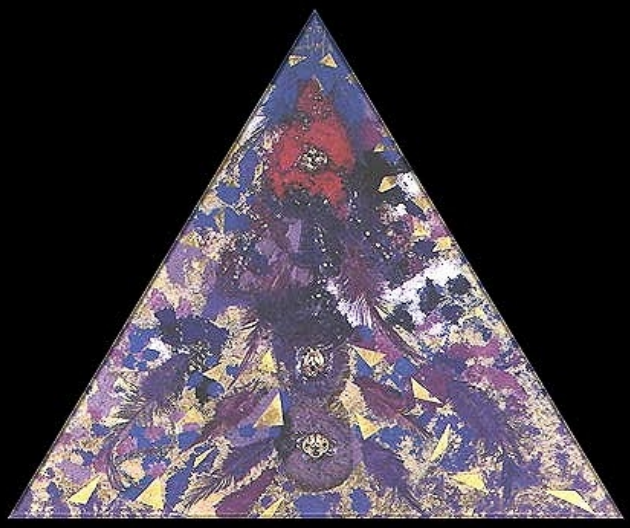
Master of Crows



Purity

Mastery

Prosperity

695 days to go

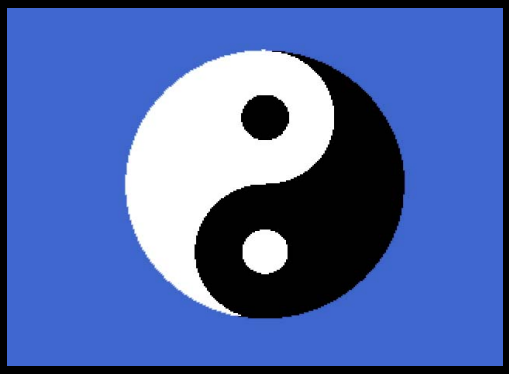
Crow Trader

Home | Purity | Mastery | Prosperity |

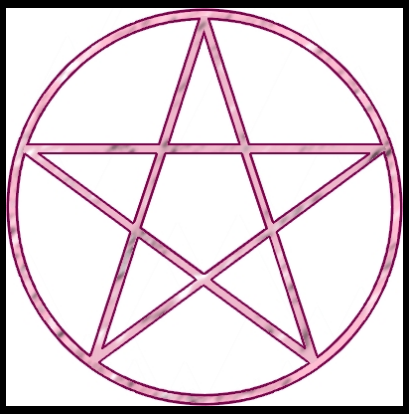
Purity

"free from what vitiates, weakens, or pollutes: containing nothing that does not properly belong: free from moral fault or guilt ."

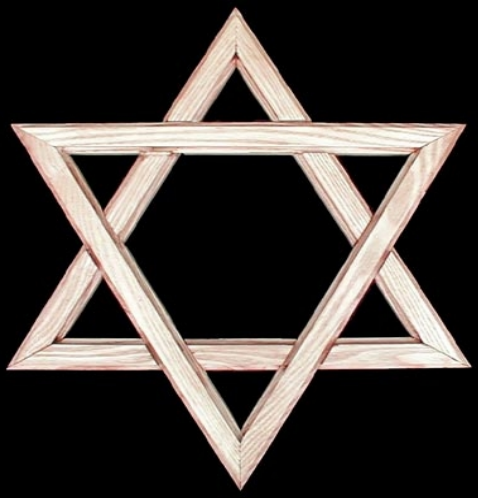
The Essence



Unifies



Eternity



Home | Desire |

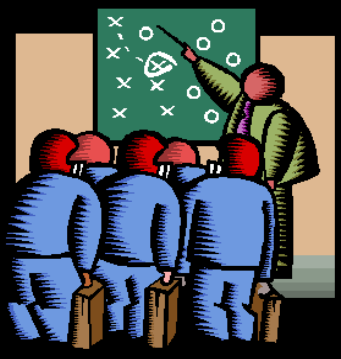
695 days to go

Crow Trader

Mastery

"possession or display of great skill or technique."

Tools



Persistence

Courage

Results

Home | Intuition | Harmony | Trading |

695 days to go

Crow Trader

Home | Purity | Mastery | Prosperity |

Prosperity

*"the condition of being successful or thriving;
especially : economic well-being ."*

Flair

Humility

Tenacity

Home | Flair | Humility | Tenacity |

695 days to go

Crow Trader

Flair

"A skill or instinctive ability to appreciate or make good use of something."

695 days to go

Crow Trader

Humility

"The quality or state of being humble."

695 days to go

Crow Trader

Tenacity

"Not easily pulled apart: persistent in maintaining or adhering to something valued or habitual. "

695 days to go

Crow Trader

Intuition

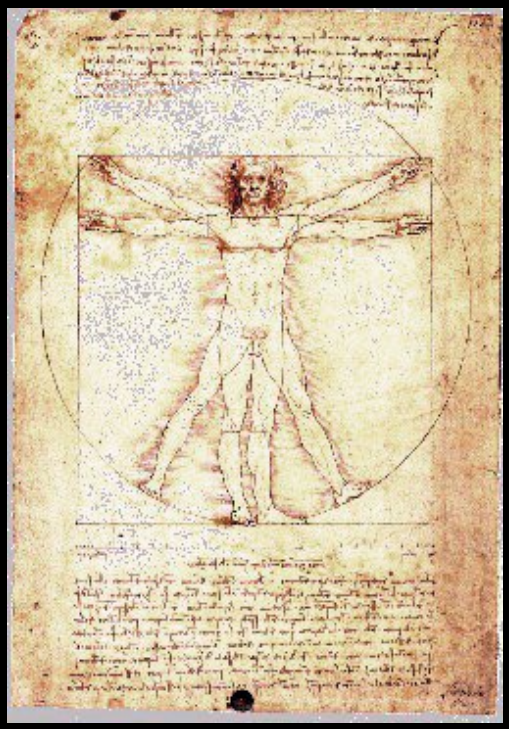
"The power or faculty of attaining to direct knowledge or cognition without evident rational thought and inference "

695 days to go

Crow Trader

Harmony

"Internal Calm"



At the vague, distant edge of the unknown, all is mystery.

Beyond the mystery there is a source of order.

Mystery reveals the Divine. Order reveals the Harmony.

Beyond mystery there is the Divine Harmony.

All comes from the Divine Harmony, which is unknowable and unknown.

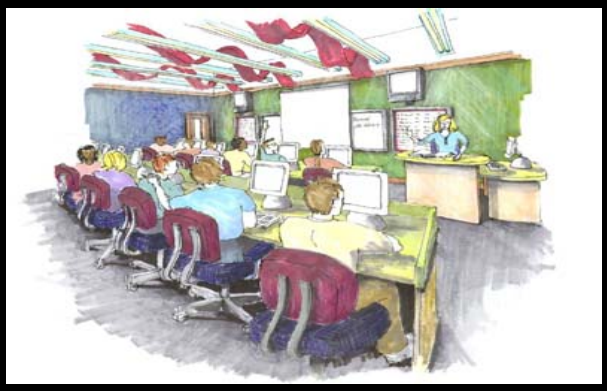
Yet the All gives hints Of its divine origin In ways humans Can understand.

695 days to go

Crow Trader

Trading

"to engage in frequent buying and selling of (as stocks or commodities) usually in search of quick profits "



Creation of trading signals

We divide trading signals into long (buy) and short (sell) formulas. Each formula is written in a simple but powerful scripting language. A buy signal is issued when the buy formula is true and the short formula is false. A sell signal is issued when the sell formula is true and the buy formula is false. You can specify only the long formula (the short formula will be true when the long formula is false) only the short formula (the long formula will be true when the short formula is false) or both (the formulas will be evaluated independently). Formulas are composed of one or more technical indicator lines. Functions can be applied to modify the value of the indicator lines (e.g. the EMA function takes the exponential moving average of a line, given an averaging period: EMA(LINE, PERIOD)). Operators are the glue which binds the functions/ lines together (e.g. "CLOSE > 5" or "CLOSE <= EMA(CLOSE, 10)").

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695 days to go

Crow Trader

Trading

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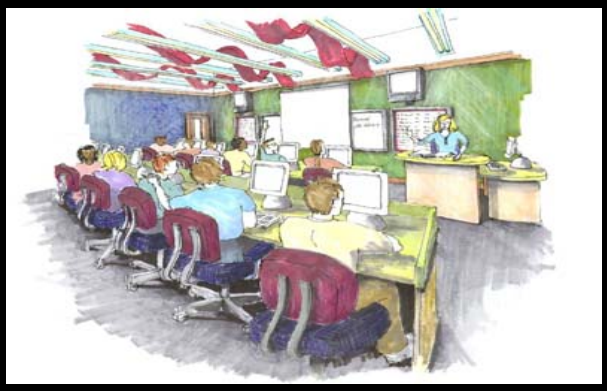

Overall

Basics
Buying
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Indicators
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Moving average
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SAR
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Trading criteria

Trailing stop

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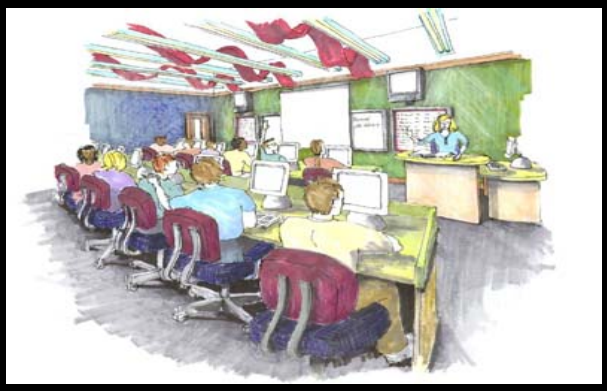
695 days to go

Crow Trader

Trading

"to engage in frequent buying and selling of (as stocks or commodities) usually in search of quick profits "



Method
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Quantum trading

Trading home

695 days to go

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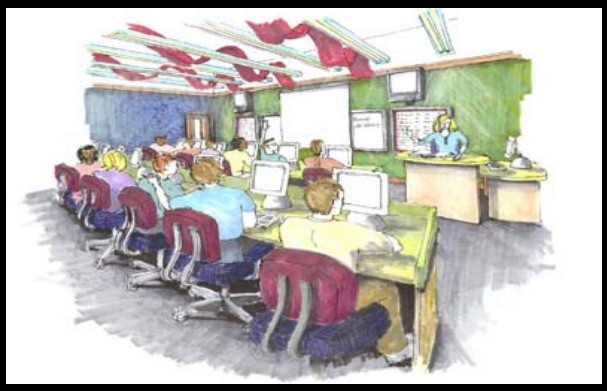
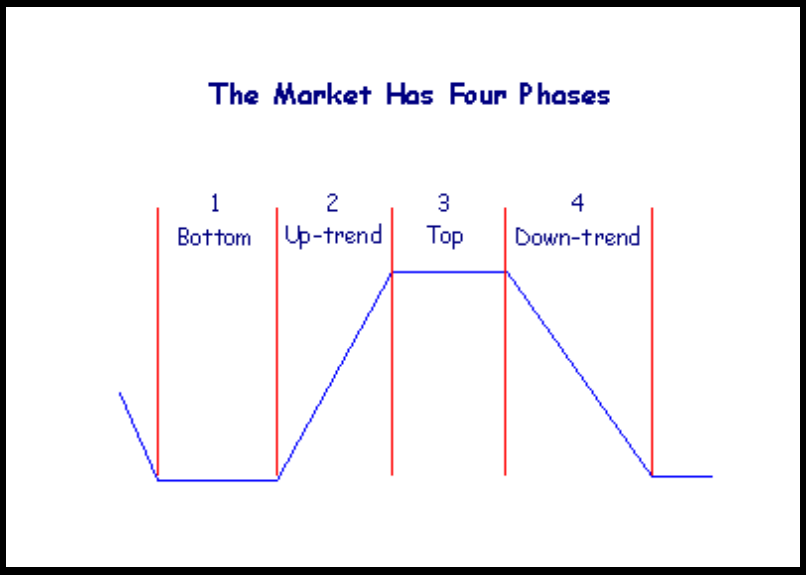


Trading Basics



The market has 4 basic phases and no trading system is suited to all of them. Some systems are suited to Phases 1 and 3, when the market is ranging, while others are designed to trade the trends in Phases 2 and 4. Trend-trading systems are more popular as they require less time and normally generate larger returns.

Trading Trends

The object of trend-trading is to go long at the transition from Phase 1 to Phase 2 and to exit before Phase 4. Some models also shortthe market during Phase 4, but this should be left to experienced traders .

Successful systems are built around the following principles:

1. **Selecting securities.**
Use Stock Screens to identify potential Market Leaders.
2. **Market direction.**
(a) Decide on the Time Frame that you are trading.
(b) Confirm the Market Direction using a suitable trend indicator.
3. **Trend direction.**
Using the same indicator, check the Trend Direction of each security.
4. **Entry signals.**
(a) Take Entry Signals from a suitable momentum oscillator.
(b) Use Trailing Stops to time entry and exit points.
5. **Stop losses.**
(a) Set Stop Losses as soon as your trade is confirmed.
(b) Do not exceed the Maximum Acceptable Loss
(c) Be technically consistent when Setting Stop Levels.
(d) Adjust Stop Levels over time to protect your profits.
6. **Exit signals.**
Take Exit Signals from a suitable trend indicator.

A Word Of Caution

These are typical steps that a trader will follow in deciding what stocks to buy, when to buy them and when to sell. It is not a magic formula, but consistent use should enhance your investment performance.

Trading methods can be compared to a carpenter's tools: Skilled use can produce outstanding results but unskilled use may lead to injury. Learn to use your trading tools properly before committing any capital. Study the behavior of the indicators over several years, learn their strengths and weaknesses and how they interact with each other and with the market. Start with a small amount of capital and only increase this when you are confident that you have a winning strategy.

Two Moving Averages

An alternative approach to using filters is to use a fast moving average to represent the price line. The fast moving average used is normally 5 days and the slow moving average is selected according to the length of the cycle being traded.

The system still has the same weakness as the single moving average system: unprofitable trades are signaled during ranging markets.

Trading Signals

Signals are generated when the moving averages cross:

- **Go long when the fast Moving Average crosses the slow MA from below.**

- **Go short (reverse your position) when the fast MA crosses the slow MA from above.**

You can always identify the fast Moving Average by its higher peaks and troughs. Take a look at the chart below.

Example

Intel Corporation is plotted with red 5 day and fuchsia 63 day exponential moving averages.

1. Go short when the fast Moving Average crosses to below the slow MA.
2. Go long when the fast MA crosses to above the slow MA.
3. No action is taken as the MA's have not crossed.
4. Go short.
5. Go long.
6. Go short.
7. Go long.

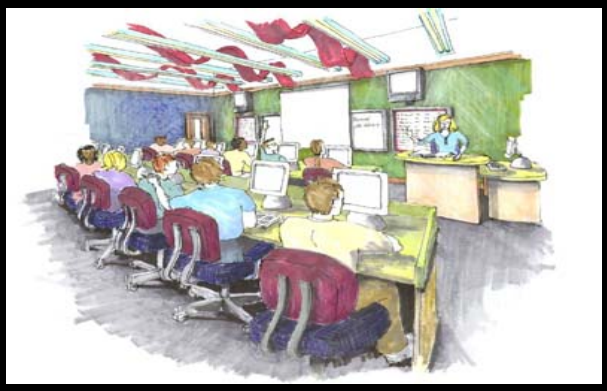
The system reduces whipsaws but still signals losing trades during a ranging market. Trailing Stops may help to eliminate unprofitable trades.

695 days to go

Crow Trader

Trading

"to engage in frequent buying and selling of (as stocks or commodities) usually in search of quick profits "



Entry & Exit Signals

(a) Entry signals

The merits of the different oscillators are discussed at Momentum Indicators. It is also possible to use an oscillator such as the Money Flow Index or MACD to time your entry points. In fact, some analysts do not use indicators at all and base their entry points on breakouts above resistance levels.

Set the Indicator Time Frame to suit the cycle being traded. There is a trade-off between indicator responsiveness and reliability: a very short time frame may provide earlier, but occasionally incorrect, signals. Trailing stops help to compensate for this.

(b) Trailing stops

Trailing Stops are useful for weeding out premature or false signals and help to alleviate some of the psychological pressure on traders - by providing automatic entry and exit points.

Example

Charles Schwab with fuchsia 7-day and aqua 150-day exponential moving averages and white 7-day relative strength index.

1. Favorable trading conditions (from Steps 2 & 3) commence on October 23rd. Shortly thereafter the RSI crosses to below zero and turns back above the zero line, giving a signal to go long [Oct 29]. The signal is strengthened by a failure swing, shown by the trendline.

   Place a buy stop order above the High on the signal day [1].
2. We are stopped in on day [2] when price rises above the High of the previous day. By the close the stock had formed a new High, surpassing the High of October 20th.

695 days to go

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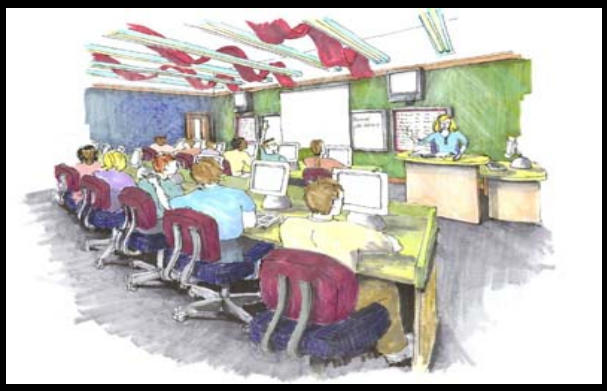

Trend Indicators

Use a Trend Indicator to exit from the trend. Adjust the Indicator Time Frame to suit the cycle being traded.

Example

Charles Schwab with **weekly** price bars and fuchsia 7-day and aqua 150-day exponential moving averages.

1. Entry [L] on 30 October 1998 at $10.13.
2. Exit on Key Reversal at [K] on 15 April 1999 at $44.75.
3. Remaining position stopped out at [X] on 25 May 1999 at $33.13.
4. Price crosses below MA150 at [Y] on 14 June 1999 at $27.25.
5. MA7 crosses below MA150 at [Z] on 4 August 1999 at $24.50.

If no stops had been activated, the position would have been closed either:

- At [Y] when price fell below the 150-day moving average; or
- At [Z] when the 7-day MA fell below the 150-day MA,

depending on the exit strategy.

Trade Summary

Entry [L]	October 30, 1998	$10.13
Key Reversal [K]	April 15, 1999	$44.75
Stopped Out [X]	May 25, 1999	$33.13
Price crosses below MA150 [Y]	June 14, 1999	$27.25
MA7 crosses below MA150 [Z]	August 4, 1999	$24.50

Returns vary between 440 per cent and 240 per cent.

Note how important it is to exit at the right time in addition to timing the entry : the correction retreated to below $18.00.

695 days to go

Crow Trader

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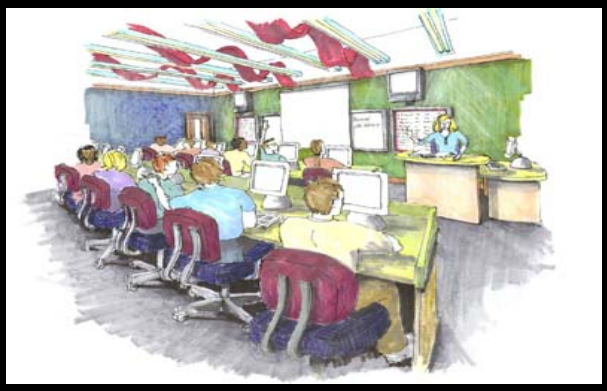

Basics
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Moving average
Moving average
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MACD
SAR

Volume
Trading criteria

Trading home

695 days to go

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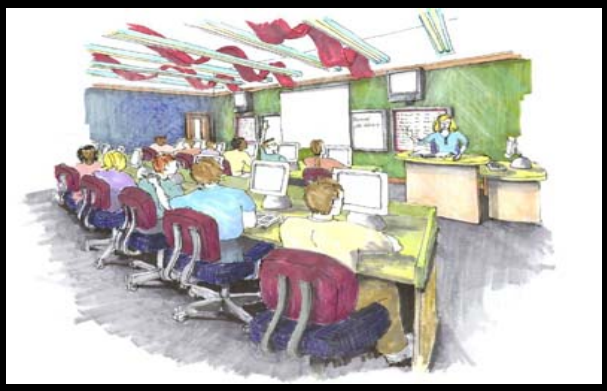

Basics of Stock Trading

1. Avoid a too frequent switching.
2. The stock market has no past.
3. No one ever went broke taking profit.
4. Never buy a stock after a long decline.
5. Trend is your friend.
6. Never guess the bottom.
7. Never average down.
8. Cut your losses - use stop loss orders.

We consider short-term (1 - 3 months) stock trading strategies. All profitable strategies are based on the following golden rules:

- Develop a winning strategy and trade often. A small monthly profit can provide a large annual return.
- Trade only stocks with the highest growth probabilities. Do not hold stocks when their probabilities of growth are close to the average value. Switch to more profitable stocks.
- Be sure that expected return is larger than the transaction cost (bid-ask spread + brokerage commissions).
- Avoid risk as much as possible. Do not put all your trading capital in one stock. Diversification is the only way to survive in the market.
- Winning strategy is a strategy with the lowest risk/return ratio.

Risk and Return

As we mentioned before a good trading strategy must have a small risk/return ratio. We found some strategies with small values of this ratio. One of the best is the Basic Trading Strategy

Basics Trading Strategy

Short Description

Every day after market closing (day #0) we perform market analysis and prepare a list of Potentially Bullish Stocks which are oversold within various time frames. Before market closing on the next day (day #1) we select two stocks from the list with maximum price drop (in %) and buy these stocks. We hold these stocks for two days, and sell them at the market opening on day #4.

More Details

1. Every day after the market closing we perform the market analysis to generate the list of potentially bullish stocks. Let us call the day of analysis day #0. Tomorrow will be day #1 and so on.

Ope1, Clo1, Ope2, Clo2, ... are the stock prices at market opening and market closing on the corresponding days.

These stocks are partially oversold in the 16 - 32 day time frames. The stocks from the list may not be oversold on the day of analysis for all possible time frames. We have not taken into account the behavior of these stocks during the last few days. This is why we call these stocks potentially bullish stocks.

2. Before market closing on day #1 one should check the prices of all stocks from the list and buy two stocks with maximal % price drop during day #1. Mathematically, this can be written as

$$Clo1/Clo0 \quad \text{-----> minimal} \qquad (*)$$

This condition substantially increases the probability that the selected stocks will be oversold in all important time frames (from 4 days to 32 days).

Note that in this strategy the stocks may rise during trading day #1. The only important thing in this case: their rises should be minimal among the stocks from the list. The equation (*) describes this statement.

3. During the next two days (#2 and #3) one should hold the stocks. At the market opening on day #4 these stocks should be sold.

We have performed computer analysis of this strategy and found a high profitability using this method. An important part of this strategy is dividing the trading capital between stocks.

Days #2 and #3 are the days of holding stocks which were bought on day #1. If we do not buy other stocks during these days we will lose possible profits. So as to be able to buy stocks every day the trading capital should be divided into three equal parts. Every part of the capital should be used to buy two stocks.

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695 days to go

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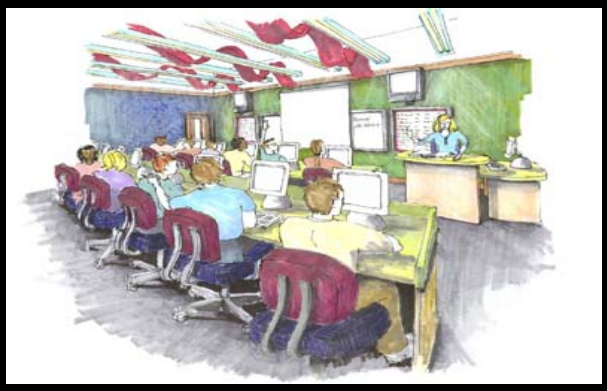


Indicator Basics

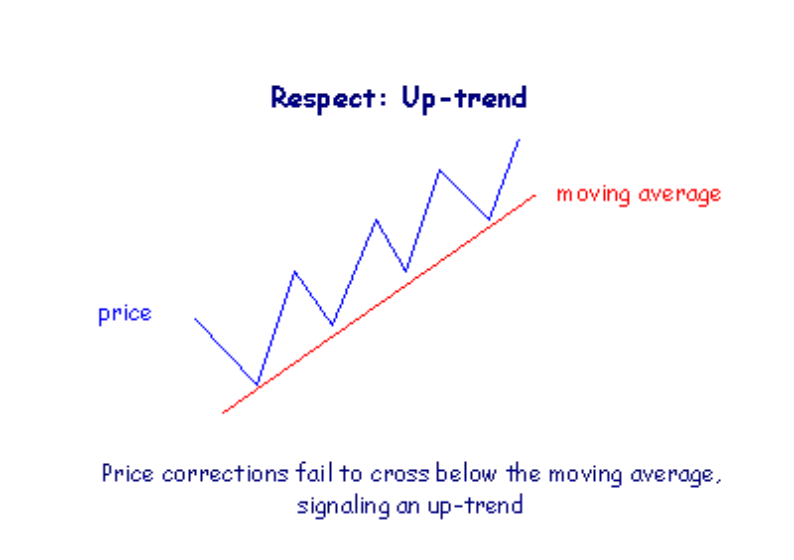
Trending v. Ranging Markets

No one indicator is suited to all market conditions. Trend indicators lose money during a ranging market, as fluctuations in a narrow price range whipsaw traders in and out of positions. In atrending market, momentum indicators give too many signals and should only be used to confirm trend indicators.

Respect

If price reverses direction when it reaches a moving average (or trend line) we say that price has *respected* that moving average (or trend line).

This is significant as it **confirms that price is trending**.



Whipsaws

If price fluctuates around a moving average, frequently crossing above and below, this is referred to as whipsawing.

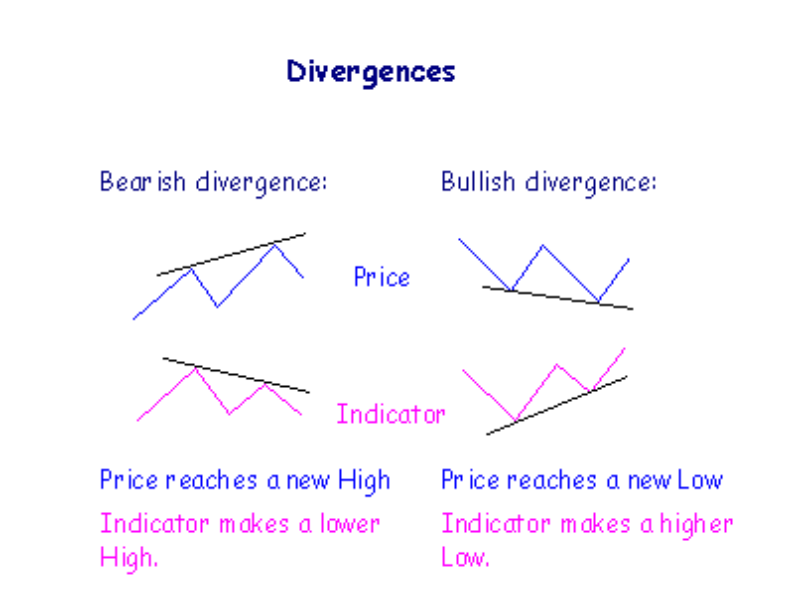
Price whipsawing around a moving average **signals that price is ranging**.

Divergence

Many indicators tend to imitate the peaks and troughs on the price chart with a series of similar highs and lows. Divergence occurs when the indicator fails to imitate the pattern on the price chart, a **sign of trend weakness and likely reversal**.

In an up-trend, if price makes a new High (a higher peak than the last) but the indicator fails to do so, that is a bearish divergence.

In a down-trend, if price makes a new Low (a lower trough than the last) but the indicator does not, a bullish divergence occurs.



Unless supported by other indicators, ignore weaker divergences where:

- Price makes an equal High (a double top) and the indicator makes a lower High or price makes an equal Low (a double bottom) and the indicator makes a higher Low; or
- Price reaches a new High and the indicator makes an equal High or price reaches a new Low and the indicator makes an equal low; or
- Peaks or troughs are only marginally different in height (if you need a ruler to distinguish which is higher).

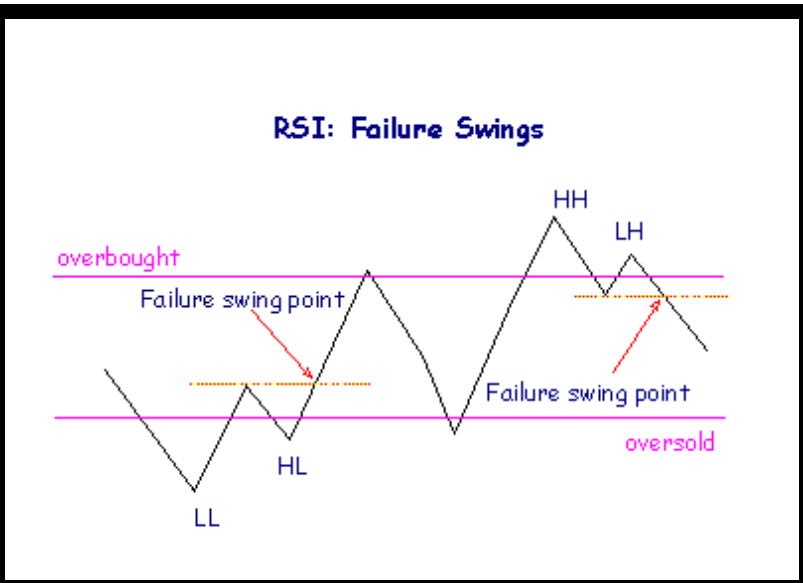
Failure Swings

Failure swings, in overbought or oversold territory, **signal that a trend is weakening and likely to reverse**. They also add weight to other signals and are identified by either:

- A trough [LL] below the oversold level,
- followed by an intervening peak that does not reach the overbought level,
- then a higher second trough [HL].
- To complete the failure swing the indicator must then rise above the intervening peak.

OR

- A peak [HH] above the overbought level,
- followed by an intervening trough that does not reach the oversold level,
- then a lower second peak [LH].
- To complete the failure swing the indicator must then fall below the intervening trough.

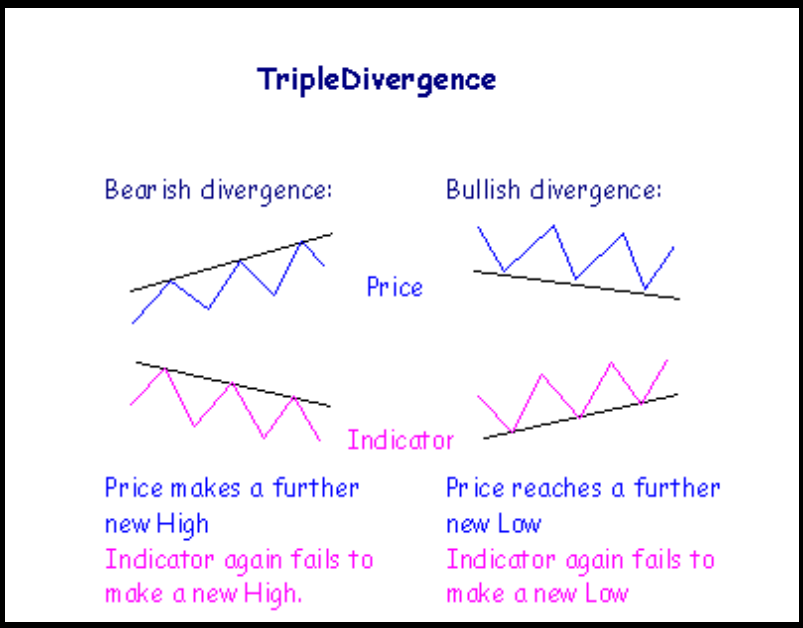


This pattern of highs and lows is identical to a trend reversal on a price chart.

The signal is strongest when the second peak (or trough) is also above the Overbought level (below the Oversold level), though this is not essential for a valid failure swing.

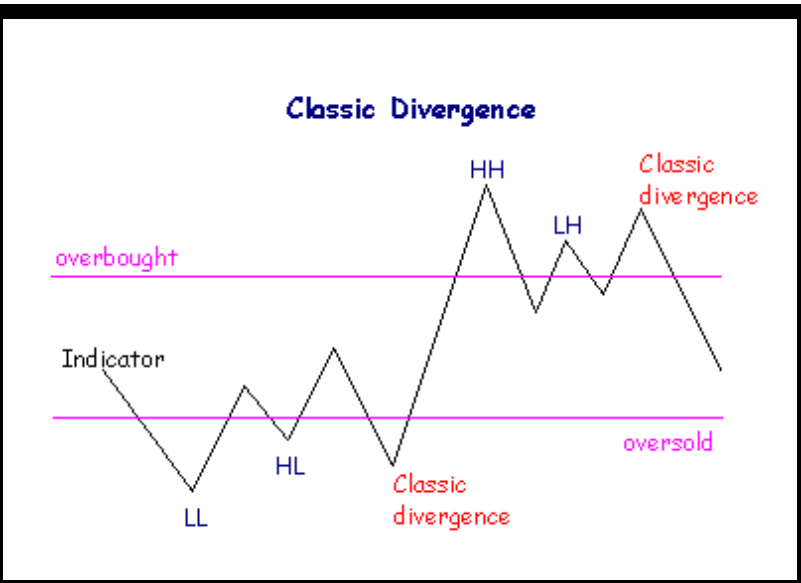
Triple Divergence

A triple divergence only occurs where a divergence has given an incorrect signal. Instead of reversing direction, price has made a new, higher High (in an up-trend) or lower Low (in a down-trend). If the indicator repeats its signal by making another lower High (in an up-trend) or higher Low (in a down-trend), this is an **even stronger signal than the original divergence**.



Classic Divergence

George Lane (Stochastic indicator) identified a weaker form of triple divergence where the third peak is higher than the second.



695 days to go

Crow Trader

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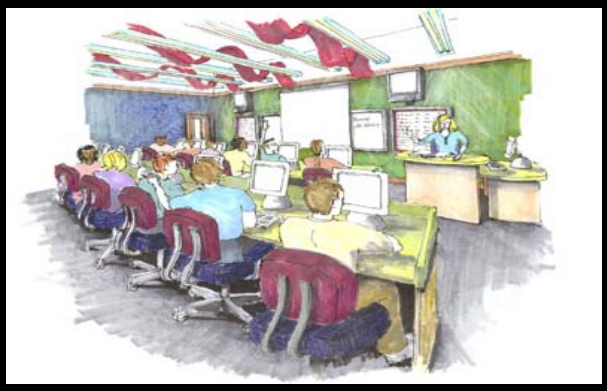


Dow Theory - Trends

The ideas of Charles Dow, the first editor of the Wall Street Journal, form the basis of technical analysis today.

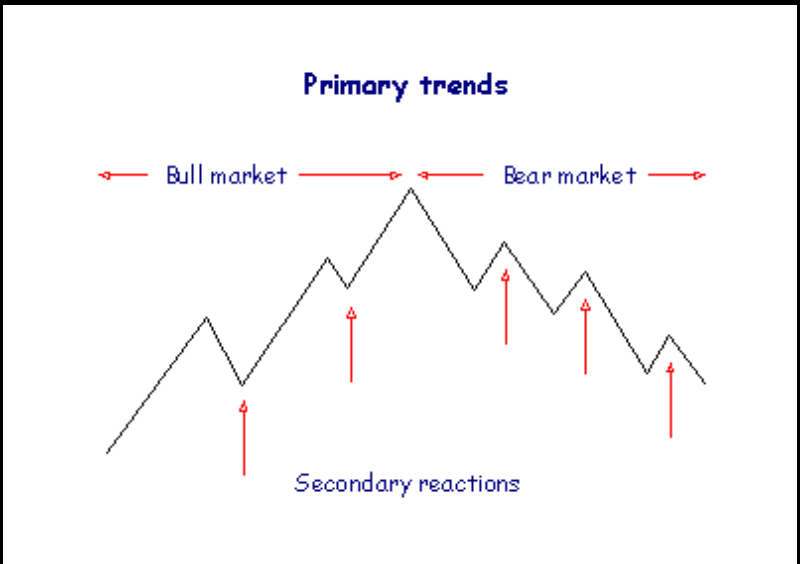
Dow created the Industrial Average, of top blue chip stocks, and a second average of top railroad stocks (now the Transport Average). He believed that the behavior of the averages reflected the hopes and fears of the entire market. The behavior patterns that he observed apply to markets throughout the world.

Three Movements

Markets fluctuate in more than one time frameat the same time:

Nothing is more certain than that the market has three well defined movements which fit into each other.

- *The first is the daily variation due to local causes and the balance of buying and selling at that particular time.*
- *The secondary movement covers a period ranging from ten days to sixty days, averaging probably between thirty and forty days.*
- *The third move is the great swing covering from four to six years.* (Nelson, 1903)



- Bull markets are broad upward movements of the market that may last several years, interrupted by secondary reactions. Bear markets are long declines interrupted by secondary rallies. These movements are referred to as the primary trend.
- Secondary movements normally retrace from one third to two thirds of the primary trend since the previous secondary movement.
- Daily fluctuations are important for short-term trading, but are unimportant in analysis of broad market movements.

Various cycles have subsequently been identified within these broad categories.

Primary Movements have Three Phases

Look out for these general conditions in the market:

Bull markets

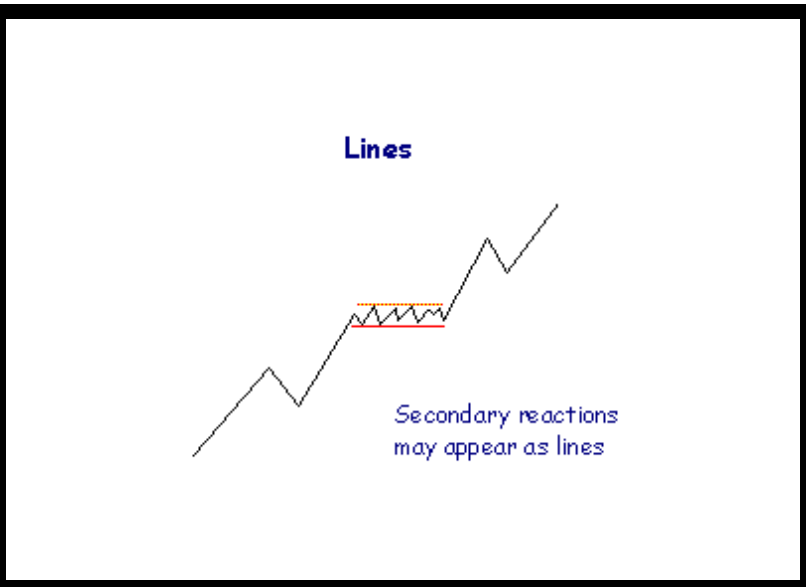
- Bull markets commence with reviving confidence as business conditions improve.
- Prices rise as the market responds to improved earnings
- Rampant speculation dominates the market and price advances are based on hopes and expectations rather than actual results.

Bear markets

- Bear markets start with abandonment of the hopes and expectations that sustained inflated prices.
- Prices decline in response to disappointing earnings.
- Distress selling follows as speculators attempt to close out their positions and securities are sold without regard to their true value.

Ranging Markets

A secondary reaction may take the form of a ‘line’ which may endure for several weeks. Price fluctuates within a narrow range of about five per cent.



Breakouts from a range can occur in either direction.

- Advances above the upper limit of the line signal accumulation and higher prices;
- Declines below the lower limit indicate distribution and lower prices;
- Volume is used to confirm price breakouts.

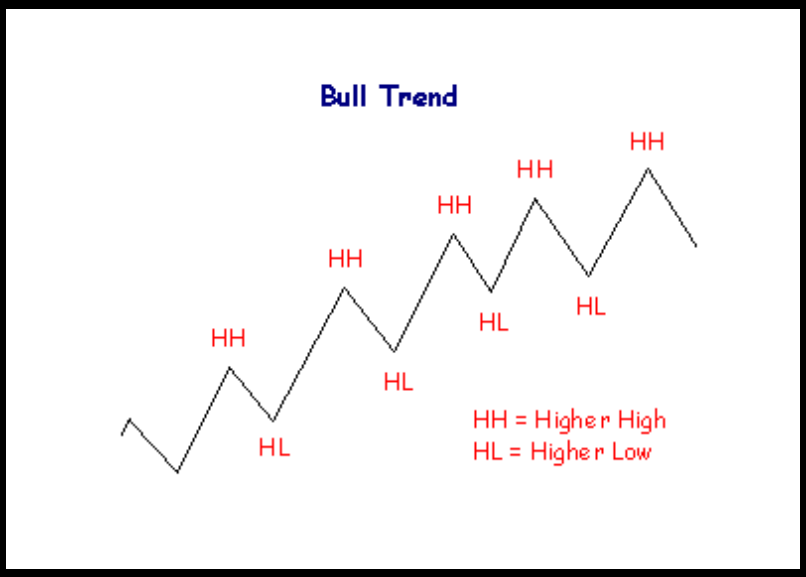
See Trading Ranges for more detail.

Trends

Bull Trends

A bull trend is identified by a series of rallies where each rally exceeds the highest point of the previous rally. The decline, between rallies, ends above the lowest point of the previous decline.

Successive higher highs and higher lows.

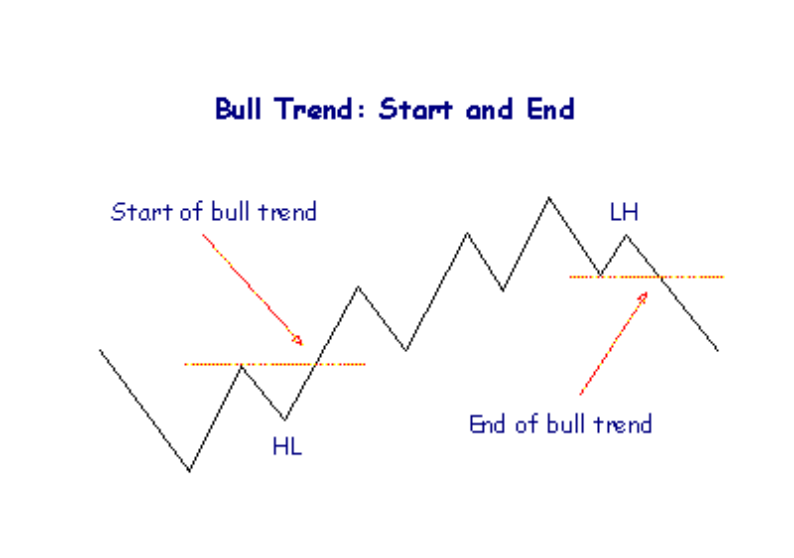


The start of an up trend is signaled when price makes a higher low (trough), followed by a rally above the previous high (peak):

Start = higher Low + break above previous High.

The end is signaled by a lower high (peak), followed by a decline below the previous low (trough):

End = lower High + break below previous Low.

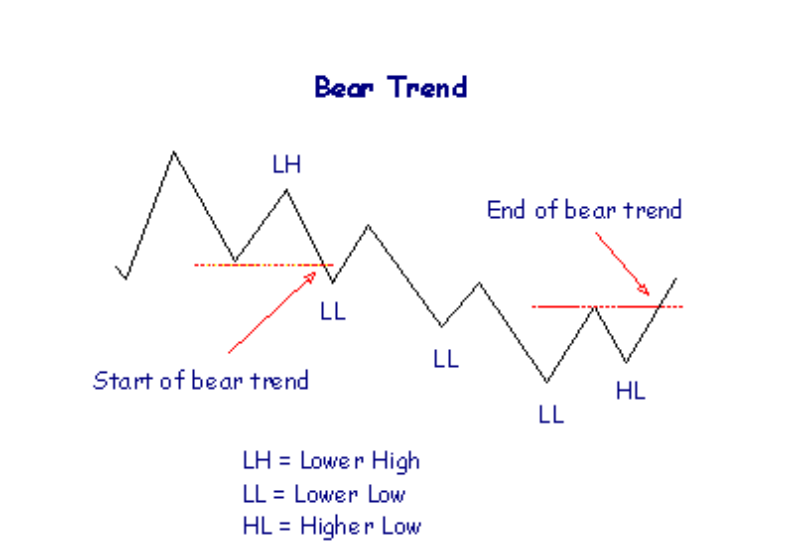


What if the series of higher Highs and higher Lows is first broken by a lower Low? There are two possible interpretations - see Large Corrections.

Bear Trends

Each successive rally fails to penetrate the high point of the previous rally. Each decline terminates at a lower point than the preceding decline.

Successive lower highs and lower lows.

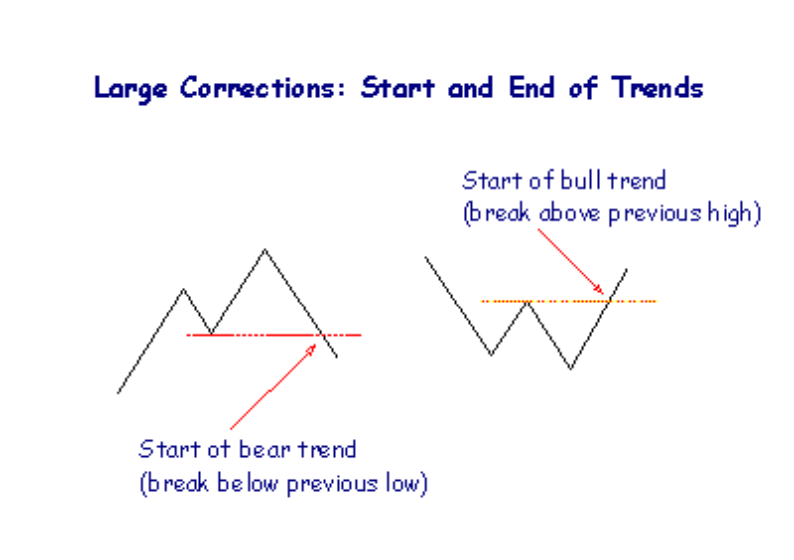


A bear trend starts at the end of a bull trend: when a rally ends with a lower peak and then retreats below the previous low. The end of a bear trend is identical to the start of a bull trend.

What if the series of lower Highs and lower Lows is first broken by a higher High? This is a gray area - see Large Corrections.

Large Corrections

A large correction occurs when price falls below the previous low (during a bull trend) or where price rises above the previous high (in a bear trend).



Some purists argue that a trend ends if the sequence of higher highs and higher lows is broken. Others argue that a bear trend has not started until there is a lower High and Low nor has a bull trend started until there is a higher Low and High.

For practical purposes: **Only accept large corrections as trend changes in the primary trend**:

- A bull trend starts when price rallies above the previous high,
- A bull trend ends when price declines below the previous low,
- A bear trend starts at the end of a bull trend (and vice versa).

695 days to go

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Trading

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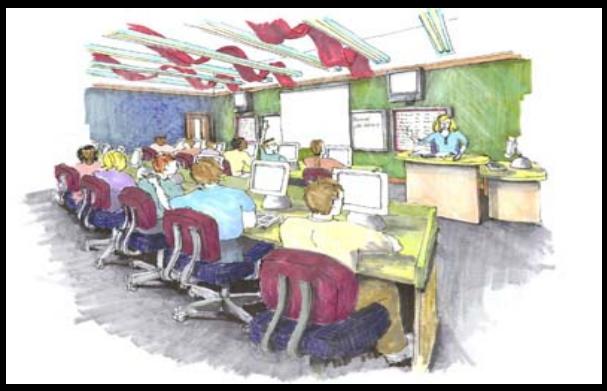


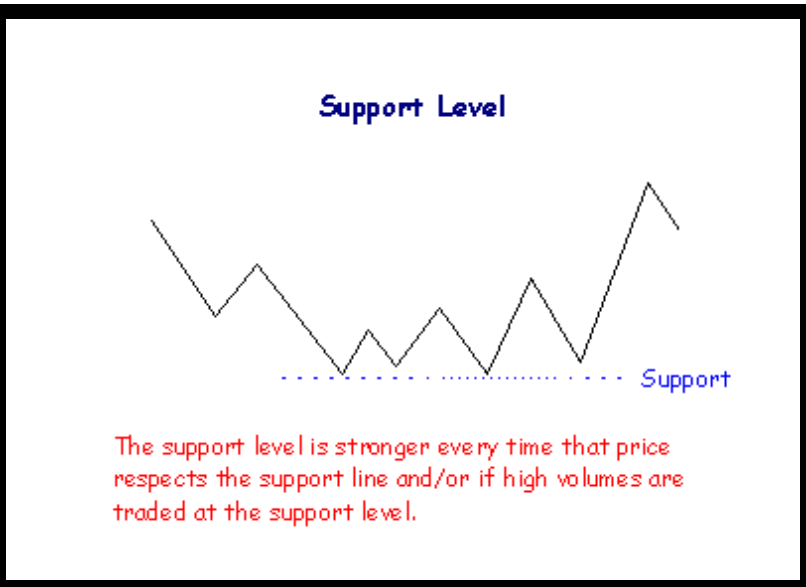
Support and Resistance

Support and resistance levels form the foundation of most chart patterns.

Support

A support level is the price at which buyers are expected to enter the market in sufficient numbers to take control from sellers.

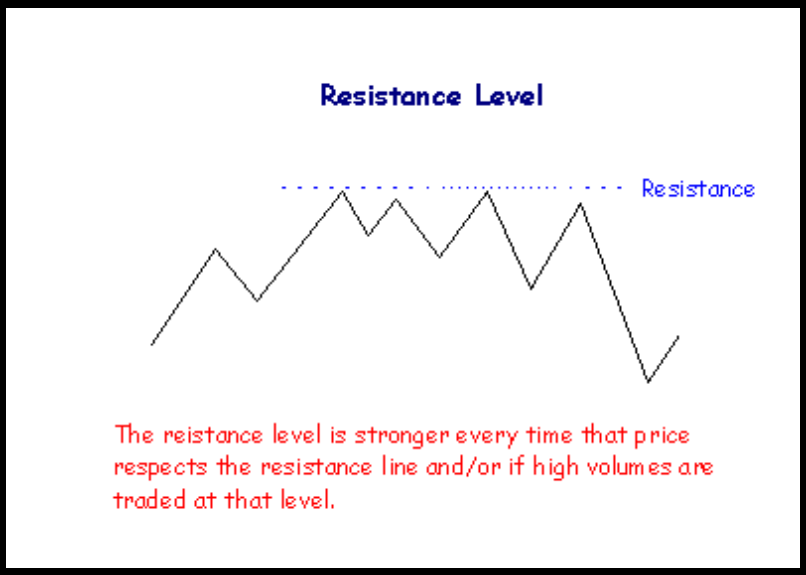
The market has a memory. When price falls to a new Low and then rallies, buyers who missed out on the first trough will be inclined to buy if price returns to that level. Afraid of missing out for a second time, they may enter the market in sufficient numbers to take control from sellers. The result is a rally, reinforcing perceptions that price is unlikely to fall further and creating a support level.



Resistance

A resistance level is the price level at which sellers are expected to enter the market in sufficient numbers to take control from buyers.

When price makes a new High and then retreats, sellers who missed the previous peak will be inclined to sell when price returns to that level. Afraid of missing out a second time, they may enter the market in numbers sufficient to overwhelm buyers. The resulting correction will reinforce market perceptions that price is unlikely to move higher and establish a resistance level.



Point and figure charts are useful for identifying supportand resistance levels.

Role Reversal

Support levels, once penetrated, frequently become resistance levels and *vice versa*.

The market logic is fairly simple: buyers who purchase near a support level, only to see price fall, are likely to sell in order to recover their losses, when price rallies to near their break-even point. The support level then becomes a resistance level.

Likewise, stockholders who sell when price approaches a resistance level will be disappointed if price penetrates the level and continues to rise. They will be inclined to buy if price returns to near the support level, fearing that they may miss out a second time. The resistance level thus becomes entrenched as a support level.

Strength of Support/Resistance

Some support and resistance levels are more important than others. The significance of the support level is identifiable by:

- the number of times that the level has been respected;
- the amount of volume that has been traded near the level;
- whether the level is old or new - recent levels have greater significance;
- whether the level is a new High or new Low - more extreme levels have greater impact; or
- a level formed at a round number (e.g. $20.00 or $100.00) leaves a lasting imprint.

695 days to go

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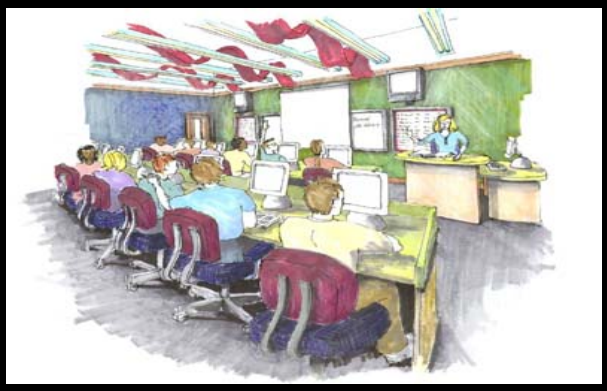


Trailing Stops

Trailing stops have three uses:

- To limit your losses,
- To protect your profits, or
- To prevent you from entering (or exiting) a trade too early or on a false signal.

Stops can be based on the high/ low of the daily trading range or on a trailing percentage. Welles Wilder's Parabolic SAR is a further form of trailing stop.

Trailing Buy- and Sell-Stops

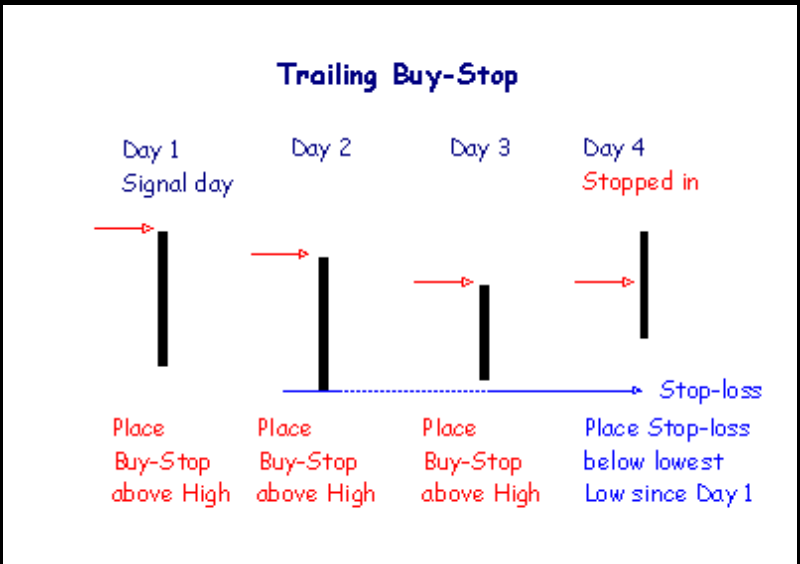
The rules below are based on Screen 3 of the Triple Screen trading system, described by Alexander Elder in *Trading for a Living*.

Buy-stop

When you get a signal to go long - place a buy order one tick above the High on the signal day. If price rallies, you will be stopped in on the

next day. If price falls, the buy order will remain untouched. Move the buy order down to one tick above the High on the second day. Continue to lower the buy order on each subsequent day until price rallies and you are stopped in.

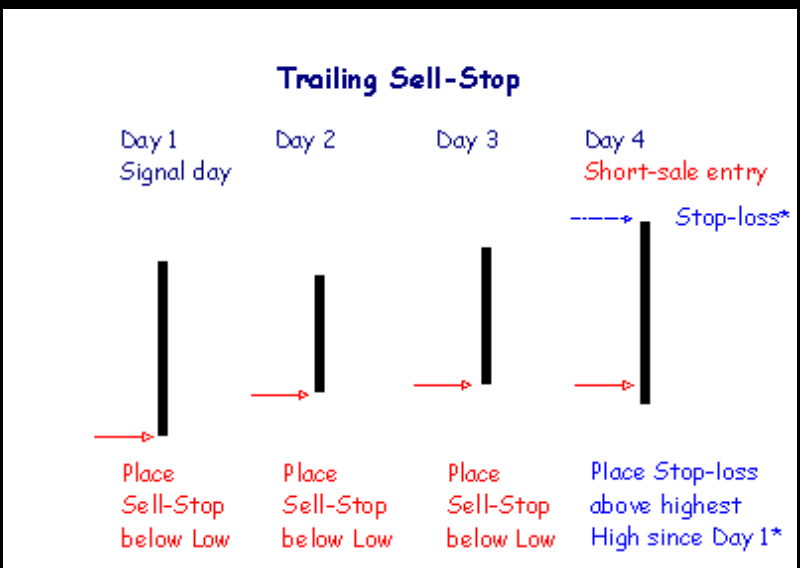
When you are stopped in, place a stop-loss below the Low of the recent down-trend (the lowest Low since the signal day).



Sell-stop

When you get a signal to go short - place an order to sell short one tick below the Low on the signal day. If price falls, you will be stopped in on the next day. If price rallies, the buy order will remain untouched. Move the sell-stop up to one tick below the Low on the second day. Continue to raise the sell-stop on each subsequent day until there is a correction and you are stopped in.

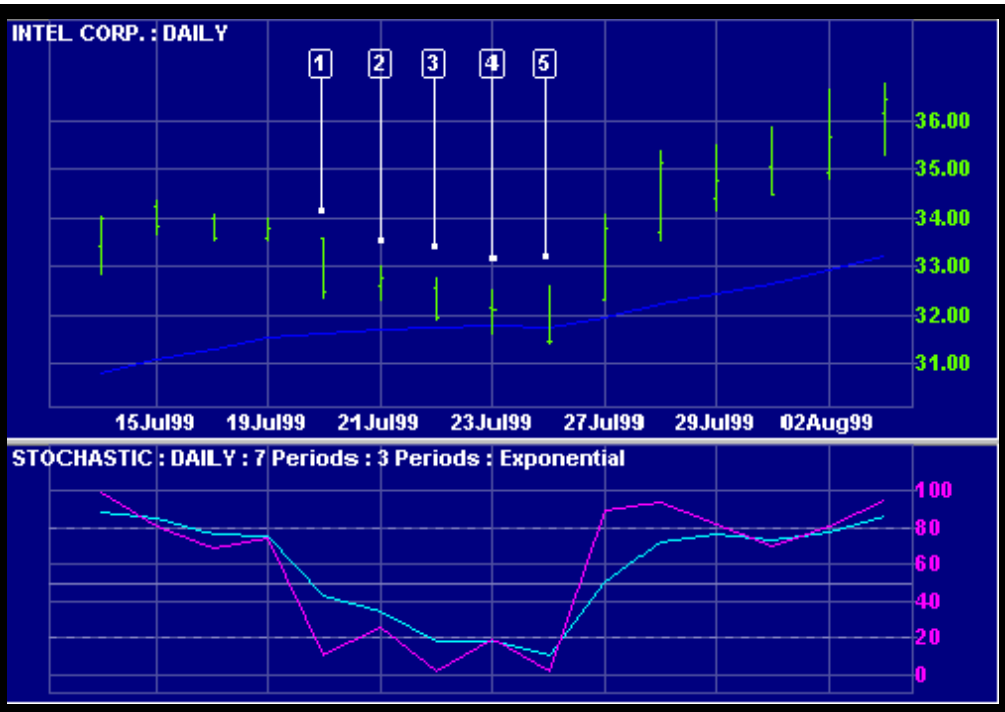
When your sell-stop is executed, place a stop-loss above the High of the recent up-trend (the highest High since the signal day).



*Day 4 makes a new High and a new Low. If the High was made before the sell-stop is reached, the stop-loss will be placed as shown. If the sell-stop was activated before the new High was made, then the stop-loss would have been placed above the High of Day 3 and the trade would have been stropped out on making the new High.

Example

Intel Corporation is shown with a blu 21 day exponential moving average (MA) and 7-day Stochastic fuchsia %K and aqua %D.



1. %K falls below 20. Place a trailing buy-stop just above the day's High of $33 1/2.
2. Move the buy-stop down to $33, above the High of day 2.
3. Move the stop down to above the High of day 3.
4. Move the stop down to $32 1/2 - one tick above the High on day 4.
5. The day opens with a new Low of $31 3/8 and then rises until we are stopped in at $32 1/2. Place a stop-loss below the Low (i.e.. the lowest Low since day [1]). Thereafter, price falls back to the day's Low, but fails to activate the stop-loss one tick below.

Alternative Rules

The rules for sell and buy stops are sometimes varied by excluding inside days:

- no adjustment is made to a buy-stop if the day does not make a new low;
- no adjustment is made to a sell-stop on days that do not make a new high.

695 days to go

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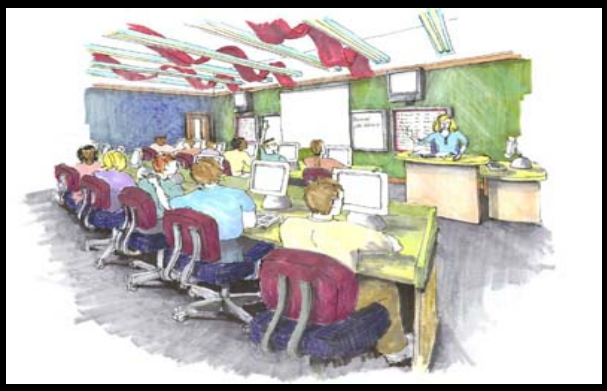

Moving Averages

Moving averages provide an objective measure of trend direction by smoothing the price data. Normally calculated using closing prices, moving averages can also be used on median, typical and weighted closing prices as well as other indicators (see Indicator Smoothing

Time Frames

Shorter length moving averages (*MA's* for short) are more sensitive and identify new trends earlier, but also give more false alarms. Longer moving averages are more reliable but only pick up the big trends.

It is best to use a moving average that is half the length of the cycle that you are tracking. If the peak-to-peak cycle length is roughly 30 days then a 15 day MA is appropriate. If 20 days, then a 10 day MA is appropriate. You will, however, often find traders using 14 and 9 day MA's for the above cycles in the hope that they will generate signals slightly ahead of the market.

- 200 Day (40 Week) moving averages are popular for tracking longer cycles;
- 20 to 65 Day (4 to 13 Week) moving averages are useful for intermediate cycles; and
- 5 to 20 Days for short cycles.

Cycles vary in length over time - always check that the moving average you are using is still appropriate.

Trading Signals

Click on the following links for details of the various moving average trading systems:

Single Moving Average
Compares price to a single moving average. The system is often used with filters.

Filters
Filters are used to eliminate uncertain signals by objectively measuring when price has crossed the moving average.

Moving Average Directional Filter
Uses the slope of the moving average as a filter.

Two Moving Averages
Uses a fast moving average instead of a filter.

Three Moving Averages
The third moving average identifies when price is ranging.

Multiple Moving Averages
A series of five fast moving averages and five slow moving averages.

Construction

Simple Moving Average

The simple moving average (or *SMA*) is the easiest to construct. A 5 day SMA takes the sum of the last 5 days prices and divides by 5. Easy but not always accurate: the indicator has a tendency to "bark twice". Consider this example:

Day	1	2	3	4	5	6	7	8	9
Price ($)	16	17	17	10	17	18	17	17	17
5 Day SMA					15.4	15.8	15.8	15.8	17.2

You can see that on day 9 there is a big step in the simple moving average, but price has been constant at $17. This distortion is caused by the low price on day 4 - dropped from the SMA on day 9.

Exponential Moving Average

To calculate an exponential moving average (*EMA*):

- Take today's price multiplied by an EMA%
- Add this to yesterday's EMA multiplied by (1 - EMA%).

If we recalculate the earlier table we see that the exponential moving average presents a far smoother trend:

Day	1	2	3	4	5	6	7	8	9

Price ($)	16	17	17	10	17	18	17	17	17
33.3% (or 1/3) EMA			16.7	14.4	15.3	16.2	16.5	16.6	16.8

EMA %

EMA% is the weighting attached to the current days value:

- 50% would be used for a 3-day exponential moving average;
- 10% is used for a 19-day exponential moving average; and
- 1% is used for a 199-day exponential moving average.

Exponential Moving Average Time Periods

How to calculate an EMA% for a selected time period

EMA% = 2/(n + 1) where *n* is the number of days

Example: The EMA% for 5 days is 2/(5 days +1) = 33.3%

Weighted Moving Average

A Weighted moving average (*WMA*) attaches greater weight to the most recent data. The weighting is calculated from the sum of days.

Example: For a 5-day weighted moving average the Sum of Days is 1+2+3+4+5 = 15
The weighting is shown below:

Day	1	2	3	4	5
Price ($)	16	17	17	10	17
Weighting	1/15	2/15	3/15	4/15	5/15
Weighted value	1.07	2.27	3.40	2.67	5.67
5 Day WMA					15.07

Weighted values are calculated by multiplying today's price by 5/15, yesterday by 4/15, and so on. The weighted moving average is the sum of the 5 weighted values.

Setup

Indicator Panel shows how to set up moving averages.

The default setting is a 21 day exponential moving average.

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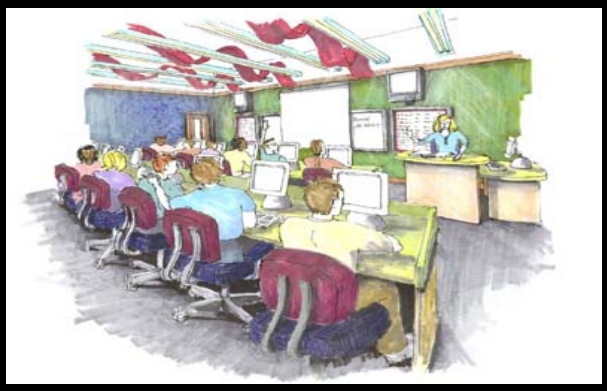
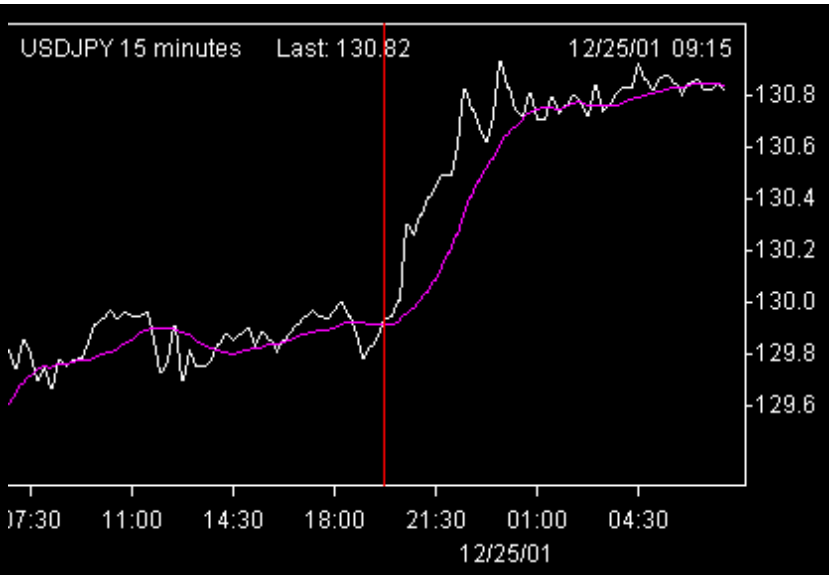


Sample Strategy 1 - Simple Moving Average

Successful trading is often described as optimizing your risk with respect to your reward, or upside. Any trading strategy should have a disciplined method of limiting risk while making the most out of favorable market moves. We will illustrate one decision making model which uses a Simple Moving Average ("SMA") technical study, based on a 12-period SMA, where each period is 15 minutes. This type of study is available in the CFX trading charts. This is one example of a trading decision making strategy, and we encourage any trader to research other strategies as thoroughly as possible.

We will use a simple algorithm: when the price of the currency crosses above the 12-period SMA, it will be taken as a signal to buy at the market. When the currency price crosses below the 12-period SMA, it will be a signal to "Stop and Reverse" ("SAR"). In other words, a long position will be liquidated and a short position will be established, both with market orders. Thus this system will keep the traders "always in" the market - he will always have either a long or short position after the first signal. In the chart below, the white line represents the price of USDJPY, the purple line represents the 12-period SMA of USDJPY, and the red line indicates where USDJPY crosses above the SMA, generating a buy signal at approximately 129.90:



This is a simple example of technical analysis applied to trading. Many strategies used by professional traders make use of moving averages along with other indicators or "filters". Note that the moving average method has an element of risk control built in: a long position will be stopped out fairly quickly in a falling market because the price will drop below the SMA, generating a stop-and-reverse signal. The same holds true for a sell signal in a rising market. Note that the SMA is generated automatically by CFX's integrated charting application.

Sample Strategy 2 - Support and Resistance Levels

Another of technical analysis, apart from technical studies, is in deriving "support" and "resistance" levels. The concept here is that the market will tend to trade above its support levels and trade below its resistance levels. If a support or resistance level is broken, the market is then expected to follow through in that direction. These levels are determined by analyzing the chart and assessing where the market has encountered unbroken support or resistance in the past.

For example, in chart below EURUSD has established a resistance level at approximately .9015. In other words, EURUSD has risen up to .9015 repeatedly, but has been unable to move beyond that point:

The trading strategy would then be to sell EURUSD the next time it gets close to .9015, with a stop placed just above .9015, say at .9025. This would have indeed been a good trade as EURUSD proceeded to fall sharply, without breaking the .9015 resistance. Hence a substantial upside can be achieved while only risking 10 or 15 pips (.0010 or .0015 in EURUSD).

695 days to go

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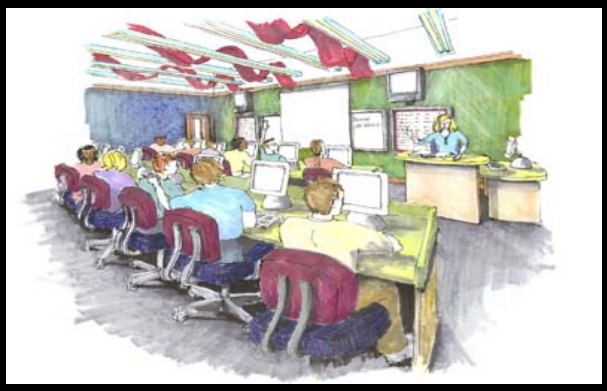

Single Moving Average

This is the simplest of the moving average systems. The system needs to be combined with a system that identifies ranging markets, when price whipsaws back and forth across the Moving Average, resulting in losses.

Trading Signals

Signals are generated when price crosses the Moving Average:

- **Go long when price crosses to above the MA from below.**
- **Go short when price crosses to below the MA from above.**

Filters

Filters are used to eliminate uncertain signals. They objectively measure if price has crossed the moving average. Commonly used filters are:

- Closing Price - either one, two or three closes must cross the Moving Average;

- Typical price, Median price or Weighted close;
- The entire bar must cross the MA;
- Two or three bars (in succession) must cross the MA; or
- Moving Average Direction

Moving Average Directional Filter

Trades are only entered if the moving average is sloping in the direction of the trade:

- **Go long if price crosses a *rising* MA from below.**
- **Go short if price crosses a *falling* MA from above.**

Exit when price re-crosses the Moving Average.

Moving Average Direction can be used in conjunction with other filters such as closing price.

Example

Intel Corporation is plotted with a fuchsia 63 day exponential moving average.

The single moving average is used with two filters:

-
- on two consecutive days.

1. Go short - two closes below a falling Moving Average.
2. Go long - MA is now rising and price has closed above the MA for 2 days.
The following dip below the MA (in early January) is filtered out.
3. The long trade is exited as there are two closes below the MA.
No short trade is entered as the MA is sloping upwards.
4. Go long - two closes above a rising MA.
5. Go short as there are two closes below a falling MA.
6. Go long - two closes above a rising MA.

7. Go short - two closes below a falling MA.
8. Go long - MA is rising again and there are 2 closes above it.

Note how profitable the long trade [2] is during the strong upward trend, compared to when price whipsaws around the relatively flat moving average, frequently switching you in and out of trades. Trend indicators are normally unprofitable, and should be avoided, during ranging markets.

695 days to go

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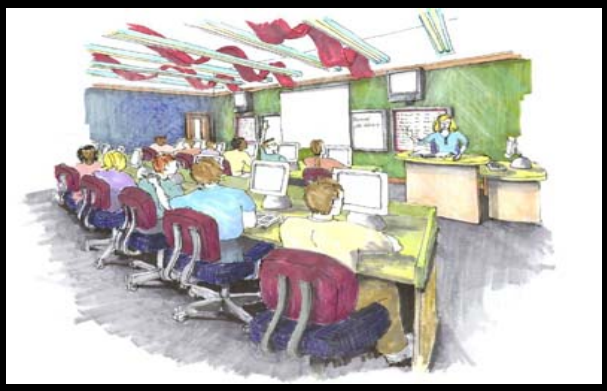


Two Moving Averages

An alternative approach to using filters is to use a fast moving average to represent the price line. The fast moving average used is normally 5 days and the slow moving average is selected according to the length of the cycle being traded.

The system still has the same weakness as the single moving average system: unprofitable trades are signaled during ranging markets.

Trading Signals

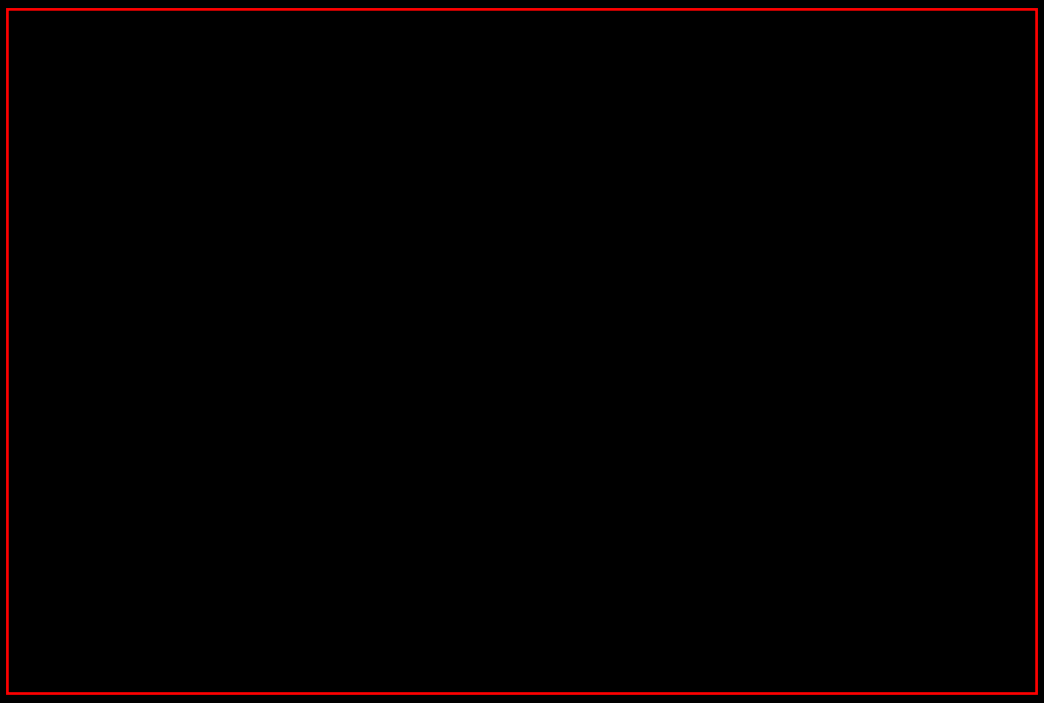
Signals are generated when the moving averages cross:

- **Go long when the fast Moving Average crosses the slow MA from below.**
- **Go short (reverse your position) when the fast MA crosses the slow MA from above.**

You can always identify the fast Moving Average by its higher peaks and troughs. Take a look at the chart below.

Example

Intel Corporation is plotted with red 5 day and fuchsia 63 day exponential moving averages.



1. Go short when the fast Moving Average crosses to below the slow MA.
2. Go long when the fast MA crosses to above the slow MA.
3. No action is taken as the MA's have not crossed.
4. Go short.
5. Go long.
6. Go short.
7. Go long.

The system reduces whipsaws but still signals losing trades during a ranging market. Trailing Stops may help to eliminate unprofitable trades.

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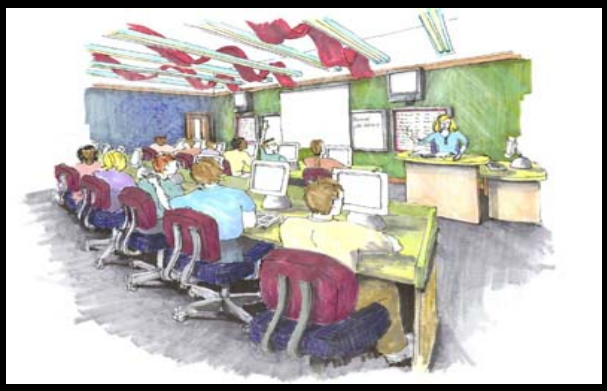

Three Moving Averages

The Three Moving Average system attempts to identify ranging markets which are then avoided as they tend to be unprofitable when traded with trend indicators.

Trading Signals

The system features three moving averages: fast, middle and slow. Entry points are determined by the middle Moving Average crossing the long MA and exit points by the fast MA crossing the middle MA:

Go long when:

- middle Moving Average crosses to above slow MA from below; AND
- fast MA is above middle MA.

Close long when fast Moving Average crosses to below middle MA from above.

Go short when:

- middle Moving Average crosses to below slow MA from above; AND
- fast MA is below middle MA.

Close short when fast Moving Average crosses to above middle MA from below.

Example

Intel Corporation chart with fuchsia 5 day (fast), yellow 21 day (middle), and aqua.png 63 day (slow) exponential moving averages.

1. Close previous long trade as the fast Moving Average has fallen below the middle MA.
2. Go long as the middle MA has risen above the slow MA (and the fast MA above the middle MA).
3. Close long trade - fast MA has fallen below middle MA.
4. We are whipsawed in and out of a long position as the fast MA crosses to above then back under the middle MA.
5. Another whipsaw.
6. Go long as the fast MA crosses to above the middle MA (and the middle MA is above the slow MA).

Whipsaws are not entirely eliminated. Using trailing stops to time entry and exit points may further reduce unprofitable trades.

695 days to go

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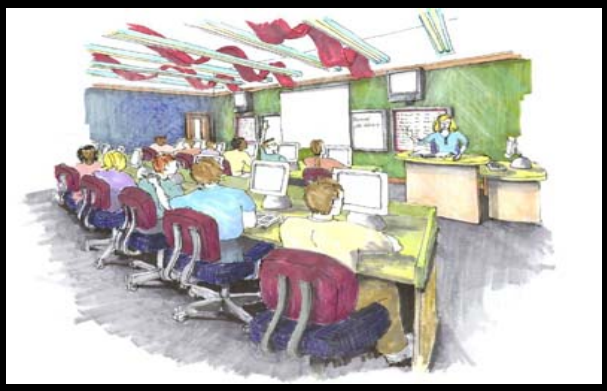


MACD: Moving Average Convergence Divergence

The MACD is basically a refinement of the two moving averages system and measures the distance between the two moving average lines. Signals are taken when MACD crosses its signal line, calculated as a 9 day exponential moving average of MACD.

The indicator is primarily used to trade trends and should not be used in a ranging market.

MACD was developed by Gerald Appel and is discussed in his book, *The Moving Average Convergence Divergence Trading Method*. For further details, see MACD Construction.

Trading Signals

First check whether price is trending. If MACD is flat or stays close to the zero line, the market is ranging and signals are unreliable.

Trending Market

- **Go long when the MACD line crosses the signal line from below.**

- **Go short when the MACD line crosses the signal line from above.**

Signals are far stronger if there is either:

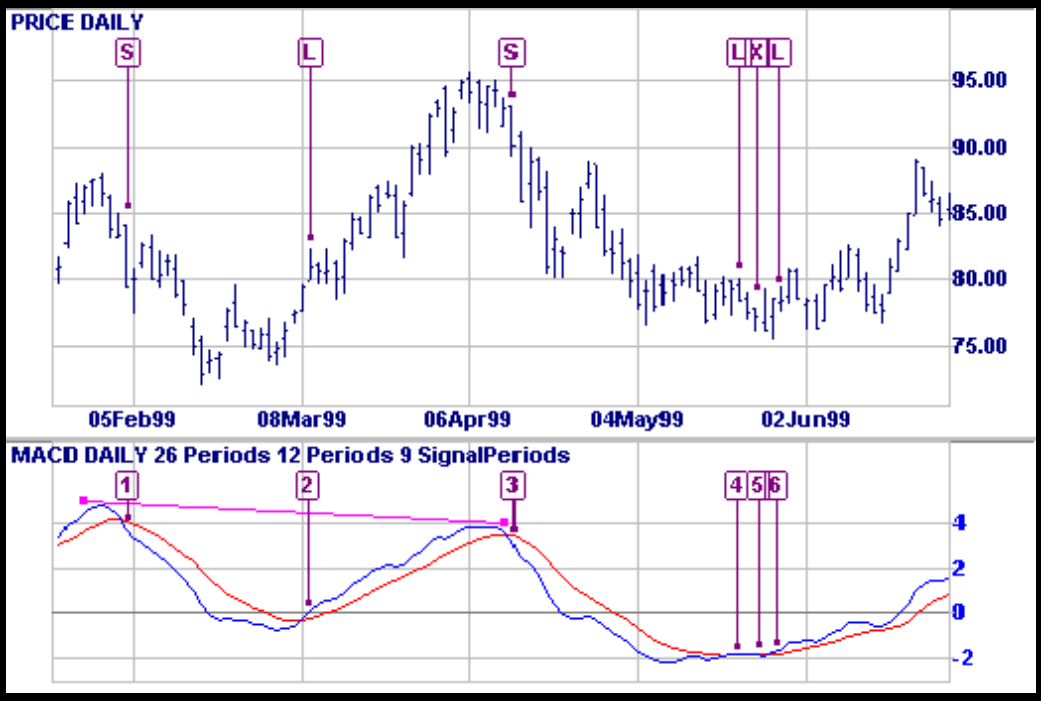
- a divergence on the MACD line; or
- a large swing above or below the zero line.

Unless there is a divergence, do not go long if the signal is above the zero line, nor go short if the signal is below zero.

Place stop-losses below the last minor Low when long, or the last minor High when short.

Example

Microsoft Corporation chart with: blue MACD, and red MACD signal line.



1. Go short [S] - MACD crosses to below the signal line after a large swing.
2. Go long [L] when MACD crosses to above the signal line.
3. Strong short signal [S] - the MACD crosses after a large swing and bearish divergence (shown by the fuchsia).
4. Go long [L]. Flat MACD signals that the market is ranging - we are more likely to be whipsawed in/out of our position.
5. Exit long trade [X] but do not go short - MACD is significantly below the zero line.
6. Re-enter your long trade [L].

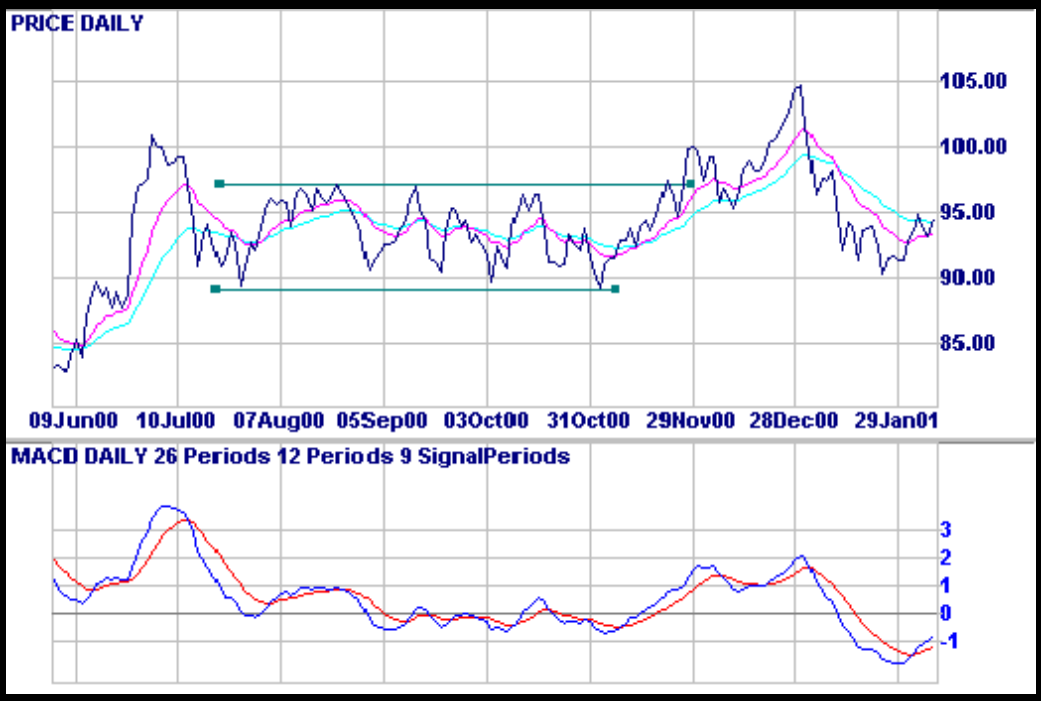
Setup

The default settings for the MACD are:

- Slow moving average - 26 days
- Fast moving average - 12 days
- Signal line - 9 day moving average of the difference between fast and slow.
- All moving averages are exponential.

Construction

Johnson & Johnson with fuchsia a 12 day, and aqua a 26 day exponential moving average(*EMA*) plotted on the price chart. blu MACD is calculated as the difference between the fast and slow EMA. The red signal line is calculated as a 9 day EMA of the MACD line.



Observe that:

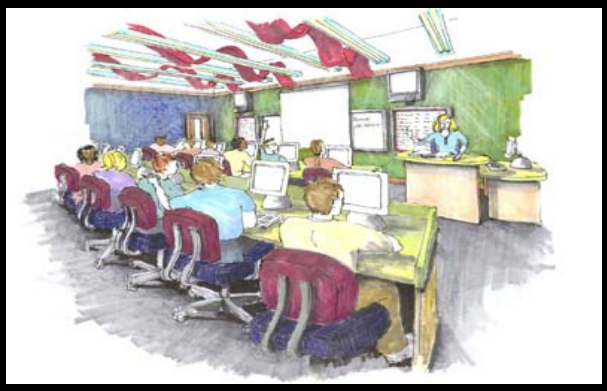
- The MACD line is furthest from the zero line when the gap between the two EMAs is widest.
- The MACD line is at zero when the two EMAs cross (the trading signal when using two moving averages).
- When MACD fluctuates between 1.0 and -1.0 on the above chart, the market is likely to be ranging.

695 days to go

Crow Trader

Trading

"to engage in frequent buying and selling of (as stocks or commodities) usually in search of quick profits "



Parabolic SAR

Parabolic SAR was developed by J. Welles Wilder Jr. and is described in his book *New Concepts in Technical Trading Systems*. SAR stands for *stop and reverse.*

Parabolic SAR should only be employed in trending markets - when it provides excellent entry and exit points. It is plotted in a rather unorthodox fashion: a stop loss is calculated for each day using the previous days data. The advantage is that the stop level can be calculated in advance of the market opening.

- A stop level below the current price indicates that your position is long. The stop will move up every day until activated (when price falls to the stop level).
- A stop level above the current price indicates that your position is short. The stop moves down every day until triggered (when price rises to the stop level).

See Construction for further details.

Trading Signals

Your first step is to confirm that the market is trending:

- Use a trend indicator, or
- Stop trading with the Parabolic SAR if you are whipsawed twice in a row and re-commence after you observe a breakout from the chart pattern.

A trade is signaled when the price bars and stop levels intersect:

- **Go long when price meets the Parabolic SAR stop level, while short.**
- **Go short when price meets the Parabolic SAR stop level, while long.**

Example

Microsoft Corporation plotted with yellow Parabolic SAR and blu 63-day exponential moving average.

1. Ignore signals while price is ranging (identified by the fluctuations around the MA). Go long at [L] after price respects the MA. Price then breaks out of the range, confirming our signal.
2. Exit [X] when price activates the Parabolic SAR stop.
   Do not go short as the MA slopes upwards.
3. Go long [L] when price crosses back above the stop. MA is still rising.
4. Exit [X] when price falls to the stop level.
   Do not go short as the MA slopes upwards.
5. Go long [L] when price crosses back above the stop. MA is still rising.
6. Exit [X] when price falls to the stop level.
   Do not go short as the MA still slopes upwards.

In the original system, short signals are taken at each exit point [X], resulting in unprofitable trades against the trend.

Construction

There are a few basic concepts that need to be addressed before we can explain how Parabolic SAR is calculated:

Extreme Point

This is the highest price recorded (to date) during a long trade or the lowest price recorded (to date) during a short trade.

Significant Point

The SP is the highest price reached in a long trade or the lowest price reached in a short trade. It is equal to the extreme point when a trade is closed.

Acceleration Factor

The Acceleration Factor starts at 2% for a new trade and increases by 2% on each day that a new extreme point is reached. The maximum acceleration factor is 20%. No further increases are made after this figure has been reached.

SAR Calculation

- On day 1 of a new trade (the day that the trade is entered), the Parabolic SAR is taken as the significant point from the previous trade.
If the trade is Long the SP will be the extreme Low reached in the previous trade.
If the trade is Short then the SP will be the extreme High reached in the previous trade.
- To calculate Parabolic SAR for the following day:
Take the difference between the extreme point and the SAR (on day 1) and multiply by the acceleration factor.
If the trade is Long, add the result to the SAR on day 1.
If the trade is Short, subtract the result from the SAR on day 1.
- There is one exception:
Parabolic SAR is never moved within the range of the current or previous day (highest High to lowest Low over the 2 days).
If this occurs in a long trade, use the lowest Low over the 2 days as SAR for the following day.
If short, use the highest High over the 2 days as SAR for the following day.
- Repeat the Parabolic SAR calculation for each subsequent day, adjusting the Acceleration Factor whenever a new extreme point is recorded.
- The trade is reversed when price equals the Parabolic SAR for the day.

695 days to go

Crow Trader

Trading

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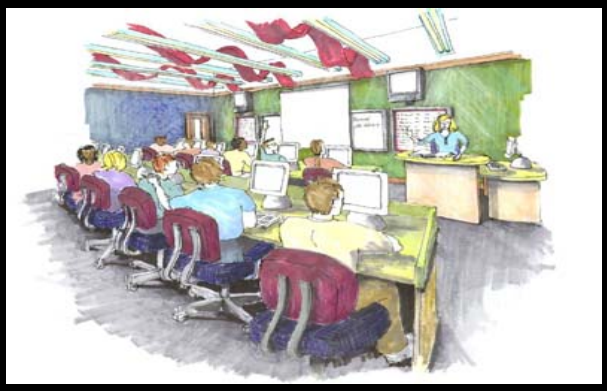


Volume Patterns

Volume is used for two major purposes:

1. To confirm price changes: if a trend is not accompanied by an increase in volume it is considered to be weak and lacking commitment .
2. To anticipate changes in price: increases in volume often precede changes in price. See Accumulation and Distribution for more detail.

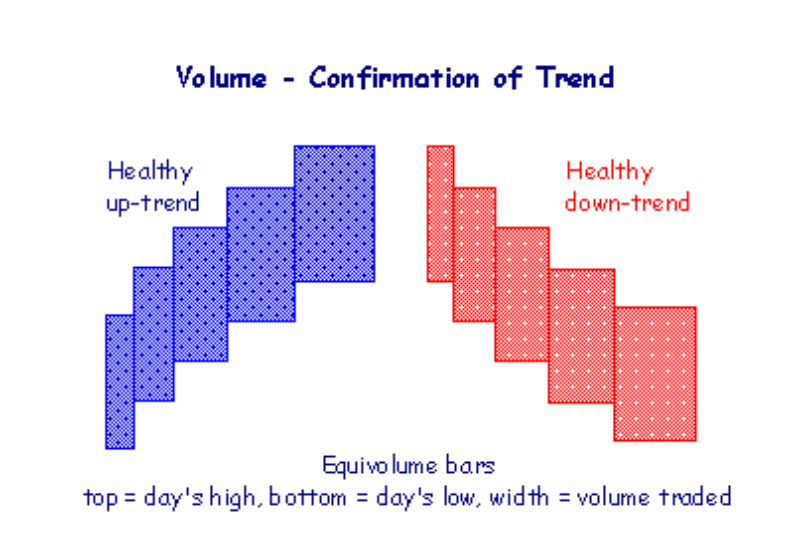
Trading Signals

Trending Markets

Short-term

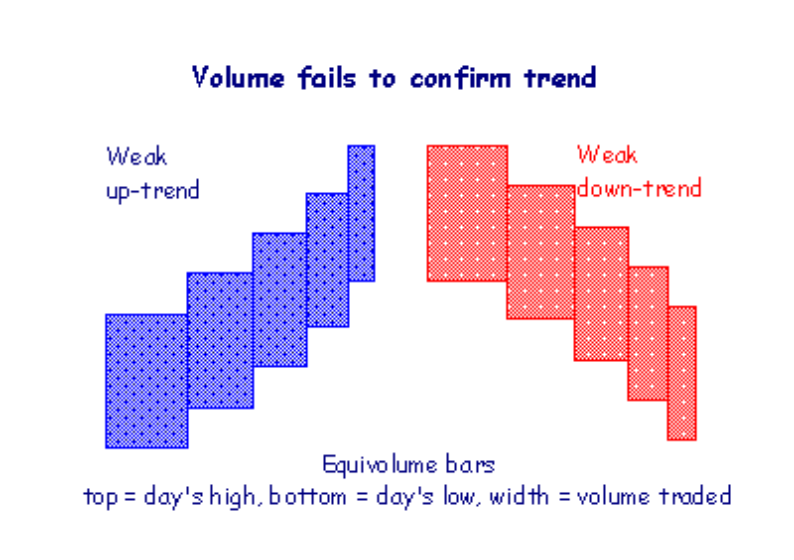
Trend confirmation:

- Rising prices and rising volume signal a healthy up-trend.
- Falling prices and rising volume signal a healthy down-trend.



Trend weakness:

- Rising prices and falling volume signal trend weakness.
- Falling prices and falling volume may signal trend weakness. See Low Volume in Down-trends for further details.



A large range with low volume indicates a lack of interest from sellers (if price is rising) or buyers (if price is falling).

Long-term

Trend confirmation:

- Higher peaks with higher volume at peaks signal a healthy up-trend.
- Lower troughs with higher volume at troughs signal a healthy down-trend.

Trend weakness:

- Higher peaks with lower volume at peaks signal that the up-trend is weakening.
- Lower troughs with lower volume at troughs signal that the down-trend is weakening.

Accumulation and Distribution

Accumulation and distribution indicate who is in control of the market and often signal a reversal.

Trading ranges represent longer term accumulation or distribution.

Accumulation

Accumulation is when the market is controlled by buyers.

A down-trend that stalls while volume remains high signals that accumulation is taking place. Sellers have lost control to buyers and a reversal is likely.

An Accumulation Day occurs when either:

- Volume increases (compared to yesterday) and closing price moves higher, or
- After trending downwards, there is little or no price movement and an increase in volume.

Distribution

Distribution is when the market iscontrolled by sellers.

An up-trend that stalls while volume remains high is a sign that distribution is taking place. Buyers have lost control to sellers and a reversal is likely.

A Distribution Day occurs when either:

- Volume increases (compared to yesterday) and closing price moves lower, or
- After trending upwards, there is little or no price movement and an increase in volume.

Breakouts

When price is trading in a range, volume may indicate in which direction a breakout is most likely to occur:

- Higher volume at peaks means that an upward breakout is more likely
- Higher volume at troughs indicates that a downward breakout is more likely

Use volume to confirm the breakout:

- High volume indicates a healthy breakout.
- Low volume indicates weakness.

Trend Climaxes

After a trend has lasted several months, there is often a surge in price and volume, which may signal that the trend is about to expire. Look out for:

- Spikes
- Wide-ranging days,
- Exhaustion gaps, and/or
- Reversal signals.

Low Volume in Down-trends

Low volumes do not necessarily signal the end of a down-trend. Commitment from buyers is necessary to drive up prices. Prices can fall due to a lack of interest from both buyers and sellers.

695 days to go

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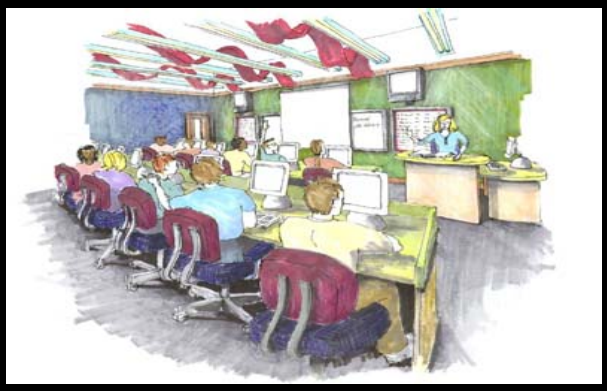


Stochastic Oscillator

The Stochastic Oscillator was developed by Dr. George Lane to track market momentum.

The indicator consists of two lines:

- %K compares the latest closing price to the recent trading range.
- %D is a signal line calculated by smoothing %K.

The number of periods used in the indicator can be varied according to the purpose for which the Stochastic is used:

Purpose:	%K Periods	%D Periods	Overbought level	Oversold level	Comments:
Combine with trend indicator	5 to 10 days	3 days	80%	20%	Very sensitive

Stand-alone or trade longer cycles	14 or 21 days	3 days	70%	30%	Only shows important turning points

The formula is explained at Construction.

Slow Stochastic incorporates further smoothing and is often used to provide a more reliable signal.

Trading Signals

If the Stochastic hovers near 100 it signals accumulation. Stochastic lurking near zero indicates distribution.

The shape of a Stochastic bottom gives some indication of the ensuing rally. A narrow bottom that is not very deep indicates that bears are weak and that the following rally should be strong. A broad, deep bottom signals that bears are strong and that the rally should be weak.

The same applies to Stochastic tops. Narrow tops indicate that the bulls are weak and that the correction is likely to be severe. High, wide tops indicate that bulls are strong and the correction is likely to be weak.

Ranging Markets

Signals are listed in order of their importance:

1. **Go long on bullish divergence (on %D) where the first trough is below the Oversold level**.
2. Go long when %K or %D falls below the Oversold level and rises back above it.
3. Go long when %K crosses to above %D.

Short signals:

1. **Go short on bearish divergence (on %D) where the first peak is above the Overbought level**.
2. Go short when %K or %D rises above the Overbought level then falls back below it.
3. Go short when %K crosses to below %D.

Place stop-losses below the most recent minor Low when going long (or above the most recent minor High when going short).

%K and %D lines pointed in the same direction are used to confirm the direction of the short-term trend.

Lane also used Classic Divergences, a type of triple divergence.

Trending Markets

Only take signals in the direction of the trend and never go long when Stochastic is overbought, nor short when oversold.

Use trailing buy- and sell-stops to enter trades and protect yourself with stop-losses.

Long:

If %K or %D falls below the Oversold line, place a trailing buy-stop. When you are stopped in, place a stop loss below the Low of the recent down-trend (the lowest Low since the signal day).

Short:

If Stochastic rises above the Overbought line, place a trailing sell-stop. When you are stopped in, place a stop loss above the High of the recent up-trend (the highest High since the signal day).

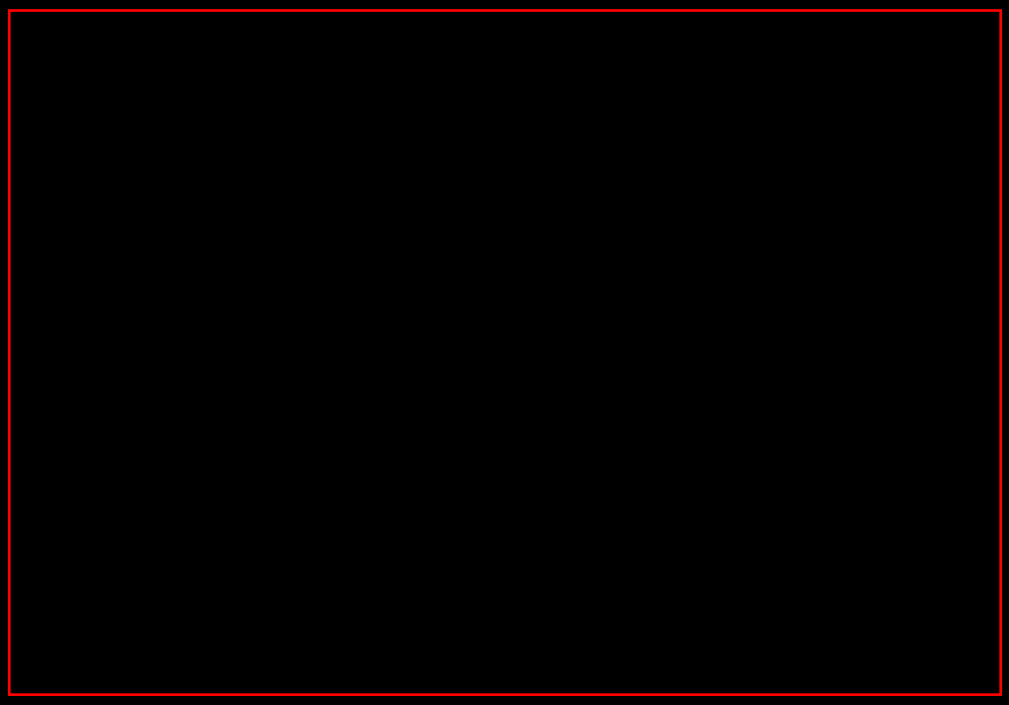
Exit:

Use a trend indicator to exit.

Example

The Slow Stochastic Example illustrates the trading signals. This study focuses on the trailing stop entry technique used in a trending market.

Intel Corporation is shown with a blu 21 day exponential moving average (MA) and 7 day Stochastic fuchsia %K and aqua %D. The MA is used as the trend indicator with closing price as a filter.



1. %K falls below 20. Place atrailing buy-stop just above the day's High of $33 1/2.
2. Move the buy-stop down to $33, above the High of day 2.
3. Move the stop down to above the High of day 3.
4. Move the stop down to $32 1/2 - one tick above the High on day 4.
5. The day opens with a new Low of $31 3/8 and then rises until we are stopped in at $32 1/2. Place a stop-loss below the Low (i.e.. the lowest Low since day [1]). Thereafter, price falls back to the day's Low, but fails to activate the stop-loss one tick below.
6. Exit when price closes below the MA.

Slow Stochastic

The Slow Stochastic applies further smoothing to the Stochastic oscillator, to reduce volatility and improve signal accuracy.

Details of the formula can be found at Construction.

Trading Signals

Trading signals are the same as for the Stochastic oscillator.

Ranging Markets

Signals are listed in order of their importance:

1. **Go long on bullish divergence (on %D) where the first trough is below the Oversold level**.
2. Go long when %K or %D falls below the Oversold level and rises back above it.
3. Go long when %K crosses to above %D.

Short signals:

1. **Go short on bearish divergence (on %D) where the first peak is above the Overbought level**.
2. Go short when %K or %D rises above the Overbought level then falls back below it.
3. Go short when %K crosses to below %D.

Place stop-losses below the most recent minor Low (or above the most recent minor High) when going long (or short).

Trending Markets

Only take signals in the direction of the trend and never go long when Stochastic is overbought, nor short when oversold.

The shape of a Stochastic bottom gives some indication of the ensuing rally. A narrow bottom that is not very deep indicates that bears are weak and that the following rally should be strong. A broad, deep bottom signals that bears are strong and that the rally should be weak.

The same applies to Stochastic tops. Narrow tops indicate that the bulls are weak and that the correction is likely to be severe. High, wide tops indicate that bulls are strong and the correction is likely to be weak.

Use trailing buy- and sell-stops to enter trades and protect yourself with stop-losses.

Long:

If the Stochastic (%K or %D) falls below the Oversold line, place a trailing buy stop. When you are stopped in, place a stop loss below the Low of the recent down-trend (the lowest Low since the signal day).

Short:

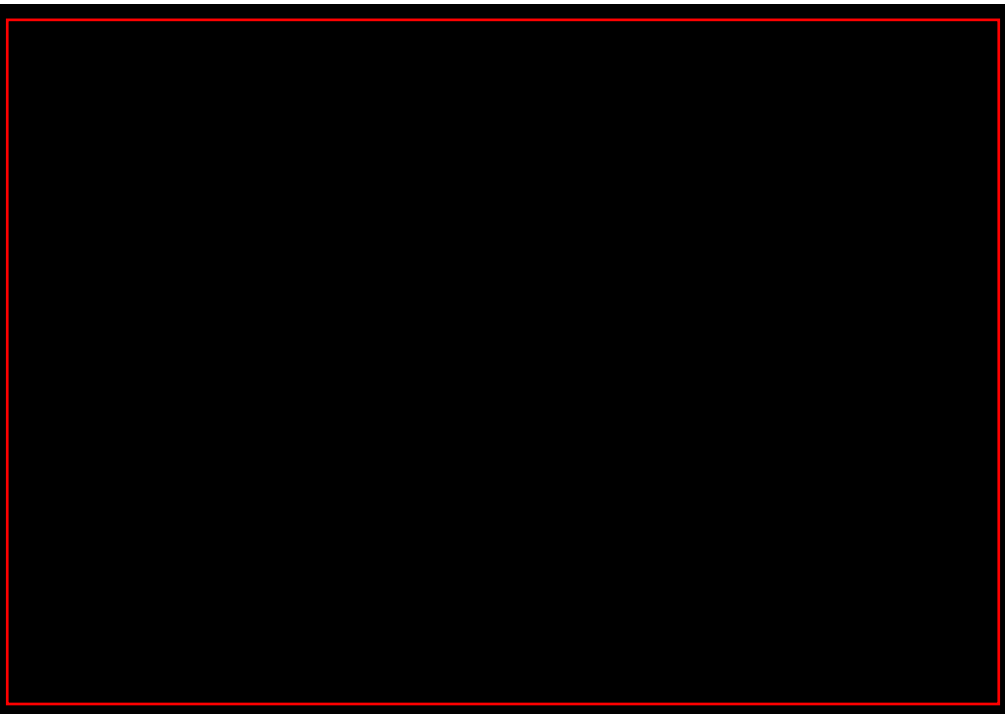
If Stochastic rises above the Overbought line, place a trailing short stop. When you are stopped in, place a stop loss above the High of the recent up-trend (the highest High since the signal day).

Exit:

Use a trend indicator to exit.

Example

Johnson & Johnson is plotted with a red 21 day exponential moving average (MA) and 5 day Slow Stochastic with fuchsia %K and aqua %D. Overbought/oversold levels silver are set at 70/30. Closing price is used as a filter on the MA.



1. The market is trending upwards (price above the MA). %K twice crosses to above 80. Wait until the MA turns down before going short [S].
2. %K crosses to below 20. Go long [L] when the MA turns upwards. Exit [X] when price closes below the MA.
3. %K crosses to below 20. Go long [L] when the MA turns upwards.
4. Price has been fluctuating around the MA which indicates that the market is ranging. Adjust the trading signals and overbought/ oversold levels.
Go short [S] when %K crosses to below % D. The trade is stopped out by a rally above the last minor High.
5. A bearish divergence on %D signals to re-instate the short [S] position.
6. %K crosses to above %D, signaling to go long [L].
7. %K signals to go short [S] when it crosses below %D.
8. A bullish divergence on %D signals to go long [L].
9. %K rises above 70 and turns back below. Go short [S].
10. There is a bullish, triple divergence on %D. Go long [L].
11. %K crosses to below % D. Go short [S].
12. Go long [L] when %K crosses to above %D. The market is still ranging, with price fluctuating around the MA.

Remember that the days shown are the signal days and that trades are only entered on the following day. Take a look at the exit [X] from [2]. Adjusting Stop Levels may provide faster exits.

Stochastic Oscillator

Construction

To calculate the Stochastic Oscillator:

1. The first step is to decide on the number of periods (*%K Periods*) to be included in the calculation. The norm is 5 days, but this should be based on the time frame that you are analyzing.
2. Then calculate %K, by comparing the latest Closing price to the range traded over the selected period:

CL = Close [today] - Lowest Low [in *%K Periods*]

HL =Highest High [in *%K Periods*] - Lowest Low [in *%K Periods*]

%K = CL / HL *100

3. Calculate %D by smoothing %K. The original formula used a 3 period simple moving average, but this can be varied, based on the time frame that you are analyzing.

Slow Stochastic Oscillator

Construction

Many traders find the Stochastic Oscillator too volatile and prefer to use the Slow Stochastic:

1. The %K [Slow] is equal to the %D [Fast] from the above formula.
2. The %D [Slow] is calculated by smoothing %K [Slow]. This is normally done using a further 3 period simple moving average.

695 days to go

Crow Trader

Trading

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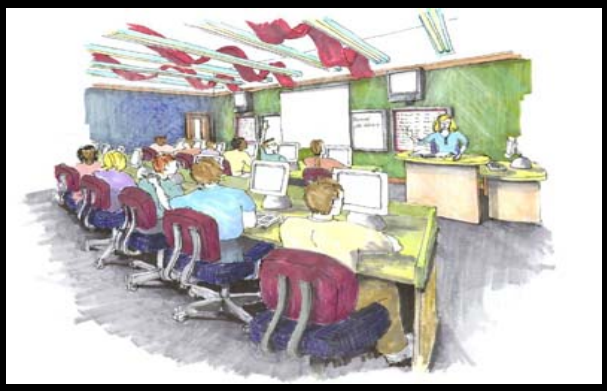


Relative Strength Index

Relative Strength Index (RSI) is a popular momentum oscillator developed by J. Welles Wilder Jr. and detailed in his book *New Concepts in Technical Trading Systems.*

The Relative Strength Index compares upward movements in closing price to downward movements over a selected period. Wilder originally used a 14 day period, but 7 and 9 days are commonly used to trade the short cycle and 21 or 25 days for the intermediate cycle. Please note that Wilder does not use the standard moving average formula and the time period may need adjustment.

Relative Strength Index is smoother than the Momentum or Rate of Change oscillators and is not as susceptible to distortion from unusually high or low prices at the start of the window (detailed in Momentum Construction). It is also formulated to fluctuate between 0 and 100, enabling fixed Overbought and Oversold levels.

See Construction for further details.

Trading Signals

Different signals are used in trending and ranging markets. The most important signals are taken from overbought and oversold levels,

divergences and failure swings.

Use trailing buy- and sell-stops to time entry into trades.

Ranging Markets

Set the Overbought level at 70 and Oversold at 30.

- **Go long when RSI falls below the 30 level and rises back above it or on a bullish divergence where the first trough is below 30.**

- **Go short when RSI rises above the 70 level and falls back below it or on a bearish divergence where the first peak is above 70.**

Failure swings strengthen other signals.

Trending Markets

Only take signals in the direction of the trend.

- **Go long, in an up-trend, when RSI falls below 40 and rises back above it.**

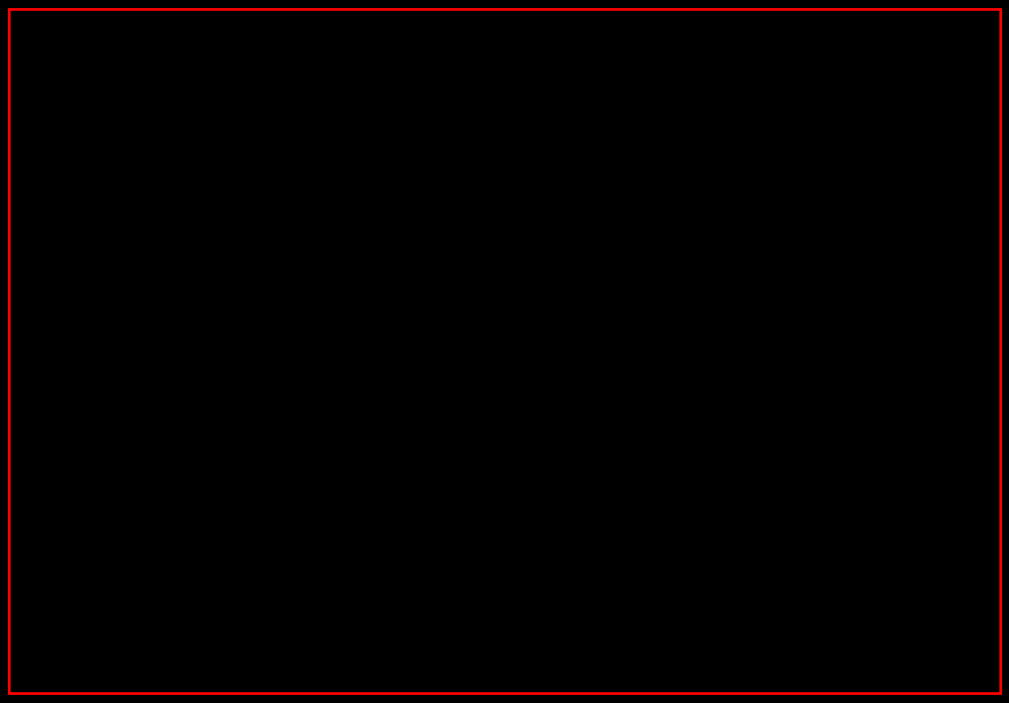
- **Go short, in a down-trend, when RSI rises above 60 and falls back below it.**

Exit using a trend indicator.

Take profits on divergences. Unless confirmed by a trend indicator, Relative Strength Index divergences are not strong enough signals to trade in a trending market.

Example

Wal-Mart Stores Inc. is plotted with a fuchsia 21 day exponential moving average (MA) and aqua 9 day Relative Strength Index. A 2-day closing filter is used with the MA.



1. Price is trending downwards (staying below the moving average). Do not take long signals until the MA turns upward, otherwise we are trading against the trend.
2. A bullish divergence on Relative Strength Index is reinforced by completion of a failure swing at [2]. Go long [L] when the MA slopes upwards and RSI crosses to above 40.
3. RSI completes a minor failure swing at [3]. Take profits [P] and exit the remaining position [X] when there are two closes below the MA.

Do not go short as price is trending upwards (staying above the moving average).

4. Price has started to fluctuate around the moving average, signaling a ranging market. Go short [S] when RSI crosses from above to below 70.
5. Go long [L] when RSI crosses from below to above 30.
6. There has been a breakout from the trading range and price is trending upwards. Do not close the long position.
7. Take profits [P] on the bearish divergence (Price has completed a higher peak while RSI has experienced a lower peak).
8. Take profits [P]. A bearish triple divergence is confirmed by completion of a large failure swing at [8].
9. Increase your long position [L]. RSI has crossed from below to above 40 during an up-trend.

Exit your position [X] when there are two closes below the MA. Do not go short as the MA still slopes upwards.

10. A small bearish divergence warns of a possible trend reversal.
11. A bearish triple divergence is reinforced by completion of a failure swing at [11]. Wait until the MA has turned down and RSI has crossed to below 60 before entering a short trade [S].

Construction

The steps in calculation of the Relative Strength Index are:

1. Decide on the RSI Period, based on the time frame that you wish to analyze.
2. Compare Closing price [today] to Closing price [yesterday].
3. For the RSI Period, add all upward movements in Closing price.
4. For the RSI Period, add all downward movements in Closing price.
5. Calculate the exponential moving average* of price movements:

Average Upward Price Move = Exponential Moving Average of Upward Movements

Average Downward Price Move = Exponential Moving Average of Downward Movements

6. Calculate Relative Strength (RS):

RS = Average Upward Price Move / Average Downward Price Move

7. Calculate the Relative Strength Index (RSI):

RSI = 100 - 100 / (1 + RS)

*Welles Wilder's Indicators

Users should beware, when setting time periods for Welles Wilder's indicators, that he does not use the standard exponential moving average formula. For example, Wilder describes *1/14 of today's data + 13/14 of yesterday's average* as a 14-day exponential moving average. If you refer to Exponential Moving Averages you will see the formula equates to a 27-day exponential moving average.

Indicators affected are:

We recommend that users try shorter time periods when using one of the above indicators. For example, if you are tracking a 30-day cycle you would normally select a 15-day Indicator Time Period. With the RSI, adjust the time period as follows:

RSI time period = (n + 1) / 2 = (15 + 1) / 2 = 8 days

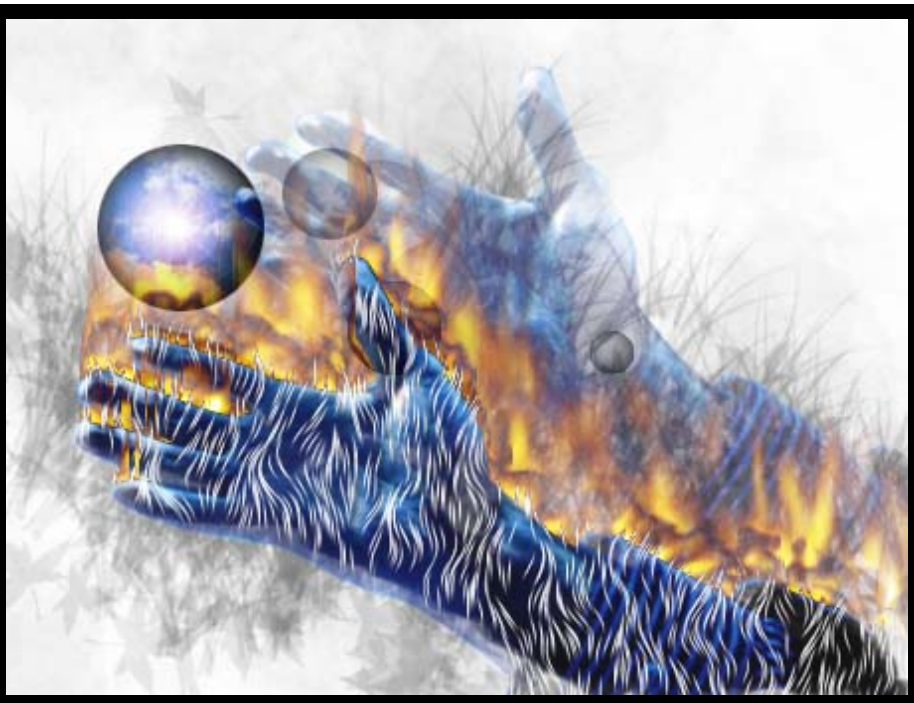
Alternatively, select the Exponential moving average option (for RSI or ATR) in place of the default Wilder moving average

695 days to go

Crow Trader

Desire

"Stresses the strength of feeling and often implies strong intention or aim. WISH sometimes implies a general or transient longing especially for the unattainable."



Purity is achieved by freedom from desire, and desire should be distinguished from necessity. When one is hungry, one should eat, when one is thirsty one should drink, when one is fatigued, one should sleep. These absolute necessities cannot be called desires because without these necessities one cannot even survive.

Desire is a destructive form of longing which innervates the whole system, longing for things which are not necessary for the maintenance of the body. Every kind of luxury should be considered as desire. One has to judge for oneself whether this particular thing is absolutely necessary, or one can be comfortable even without that. Each one is one's own judge. If one can comfortably live happily without certain things, asking for those things once again is called desire. It will disturb the mind.

There are levels of desire, of a lower category and a higher category, etc. You may feel like having a cup of tea, it is a minor desire, have it. You may like to go for a walk - go, go for a walk. Any object that brings about tumult in the emotion, that is an object of desire by which you either want it intensely or hate it intensely. Intense wanting and intense hating will affect the emotions. The test of good health is freedom from emotion, correct understanding without any kind of ebullition, burning desire of any kind. This is briefly the definition of desire.

There are two kinds of desires, anabolic and catabolic. Anabolic desires are constructive, helpful and necessary for maintaining health and peace of mind. Catabolic desires are destructive in their nature. They throw the energy out. Any procedure by which we can conserve our energy is anabolic. Any process by which we deplete our energy and then become weak, that is catabolic. One must be able to very carefully distinguish between one and the other. Understanding is the judge, it is called Viveka-Shakti, capacity to distinguish between what is absolutely essential for living a normal life and what is irrelevant. This is a preliminary definition to the question "What is purity?".

So purity is not like an apple that falls from a tree, it has shades of definition. You will not find any such clear description of this subject in any book, each one has to use one's common sense.

It is necessary to save life. Suppose you find a snake is wriggling encircled by forest fire, you would like to save it but you do not go and catch hold of its neck. So even a good desire like wanting to save the snake should not be fulfilled in a reckless way. People generally take a long stick and throw it like this, etc. etc.

There are desires of a different type, like sexual desire. It is neither good nor bad, like fire. Do you consider fire as a good thing or a bad thing? You cannot say anything about it. It can destroy or it can cook your food. So, likewise, sexual desire is a conservative process of maintaining a balance in the system, it is not capable of definition in a cut-and-dried manner. It is, as any desire is, relative to circumstance. But if it is a passion, you may distinguish between desire and passion. Passion is voluptuous, tumult-like, and makes one sick afterwards. Great discrimination has to be exercised here.

There is a famous passage called Kama Gita in the Mahabharata. The desire says, "People try to conquer me, but they do not know that even the desire to conquer me is a desire, they don't understand that, so I am behind all their attempts."

Desire for God sublimates all other mortal desires. The higher absorbs the lower, the lower should be transmuted to the higher by meditation.

695 days to go