the trend has reversed must come from price action, for example a trend line break.

Parameters
Observation Period for %K FAST: (default 5)
The number of intervals in the period used for selecting the high and low.
A value greater than the default results in a smoother less sensitive %K Fast line.
Averaging period for %D FAST: (default 3)
The averaging period is the number of observations of %K FAST lines used in the moving average.
The smaller the value, the closer the %D will be to the %K.

10. Wiliams %R

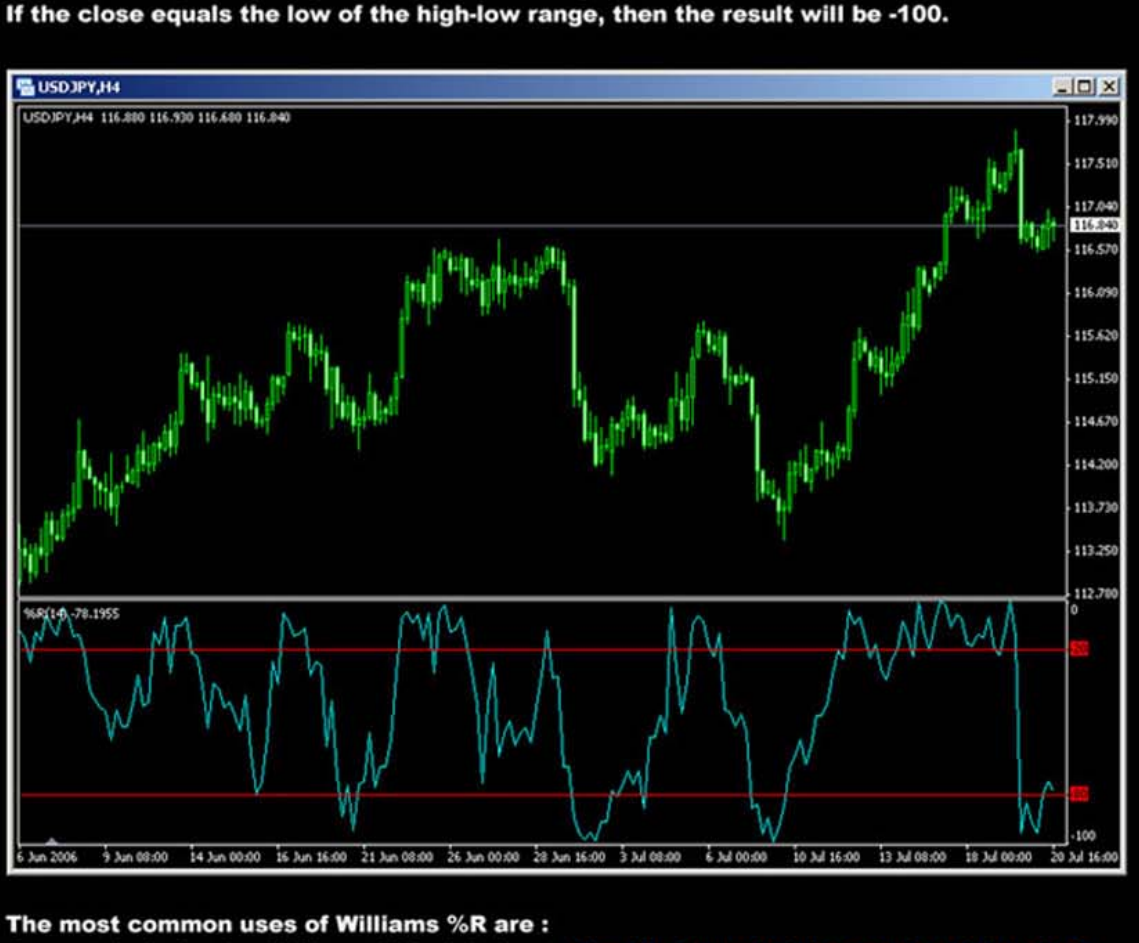
Williams %R is a momentum indicator that works much like the Stochastic Oscillator.
It is especially popular for measuring overbought and oversold levels.

The scale ranges from 0 to -100 with readings from 0 to -20 considered overbought, and readings from -80 to -100 considered oversold.

William %R, sometimes referred to as %R, shows the relationship of the close relative to the high-low range over a set period of time.

The nearer the close is to the top of the range, the nearer to zero (higher) the indicator will be.

The nearer the close is to the bottom of the range, the nearer to -100 (lower) the indicator will be.
If the close equals the high of the high-low range, then the indicator will show 0 .
If the close equals the low of the high-low range, then the result will be -100.



The most common uses of Williams %R are :
One method of using Williams %R might be to identify the underlying trend and then look for trading opportunities in the direction of the trend.
In an up trend, traders may look to oversold readings to establish long positions.
In a downtrend, traders may look to overbought readings to establish short positions.

Divergence between Williams %R and the price indicates that an up or down move is weakening.
Bearish Divergence occurs when prices are making higher highs but the Williams %R is making lower highs. This is a sign that the up move is weakening.
Bullish Divergence occurs when prices are making lower lows but the Williams %R is making higher lows. This is a sign that the downmove is weakening.

The 8 Golden Trading Recommendations

1. The Trend is your friend.
2. In up-trends, buy the dips; in downtrends, sell bounces.
3. Let profits run, cut losses short. Always use protective stops to limit losses and move them only to reduce potential losses or protect newly achieved profits.
4. Set up your plan before entering the market; don´t trade impulsively.
5. Employ at least a 3 to 1 reward-to-risk ratio.
6. Learn to be comfortable being in the minority, if you are right on the market, most people will disagree with you.
7. Keep it simple; more complicated isn´t always better.

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